EFFICACY OF VYAGHRIVARUNADI QWADHA AND KANCHANARAGULGULU IN COMPARISON WITH TRAYANTYADI QWADHA AND KANCHANARAGULGULU IN UTERINE FIBROID (ANUKTHAVYADHI) – A RANDOMISED CONTROL TRIAL

THESIS

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TILAK MAHARASHTRA VIDYAPEETH PUNE

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By

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CERTIFICATE OF THE SUPERVISOR

It is certified that work entitled **"EFFICACY OF VYAGHRIVARUNADI QWADHA AND KANCHANARA GULGULU IN COMPARISON WITH TRAYANTYADI QWADHA AND KANCHANARAGULGULU IN UTERINE FIBROID (ANUKTHAVYADHI) – A RANDOMISED CONTROL TRIAL"** is an original research work done by **PRASANNA V.N.** under my supervision for the degree of **Doctor of Philosophy** in **STREEROGA AND PRASUTI TANTRA** to be awarded by Tilak Maharashtra Vidyapeeth, Pune. To best of my knowledge this thesis

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- fulfils the requirement of the ordinance related to Ph.D. degree of the TMV
- up to the standard in respect of both content and language for being referred to the examiner.

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Undertaking

I, **PRASANNA V.N.** , is the Ph. D Scholar of the Tilak Maharashtra Vidyapeeth in **AYURVEDA – STREEROGA AND PRASUTI TANTRA** subject. Thesis entitled **"EFFICACY OF VYAGHRIVARUNADI QWADHA AND KANCHANARAGULGULU IN COMPARISON WITH TRAYANTYADI QWADHA AND KANCHANARAGULGULU IN UTERINE FIBROID (ANUKTHAVYADHI) – A RANDOMISED CONTROL TRIAL"**under the supervision of **Dr. SUJATA KADAM** MD(Ay), PhD, Professor & Head, Dept. of Prasutitantra & Streeroga, All India Institute of Ayurveda, New Delhi, solemnly affirm that the thesis submitted by me is my own work. I have not copied it from any source. I have gone through extensive review of literature of the related published / unpublished research works and the use of such references made has been acknowledged in my thesis. The title and the content of research is original. I understand that, in case of any complaint especially plagiarism, regarding my Ph.D. research from any party, I have to go through the enquiry procedure as decided by the Vidyapeeth at any point of time. I understand that, if my Ph.D. thesis (or part of it) is found duplicate at any point of time, my research degree will be withdrawn and in such circumstances, I will be solely responsible and liable for any consequences arises thereby. I will not hold the TMV, Pune responsible and liable in any case.

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Contents

Abstract

Uterine fibroids are the commonest benign tumours of the uterus as well as in the female body. These tumours arise from the uterine myometrium and consists of varying proportion of smooth muscle and fibroblasts. Symptoms of fibroids are generally classified into the following categories, abnormal uterine bleeding, pelvic pressure symptoms, pain, and reproductive dysfunction. Infertility may be associated with submucosal fibroids or a markedly distorted endometrial cavity induced by big intramural myomas, which both may interfere with embryo implantation or sperm transportation. Uterine fibroids cannot be directly correlated with any diseases mentioned in Ayurvedic classics. According to Ayurveda descriptions of two diseases, Grandhi and Arbuda are similar to that of tumour but specific description of Grandhi and Arbuda related to reproductive organ is not available. Considering the complications of fibroids like menorrhagia, treatment of Yonirogas such as asrgdara, raktayoni and asrja can be adopted. The uterine fibroids are one of the causes of repeated abortion and infertility.

Uterine fibroid management with Ayurveda directs at the samprapti-vighatana of different khataka. Vata, kapha dominating Tridosha are involved in the pathogenesis of this condition. Hence, vata-kaphahara medications are required. Vyaghrivarunadi qwadha and Trayantyadi qwadha were selected to use in this study since these two medicines are indicated for antarvidradhi. Kanchanaraguggulu gulika, which is mentioned in Sarangadhara Samhitha is indicated in gandamala, grandhi, apachi etc.

Key words: Uterine fibroid, grandhi, Vyghrivarunadi qwadha, Kanchanaraguggulu, Trayantyadi qwadha.

Trayantyadi qwadha is mentioned in Ashtanga Hridaya chikitsa sthana in the chapter of Vidradhivridhi Chikitsa. One of the studies conducted by Kanchanaraguggulu along with Trayantyadi qwadha concludes that there is significant reduction in almost all types of fibroids accompanied by its shrinkage without any side effect. The formulation Vyaghrivarunadi qwadha has been reported for its effectiveness in combination with Kanchanaraguggulu in this condition, but clinical studies have not been done so far. So, in this study the effect of Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika was selected to find out its efficacy in Uterine fibroid. In this study oral administration of Vyaghrivarunadi qwadha was found to be effective to reduce the size of fibroid.

Uterine fibroid is one of the most common gynecological diseases seen now a days. It is a benign tumour that develops in the womb of a female & appears during child bearing period. Fibroids are rare before the age of 20 and they most commonly cause symptoms between the age of 35 and 45 years. They are more common in nulliparous or relatively infertile women. It is a benign solid tumour of the uterus and composed of smooth muscle and fibrous tissue, so named as uterine leiomyomas, fibromyomas or myomas. Prevalence rate of this tumour ranging from 20 to 50% depends upon ethnicity, age and other factors. Using vaginal probe ultrasonography, 62% of premenopausal women were noted to have occult fibroids. Aetiology is unknown but several factors may influence their formation, which include genetic predisposition, steroidal hormones, vascular abnormalities and growth factors including platelet – derived growth factors, heparin – binding epithelial growth factors, hepatoma - derived growth factors and basic fibroblast growth factors. Many women

with fibroids have no symptoms and may find out during gynaecological examination or imaging technologies. The symptoms associated with these tumors include menorrhagia, dysmenorrhoea, pelvic pain, reproductive dysfunction like early pregnancy loss, subfertility and later pregnancy complications, pressure symptoms like frequent urination. The gold standard diagnostic modality for uterine fibroids is ultrasound sonography.

Review of Literature

Incidence

The true incidence of fibroids is uncertain, least 20% of women at the age of 30 have got fibroid in their wombs.

Aetiology

The aetiology of uterine myomas is not definitely known. The factors like parity, racial and genetic factors, weight, and smoking may influence in the growth of the fibroids.

Classification

Depending upon the part of the uterus fibroids can be broadly divided into two types

1. Uterine body 2. Cervix

Uterine body

Fibroids confined to the uterine body can be again divided into three types according to their relationship to the peritoneal coat and to the endometrium.

1. Intramural
2. Subserous
3. Submucous

Cervical fibroid

These are relatively uncommon and they are usually single.

Uterine fibroids vary in size, position & number & thus cause uterine enlargement. The majority of fibroids remain asymptomatic. They are accidentally discovered by examination & ultrasonography. A small submucous fibroid may produce more symptoms than a subserous fibroid. They cause menstrual abnormalities like menorrhagea, metrorrhagea, intermenstrual bleeding, dysmenorrhoea, pelvic pain, pressure symptoms like constipation, retention of urine, low backache. They also cause infertility & abortion.

Diagnosis

Diagnosis is usually made on the basis of the symptoms like menorrhagia, dysmenorrhoea or pelvic pressure symptoms or as an incidental finding at routine vaginal examination if it is asymptomatic.

Physical signs

The physical findings depend upon the number and size of the fibroids. Patients may have signs of varying degrees of anaemia so inspect the eyes, hands and sole of feet for signs of pallor.

Bimanual examination

This examination is more useful to detect small fibroids and size and contour of uterus as well as the presence of adnexal mass. Bimanual examination shows the uterus is enlarged.

Imaging technology

The uterus is often found to be enlarged on both abdominal and bimanual examinations. However, it may be difficult to distinguish between an enlarged uterus and uterine myomas and so further imaging is mandatory. The following investigations may be carried out in cases of fibroids. However, all the investigations may not be required in every patient.

1. Ultrasonography
2. CT scan
3. MRI scan
4. Hysterosalpingography
5. Hysteroscopy
6. Laparoscopy

Uterine fibroids have to be distinguished from all other causes of enlargement of the uterus.

Differential Hysteroscopy diagnosis

Adenomyosis, pregnancy, myohyperplasia, ovarian tumours, pelvic inflammatory disease, endometriosis, chocolate cyst, rudimentary horn of the uterus, ectopic pregnancy and endometrial cancer

Complications of uterine fibroid

Degenerations

Degeneration occurs to the fibroids due to reduced blood supply to the tumours. These are the types of degenerations seen in myomas.

Hyaline degeneration, Atrophic degeneration, Cystic degeneration, Calcific (calcareous) degeneration, Septic degeneration, Red (carneous) degeneration and Myxomatous (fatty) degeneration.

Other complications

Torsion, Haemorrhage, Infection, Ascites (Pseudo-Meigs syndrome), Sarcomatous change

Treatment

Uterine myomas, as benign tumours, can generally be managed expectantly unless they cause symptoms. Management of myomas depends upon the symptoms that they cause and their effects, if any, on general health of the patient and their routine work. Small asymptomatic fibroids do not require removal. They can be treated by medicines and require observation on every 6months.

According to the age, parity, desire to retain her uterus and symptoms of the patient, one of the following modes of treatment may be adopted.

1. Expectant
2. Medical management
3. Uterine artery embolisation
4. Myomectomy
5. Hysterectomy
6. Hysteroscopic Resection of Myomas

Ayurvedic perspective

Uterine fibroids cannot be directly correlated with any diseases mentioned in Ayurvedic classics. According to Ayurveda descriptions of two diseases, Grandhi and Arbuda are similar to that of tumour but specific description of Grandhi or Arbuda related to reproductive organ is not available.

Arbuda

The word Arbuda is derived from "*arb himse*" which means a condition that kills or causes harm. Another derivation is "*aram budhathi*" which denotes its fast growing capacity. From the word meaning itself we can observe that arbuda is a term used in Ayurveda to denote a disease of malignant nature. Fibroids are slow growing tumours which take about 3-5 years to grow sufficiently to be felt per abdomen. When going through the review of etiopathogenesis and symptomatology as per modern sciences, uterine fibroids can be considered as mamsa vridhijanya vikara and is correlated to mamsa grandhi. The uterine fibroids arise from the myometrium due to transformation of single smooth muscle cells to neoplasms.

Grandhi

The term grandhi is used for a tumour, lump or nodule and it develops due to vitiation of doshas and dushyas and accumulation at one place. The character of grandhi is vigradhitha sopha. In Madhukosa commentary of Madhava Nidana it is explained that the name grandhi is given due to its specific appearance of vritta, unnata and vigradhitha sobha.

Nidana and Samprapthi of Grandhi

According to Susrutacharaya grandhi develops due to vitiation of vata & kapha doshas which then vitiates dhathus such as mamsa, rakta and medas and produce vritta, unnata, vigradhitha sopha. Vata is responsible for the faulty division of cells and kapha is helpful for the growth. Affected dhathu is mamsa i,e., muscular tissue and tumours develop when kapha enters into the mamsa dhathu and mamsavaha srotas. As per the views of Vagbhatacharya

the predominant dosha in the etiopathogenesis of grandhi is kapha and also included amongst the disorders of mamsa and medas.

Nidana

Nidana can be said as the cause of diseases. Here samanya yoni roga nidana as well as pitta kapha prakopa karanas are to be taken into account. Various reasons like katu amla rasas, vidahi anna, abhishyanthi, guru snigda anna, sleeping in day time, indigestion etc can be considered as the factors that cause dosha vitiation. The involvement of causes such as beeja dosha (hereditary factor) and daiva (genetic factor) as said in yoniroga nidana also play important role in the development of this disease. Increased emotional factors also cause agni dushti as a result improper indigestion and derangement in proper dhatu formation occurs.

Roopa

Manifestation of disease depends on what extend the dosha is vitiated. Here due to nidana, guru manda, hima, snigda, sandra and sthira properties of kapha is increasing. If kapha dushti is prevalent then grandhi which is kadina, sthira and without any artava abnormality may be manifested. In case where there is excess vitiation of vata there occurs increase in chala and suksma properties leading to painful menstruation with symptoms like constipation, urinary complaints, low back ache etc.

Samprapthi

Due to the above said nidanas vitiation of pitta kapha doshas occur which leads to jadaragni mandya. This causes agnimandya at dhatwagni level especially, rakta dhatwagni causing vitiation of mamsa dhatu which in turn

leads to vitiation of medas in garbhasaya. This vitiated mamsa and medo dhatu cause avarana of vata leading to formation of a kathina vivarna sopha (grandhi) in garbhasaya. ie; vata causes grathanata of mamsa dhatu in garbhasaya causing formation of mamsa grandhi. Garbhasaya is the seat of apana vata and for the normal functioning of female reproductive cycle its normalcy along with samana is needed. The developing grandhi hinders the normal movement of vata, resulting in its further vitiation. The vitiated vata cause artava vaha srotodushti and atipravrtti of rajas occurs.

Vidradhi

In Ayurveda, the term Vidradhi is used to refer an abscess. According to Acharya Caraka, Vidradhi occurs due to the excessive vitiation of rakta and it gets suppurated quickly, hence the term Vidradhi.

Samprapthi

Doshas getting aggravated, vitiate the twak, rakta, mamsa, medas and asthi and become localised at a place and produce a sodha which is slowly bulging up, deep rooted and painful and is called vidradhi as per ayurveda.

Yonirogas having dysmenorrhoea

1. Vatiki

Susruta has mentioned only few local symptoms like karkkasa (roughness), sthabdha (stiffness) and thoda sula (pricking pain). According to Carakacharya a woman of Vata prakriti, when consumes Vata aggravating ahara and vihara leads to aggravation of Vata. This Vata when reaching the yoni, produces thoda (pricking pain), sthambham (stiffness), pippelikasruptmiva (sensation as if creeping of ants), karkkasata (roughness)

and supti (numbness). Due to vitiation of vata, artavaraktasrava occurs with sasabda (sound), ruk (painful), phena (frothy), thanu (thin) and ruksha (dry).

2. Udavartini

According to Susrutacharya Udavartini is having phenila with sula (painful frothy menstruation). Caraka says that due to vegadharana vata gets vitiated and this aggravated vata then moves in udavartham (reverse direction) fills the yoni. So the yoni affected with sula (pain), initially pushes the artava rakta in upward direction then expelled with difficulty. The woman feels relief immediately following discharge of artavarakta. Here the rajas or artavarakta moves upwards in opposite direction hence it is termed as Udavartini.

Nidana (Aetiology)

'*Na hi vatat rte sulam*' the aetiology of pain is the disordered Vata. Since artava pravritti is regulated by apana vayu, its vitiation therefore leads to udavarta and vatiki yonivyapats. Acharya Vagbhata had clearly mentioned that without the involvement of vata dosha vitiation of yoni does not happen in females. The main two reasons of disorder of vata are

i. Margavarodha i.e, obstruction either physiological or anatomical.
ii. Dhatukshaya i.e, low pain threshold or lack of the product concerned.

Applying these principles to the process of menstruation, it will be seen that krichrartava arises from the following etiology and pathology.

Among tridosas, Vata is responsible for pain. For production of

artava, vyana and apana have a coordinate relation with each other. Vyana vayu is responsible for raktachamkramana through whole body including garbhasaya gatha siras and anulomana or munchana of artava is done by apana vayu. Due to the presence of garbhasayagrandhi, artava vaha sroto dushti occurs as sanga and vimarga gamana. By means of srotovaigunya, vitiated dosha circulated through srotas leads to sanga and vimarga gamana in artavavaha srotas, which obstruct the movement of apanavata (sanga and avarana) results in prathiloma gati of rajas present as krchrartava ie. artavasula. Vitiated apanavata then produce avarana to artavavaha srothas which also causes sula during artavapravritti. As in all cases of artava sula, Vataprakopa is the main cause; the treatment should be aimed at to normalize the vitiated vata. As vata is main causative factor of all yonivyapats, vata should be treated first. Snigdha, ushna, amla and lavana articles should be used for the relief from artava sula due to Vata. For avrita apana vayu, treatment should be agnideepaka, grahi, vatanulomana and pakvashaya shuddhikarana.

Yonirogas/Strirogas having excessive artavaraktasrava.

Asrgdara

The condition of excessive artavaraktasrava is termed as Asrgdara.

Excessive secretion of rajas or artavaraktasrava is termed as raktapradara.

Raktayoni

The symptom of raktayoni is atyartava.

Asrja

Due to excessive use of ahara and vihara which are capable of aggravating rakta and pitta, thereby rakta in the yoni gets vitiated by pitta.The vitiated rakta and ritta situated in yoni will affect the woman even in garbhavastha and produces excessive artavaraktasrava during periods.

In garbhasaya grandhi the normal function of apana vata has been disturbed. It may affect normal duration and interval of artavaraktasrava. Samprapthighatakas of asrgdara, include vata, pitta & kapha dosha and rasa & rakta. In garbhasaya grandhi mamsa dushti also occurs. Due to nidana seva vitiated vata increases the amount of rakta. Vyana vayu is responsible for increasing raktachamkramana in garbhasaya and apana vata for artava nishkramana. Increased amount of rakta enters into the garbhasaya gata sira and vitiated apanavata causes atyadhika artava srava or deerghanubandhi artava srava leads to asrigdara. Due to asrayasrayi bhava of rakta and pitta, pitta dosha is also vitiated in asrigdara. So in the treatment, vatakapha samana treatment along with vatapitta samana treatment required.

Samprapti ghataka in asrigdara

Dosa ..... Vata, pitta, kapha
Dushya ..... Rasa, rakta, artava
Upadhatu ..... Artava
Srotas ..... Artavavaha srotas, rasavaha srotas, raktavaha srotas
Srotodushti ..... Atipravritti
Asaya ..... Garbhasaya
Agni ..... Jataragni, dhatvagni
Sthanasamsraya ..... Rajovaha sira of garbhasaya

Methodology

Materials and methods

Aim

To evaluate the efficacy of Vyaghrivarunadiqwadha and Kanchanaragulgulu in Uterine fibroid.

Objectives

1. To evaluate the efficacy of Vyaghrivarunadi qwadha and Kanchanaragulgulu on symptoms and size of Uterine fibroid
2. To compare the efficacies of Vyaghrivarunadi qwadha and Kanchanaragulgulu, Trayantyadi qwadha and Kanchanaragulgulu, Vyaghrivarunadi qwadha, Trayantyadi qwadha, Kanchanaragulgulu on symptoms and size of Uterine fibroid

Research Question

Is there any significant difference in the efficacy of Vyaghrivarunadi qwadha, Trayantyadi qwadha or Kanchanaraguggulu in reducing the uterine fibroid when administered continuously for 3months.

Null Hypothesis

There is no significant difference in the role of Vyaghrivarunadi qwadha, Trayantyadi qwadha, or kanchanaraguggulu either in single drug or in combination in uterine fibroid.

Alternate Hypothesis

There is significant difference in the efficacy of Vyaghrivarunadi qwadha, Trayantyadi qwadha, or Kanchanaraguggulu either in single drug or in combination in uterine fibroid.

Materials

Patients/ Drugs/ Case Record Form / Written consent form.

Drugs

Vyaghrivarunadi qwadha, Trayantyadi qwatha & Kanchanara gulugulu were prepared and purchased from a GMP certified company.

Study design

Randomized control trial

Randomization was done by the Block Randomization Technique; 170 subjects were selected randomly.

The protocol was submitted for clearance and approved by the research committee of the Tilak Maharashtra Vidyapeeth, Pune.

Sample size

Sample size was calculated in relation to prevalence rate of the disease being studied. Total number of patients is 170, 33 in each group Considering the prevalence of 25%, sample size (n) is calculated at a precision of 15% using the formula, $n= 4pq / d^2$. Thereby sample size of 33 participants per group has to be studied. Adjusting for drop-outs, a total sample size of 170 participants will be studied.

Selection of Patients

170 patients will be selected randomly from the OPD and IPD of Prasutitantra&Streeroga department, Vaidyaratnam Ayurveda College Ollur, Thrissur, Kerala, irrespective of occupation and religion and as per inclusion criteria given in the proforma and recruited after obtaining their voluntary

consent and randomly selected by Block randomization and allocated into five groups;

Group A – Vyaghrivarunadi qwadha & Kanchanara gulugulu

Group B – Trayantyadiqwatha & Kanchanaraguggulu

Group C – Vyaghrivarunadi qwadha

Group D – Trayantyadi qwadha

Group E – Kanchanaraguggulu

Methods

Specific format (CRF) was prepared for recording the study by detailed history of complaints, artava history, obstetrical history, P/V examinations & investigations. The selected patients were diagnosed as fibroid as per criteria & included as per inclusion criteria.

Preparation & dosage of medicines

Identity of Trayanthy and Varuna was confirmed before preparation of the drug by concerned authorities as BIS and received confirmation letter.

Method of preparation of Kanchanaraguggulu pills

All drugs of Kanchanaraguggulu will be purchased from the market.

Guggulu sodhana

Guggulu purified in dolayanthra with gomutra as drava dravya. It is boiled with gomutra till all pass into the fluid through the cloth. The residue left was discarded. The fluid was then filtered and boiled till it form a mass. This mass was dried under sun and pounded with a pestle in a stone mortar, adding a little quantity of ghee till it becomes waxy.

Method of preparation

Take all the ingredients, wash, dry and powdered separately and sieved. To the weighed quantity of Suddha Guggulu, add fine powder of other ingredients and pound well. Expel the mass through vati machine and cut the vaties to 1.5 gm. Roll the vatis on flat surface to round them by circular motion of palm covered with a glove and smeared with ghrita and made into pills of 3gms each and dried by keeping in shade. Standardisation of the tablet was done at Vaidyaratnam oushadhasala laboratory. These pills after proper standardisation well packed in a tightly closed container 28 pills in packet and given to the patients with proper instruction.

Method of preparation of Trayantyadi qwadha

Trayanti, triphala, nimba, kaduka, madhuka ..... equal parts

Trivrit & padola mula ..... 4parts each

Dehusked masura 8parts

These drugs washed, crushed and added 16 times of water. Qwadha is prepared by reducing it to 1/8. Then this should be filter and allow to cool. This prepared qwadha should be given to the patients after proper instruction of usage.

Method of preparation of Vyaghrivarunadi qwadha

These drugs washed, crushed and added 16 times of water. Qwadha is prepared by reducing it to 1/8. Then this should be filtered and allowed to cool. This prepared qwadha was given to the patients after proper instruction of usage.

Dosage

Group A **Vyaghrivarunadi qwadha** :- 20ml along with two tab Kanchanara gulgulu will be given at before food morning and evening.

Group B **Trayantyadi qwadha** :- 20ml along with two tab Kanchanara gulgulu will be given before food morning and evening.

Group C **Vyaghrivarunadi qwadha** :- 20ml will be given before food in morning and evening.

Group D **Trayantyadi qwadha** :- 20ml will be given before food morning and evening.

Group E **Kanchanara guggulu** :- 2tab will be given before food morning and evening.

The medications will be continued for 3months in all the five groups.

A. Selection Criteria

i. Inclusion criteria

- Diagnosed cases of fibroids by USG size of fibroid up to 4cm & number also up to 4 with or without symptoms.
- Age group between 25& 50

ii. Exclusion criteria

- Below the age of 25 & above 50 years of age
- Patients with diseases such as adenomyosis, endometriosis, DUB
- Pregnant women and lactating mother
- Malignancy

iii. Discontinuation criteria

- Patients having heavy artavaraktasrava & no response to medicine
- Non-compliance to medication and evaluation schedule during the course of study.

Data collection

Primary data was collected through interview, observations and relevant investigations. Case was recorded in case sheet proforma which includes Personal data, Socioeconomic status, Chief complaints and associated symptoms with duration and history, History of past illness, Treatment history, Personal history and Family history to know genetic potential. Detailed Artava and Obstetric history were taken to assess nature of cycles, parity, abortion and any failure in conception. Examinations including General examination, Physical examination, Systemic examination and Gynaecological examinations were done. Investigations included blood test such as BT, CT and Hb% Ultra Sonography of abdomen and pelvis was also done for the diagnosis of Uterine fibroid.

Study tool

Assessment will be done using the following

- Case proforma
- Ultrasonography of abdomen & pelvis
- Blood tests

Laboratory investigations

USG of pelvis, Hb %, CT, BT.

Follow up of study

The cases will come to the OPD every month for follow-up up to 3 months. Assessment except USG will be done every month. USG will be done after 3months of medication.

Criteria of Assessment

1. Subjective parameters

1. **Amount of artavaraktasrava (artava matra)** Normal Mild Moderate Severe 2pads / day3pads/day4pads/day>5pads/day
2. **Duration of artavaraktasrava (Artavakala)** NormalMild Moderate Severe 4-5days 5-6days 7-8days>9days

Parameter Grading

3. **Artavasula (Dysmenorrhea)** Absent, Mild (bearable pain without medicine)Moderate (able to bear with difficulty and is get relieved by medicine)Severe (unbearable pain only get relief by injections)

2. Objective parameters

Parameter Grading

Size of the fibroid as evident by USG

No fibroid

Mild (size <2cm)

Moderate (size 3cm)

Severe (>4cm)

Hb% Anemia

Normal <11gm%=/>11gm%

Ethical consideration

Certificate of consent from the Institution Ethical Committee was obtained prior to the study.

Statistical analysis

Data was entered in Microsoft excel spread sheets and analyzed using SPSS software version 20. All data are expressed as mean ± SE, and categorical data are expressed as counts. Symptoms were assessed in each group were tested using repeated mean of ANOVA with multiple comparison after applying Bonferroni corrections. Between groups were performed after computing the mean differences with one way ANOVA. Tukey – Kramer multiple comparison test was applied in those symptoms showed a significance in ANOVA test. All parameters where normality assumptions were violated, corresponding non parametric test for Friedman test and Kruskal Wallis tests were used. Multiple comparisons were performed using Mann-Whitney- U test and Wilcoxon Signed Rank test were used. 5% was fixed as the level of significance for each test.

Observation and analysis

In the present study majority of the patients were included in the age group of 35-50 years.

Majority of fibroids presented as symptomatic and the fibroids nearer to the endometrial cavity more likely cause symptoms especially menstrual symptoms. In the present study symptomatic fibroids and asymptomatic fibroids are present in all the five groups. In Group A and in Group D, 27.3% had asymptomatic fibroids and remaining 72.7% were symptomatic where as in

Group B 24.2% were asymptomatic and 75.8% were symptomatic. In Group C 21.2 % were asymptomatic and 78.8% had symptomatic. In Group E only 15.15% were asymptomatic and in the remaining 84.84% symptoms present. When grandhi or vidradhi develop in the garbhasaya will affect normal function of apanavata due to the srotorodha produced. This will disrupt the normal regulation of artava pravritti and produce different types of artava dushtis like atyartava (excessive artavaraktasrava), deerghakaalanubandhi artava (prolonged artavaraktasrava), artava soola (dysmenorrhoea) etc.

Regarding the history of treatment, majority of patients in all the five groups underwent treatment previously. In Group A 51.5% of patients, in Group B 57.6% in Group C 42.42%, in Group D 45.45% and in Group E 39.4% out of 33 had received treatment for fibroid previously.

Artava sula (Congestive dysmenorrhoea) is one of the complaint that may occur in case of fibroid.This is due to vitiation of vata especially apanavata which is situated in yoni. In the present study, artavasula (dysmenorrhea) is present for 72.7% in Group A, 57.6% in Group B, 66.7% in Group C, 63.6 % in Group D and 75.8 in Group E. Majority of the patients in all the groups had the complaint of artavasula.

In Group A &C 33.3% had observed severe artavasula, in Group B 27.3%, in Group D and in Group E, 36.4% had severe artavasula. On observation majority of the patients in all the five groups had artavasula.

Vastisula (lower abdominal pain) present for 54.5% in Group A, 45.5% in Group B, 66.7% in Group C, 60.6% in Group D, and 72.7% in Group E.

Udaragurutvam (heaviness of abdomen) present for 42.4% in Group A & C, 48.5% in Group B, 60.6% in Group D, and E had udaragurutvam. Udaragrandhi (feeling of lump) present for 21.2% in Group A, 24.2% in Group B, 12.1% in Group C & D and in Group E 9.1%. Katisula (low back pain) present in 90.9% in Group A and in D 57.6% in Group B, 72.7% in Group C, and 45.5% in Group E.

Large uterine fibroids cause pressure on bladder and results in frequency of urination. Urinary symptoms present in 45.5% in Group A, 36.4% in Group B, 30.3% in Group C and in D, and 42.4% in Group E. 3% of patients complaining of frequency of urination in Group A & D and 6.1% in Group B. No patients complained about frequent urination in Group C and in Group E.

The pressure effects on the gastrointestinal tract are less conspicuous. The fibroids in the posterior wall may produce malabandha. In this study 18.2% in Group A, 9.1% in Group B, 30.3% in Group C, 27.3% in Group D and 39.4% in Group E had malabandha.

Intermittent or chronic yonisrava or post coital artavaraktasrava may be present in fibroid cases. Here in this study54.5% in Group A, Group B and D Group, 36.4% in Group C and in Group E 39.4% is having yonisrava (vaginal discharge).

Family history of fibroid present for 48.5 % in Group A, 84.8% in Group B and in Group C, 69.7% in Group D & E. In this study majority of the patients in all the five groups had a family history of uterine fibroid. There is an increased risk for developing fibroids in families having uterine fibroid history.

The most common symptom of uterine myoma is abnormal uterine bleeding like asrgdara (menorrhagia) and deerghakalanubandha artava rakta srava (prologed artavaraktasrava). This may be associated with flooding, gushing and clotting. In Group A 45.5% & in Group B 39.4% had asrgdara. In Group C & E 51.5% had asrgdara and in Group D, 33.3% had the symptom of asrgdara. Deerghakalanubandha artava rakta srava (Prolonged artavaraktasrava) for >9days present for 15.2% in Group A, 21.2% in Group B & C, 15.2% in Group D and 9.1% in Group E. Interval is regular for 25-30 days in almost all the patients. In Group A 54.5% in Group, in Group B 60.6%, in Group C 84.8%, in Group D 63.6% and in Group E 75.7% had the cycle interval of 25-30. Clots present in the artavarakta for 69.7% patients in Group A & Group C, 57.6% in Group B, 63.6% in Group D and 60, 6% in Group E.

Parity (number of deliveries) is one of the factor influencing the fibroid with a reduction in incidence with increasing parity. In this study 3% patients were nulliparous (not delivered) and in Group A, 6.1% in Group B & C, 9% in Group D were nulliparous. Majority of patients were delivered women with one or two children.

On assessing the prakriti of the patients 39.4% in Group A, 33.3% in Group B & C, are coming under Vatapitta prakriti. 30.3% of patients in Group E are having kaphaprakriti and 21.2% in Group D and 24.2% in group C are having Vatkapha prakriti.

Local examination – P/V examination : Size of uterus

According to the size of the Uterus, in group A, the most of the patients (87.9%) had bulky uterus, 9.1% had normal sized uterus and

examination was not done (3%) since they were unmarried. In group B, 84.8% had bulky uterus and 15.2% had normal sized uterus. In group C, all the patients who underwent examination (97%) had bulky uterus and 3% had normal sized uterus. In group D, 66.7% had anteverted uterus and 24.2% had retroverted uterus. In remaining 9.1%, examination was not done. In group E, 93.9% had bulky uterus and 6.1% were unmarried.

Local examination – P/V examination : Direction of uterus

On observing the direction of the Uterus, in group A, 72.7% had anteverted uterus, 24.2% had retroverted uterus and examination was not done in remaining 3%. In group B, 75.8% had anteverted uterus and 24.2% had retroverted uterus. In group C, 75.8% had anteverted uterus and 24.2% had retroverted uterus. In group D, all the patients (90.9%) underwent P/V examination had freely mobile uterus. Examination was not done in 9.1% patients. In group E, 69.7% had anteverted uterus and 24.2% had retroverted uterus. In remaining 6.1% examination was not done.

Analysis

The effect of medicines of five groups between three assessments were calculated regarding the following symptoms.

Artvaraktasrava, amount, duration and interval of artavaraktasrava, vastisula (lower abdominal pain), udaragurutvam (heaviness of abdomen), udaragrandhi (udara grandhi), maidhunasula (dyspareunia), yonisrava (vaginal discharge) and kadisula (low back ache) were assessed after treatment.

Artava raktasrava

Artavatipravritti before treatment was 45.5% which was reduced

to 9.1% in group A, 39.4% in group B reduced to 18.2%, in group C 51.5% was reduced to 24.2%, in group D 33.3% was reduced to 15.2% and in group E artava tipravritti was reduced to 18.2% from 51.5%.

Moderate amount of artavaraktasrava was found after treatment for 72.8% in group A, 75.8% in group B, 69.7% in group D, 81.8% in group D and 66.7% in group E.

Artavaraktasrava

In Group A the mean score for the symptom of artavaraktasrava between three assessments were significantly elevated during second assessment and again further elevated during third assessment. The mean score of menstrual artavaraktasrava between assessments in Group B was slightly increased during second assessment and during the third assessment the level was reduced significantly. In Group C the mean score for the symptom of artavaraktasrava between three assessments was elevated during second assessment and the no change occurs to the artavaraktasrava during third assessment. In Group D the mean score for the symptom of artavaraktasrava between three assessments was significantly elevated during second assessment and the symptom was reduced during the third assessment. The mean score for the symptom of artavaraktasrava between three assessments in Group E was elevated during second assessment and the symptom was then reduced during the third assessment.

Amount of artavaraktasrava

In Group A, the mean score for the symptom of amount of

artavaraktasrava between three assessments was reduced during second assessment and again reduced during the third assessment. In Group B, the mean score for the symptom of amount of artavaraktasrava between three assessments was reduced during second assessment and again reduced during the third assessment. The mean score for the symptom of amount of artavaraktasrava between three assessments in Group C, was reduced during second assessment and again reduced during the third assessment. In Group D and in group E, the mean score for the symptom of amount of artavaraktasrava between three assessments was reduced during second assessment and again reduced during the third assessment.

Repeated measure of ANOVA was used to finding out the mean reduction in the scores for the symptom of artava pravrithi and artava mathra (amount of artavaraktasrava) was found to be statistically significant in Group A, D & E while in group B &C the result was insignificant ($P < 0.05$). This shows, the mean score for the artavaraktasrava significantly changed between three assessments in group A, D & E and unchanged in Group B & C even after the third assessment. On pair wise comparison in group A, D & E, the comparison between first and second assessments and first and third assessment was statistically significant and between second and third assessment was statistically insignificant in group A. Regarding artava mathra, comparison between first and second assessments insignificant second and third assessment was statistically slightly significant in group A. From the comparison of these results it can be assumed that the medicines in group A ie. Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika had a slow and steady positive effect on the symptom of artava pravrithi and

artava mathra. In group D & E, pair wise comparison between first and second assessments and first and third assessment second and third assessment was statistically insignificant. Trayantyadi qwadhain group D & Kanchanaraguggulu in group E, maintain the artava pravrithi and artava mathra in the same level after 3 months of treatment. In Group B & C the symptom artava pravritti and artavamatra remain unchanged even after the third assessment. Trayantyadi qwadha along with Kanchanaraguggulu gullika in group B and Vyaghrivarunadi qwadha in group C does not change the symptoms of artavraktasrava. Groupwise comparison was done using one way ANOVA test. The test was statistically insignificant during first and second and between second and third assessment between 5 groups indicates that all groups got equal result regarding artava pravrithi. On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and highly significant between group A & E during second and third assessment indicates Kanchanaraguggulu given in group E produced significant change in amount of artavaraktasrava comparing to other groups.

Duration of artavaraktasrava

On assessing the duration of artavaraktasrava, no significant change was obtained after treatment. Before treatment 45.5% had 4-5days artavaraktasrava in group A, which was changed to 54.5% had 4-5days and 15.2% had 5-6days artavaraktasrava after treatment. >9days artavaraktasrava before treatment was observed for 15.2% in group A was reduced to 9.1% in group A. In group B, 54.5% before treatment and after treatment 4-5days artavaraktasrava was obtained for 42.4% & 24.2% had 5-6 days artavaraktasrava. 21.2% had >9days artavaraktasrava before

treatment and after treatment which was 9.1%. In group C 39.4% had 4-5days rtavaraktasrava and after treatment 3% had 4-5days artavaraktasrava and 60.6% had 5-6days artavaraktasrava. 21.2% had >9days artavaraktasrava before treatment and after treatment which was 12.1% In group D 51.5% had 4-5days artavaraktasrava and after treatment 60.6% had 4-5days artavaraktasrava and 21.2%had 5-6 days artavaraktasrava. 15.2% had >9days artavaraktasrava before treatment and after treatment which was 9.1%

In group E 42.4% had 4-5days artavaraktasrava and after treatment 9.1% had 4-5days artavaraktasrava 60.6% had 5-6days artavaraktasrava. 9.1% had >9days artavaraktasrava before treatment and after treatment which was 3%.

In Group A, the mean score for the symptom of duration of artavaraktasrava between three assessments was recorded. No change occurs during second assessment but the mean score was reduced during the third assessment. In Group B, the mean score for the symptom of duration of artavaraktasrava between three assessments in the second group was elevated during second assessment and the symptom was then reduced during the third assessment. In Group C, the mean score for the symptom of duration of artavaraktasrava between three assessments was reduced during second assessment and again reduced during the third assessment. In Group D and in Group E the mean score for the symptom of duration of artavaraktasrava between three assessments was recorded. No change occurs during second assessment but the mean score was reduced during the third assessment.

Repeated measure of ANOVA was used to finding out the mean reduction in the scores for the symptom of duration of artavapravritti and was found to be statistically insignificant in all the 5 Groups. Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika, Trayantyadi qwadha along with Kanchanaraguggulu gulika, Vyaghrivarunadi qwadha, Trayantyadi qwadha, Kanchanaraguggulu gulika had an effect to maintain the normalcy of the duration of artava prakriya. On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between second and third assessment regarding interval between artava and duration of artava pravritti indicates that all groups got equal result regarding interval between artava and duration of artavapravritti .

Interval of artava

On assessing the interval of artavaraktasrava most of the patients had normal 25-30day cycle before treatment. Only few patients had >35days artavaraktasrava interval. 6.1% in group A, 3% in group B, C&D, 9.1% in group E. After treatment only 3% had an interval of > 35days.

On RM – ANOVA test, the mean reduction in the scores for the symptom of interval of artavapravritti was found to be statistically insignificant in all the 5 Groups. Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika, Trayantyadi qwadha along with Kanchanaraguggulu gulika, Vyaghrivarunadi qwadha, Trayantyadi qwadha, Kanchanaraguggulu gulika had an effect to maintain the normalcy of the duration of artava prakriya. On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between second and third

assessment regarding interval between artava and duration of artava pravritti indicates that all groups got equal result regarding interval between artava and duration of artavapravritti .

Artavasula (Pain during artava)

After treatment krichrartava was found to be absent in 30.3% in group A, 54.5% in group B, C and D, and in group E the symptom krichrartava was absent for 51.5% of cases.

In Group A, and in Group C the mean score for the symptom of artavasula between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment. The mean score for the symptom of artavasula between three assessments in group B was significantly reduced during second assessment and then it again reduced during the third assessment. In Group D and in Group E the mean score for the symptom of artavasula between three assessments was assessed and the score was reduced during second assessment and the value remain unchanged even after the third assessment.

The symptom of artavasula was tested using Repeated measure of ANOVA and was found to be statistically significant in all the 5 groups. Pair wise comparison between assessment was then conducted and was found to be highly significant statistically between the first and second assessments and was insignificant between second and third assessment as $p<0.05$ in all the groups. The result shows that the treatment slowly reduce artavasula during third assessment than second assessment. Vyaghrivarunadi qwadha along with kanchanaraguggulu gulika, Trayantyadi qwadha along with

Kanchanaraguggulu gulika, Vyaghrivarunadi qwadha alone, Trayantyadi qwadha alone and kanchanaraguggulu gulika alone produced significant change during second assessment, while there was no significant change afterwards till the third assessment. On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between second and third assessment regarding artavasula, indicates that all groups got equal result regarding artavasula.

On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between second and third assessment regarding artavasula, indicates that all groups got equal result regarding artavasula.

Vastisula & Katisula (Lower abdominal pain & Low back ache)

Vastisula absent after treatment for 75.8% in group A, B, & in group C. For 93.9% in group D & 87.9% in group E had no vastisula after treatment.

In Group A and in Group C the mean score for the symptom of vastisula between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment. The mean score for the symptom of vastisula between three assessments in Group B was significantly reduced during second assessment and then it was elevated during the third assessment. In Group D &E, the mean score for the symptom of vastisula between three assessments were assessed and the score was reduced during second assessment and it then slightly elevated during the third assessment.

The result regarding vastisula was found to be statistically significant in all the groups except Group B. On pair wise comparison between assessments, the result was stastically insignficant between the first and second assessments and between second and third assessment in Group A & C. In group D & E the finding was statistically significant between the first and second assessments and was insignificant between second and third assessment as $p<0.05$. The result shows that the Trayantyadi qwadha alone and Kanchanaraguggulu gulika alone slowly reduce vastisula during third assessment than second assessment. Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika, Vaghrivarunadi qwadha alone in group A & C help to reduce the symptom vastisula slowly. Trayantyadi qwadha along with Kanchanaraguggulu gulika in group B, doesnot produce any significant change during the assessment period.

On groupwise comparison regarding vastisula using oneway ANOVA test, the result between first and second assessment was highly significant second and third assessment was insignificant. So multiple comparison was done and the comparison between Group A & Group E was statistically significant. The result shows that significant change occurs to vastisula in Group E comparing to other groups during first and second assessments.

Katisula (Low backpain)

On going through the assessment of katisula after treatment, the symptom was absent for 87.9% in group A, 81.8 in group B, 78.8% in group C and 72.7% in group D & E.

In Group A & in Group C, the mean score for the symptom of katisula between three assessments was assessed and the score was reduced during second assessment and it was again reduced during the third assessment. In Group B, the mean score for the symptom of katisula between three assessments was assessed and the score was reduced during second assessment and it was again reduced during the third assessment. In Group D & in Group E, the mean score for the symptom of katisula between three assessments was assessed and the score was reduced during second assessment and it was again reduced during the third assessment.

RM – ANOVA test, regarding katisula was insignificant statistically in Group B, D & E and significant in Group A & C. Pair wise comparison was stastically insignicant between the first and second assessments and between second and third assessment in Group A & C. But the overall change in the mean during the initial and final assessments showed a significant difference ($p=0.05$) with a mean difference of 0.212 ± 0.084. The results shows that the treatment produced an overall significant change in the symptom of katisula.

On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between second and third assessment regarding katisula, indicates that all groups got equal result regarding katisula.

This indicates that the usage of Trayantyadi qwadha along with Kanchanara guggulu gulika, Trayantyadi qwadha alone and Kanchanara guggulu gulika alone doesnot produce any significant change during the assessment period. Vyaghrivarunadi qwadha along with Kanchanara guggulu

gulika and Vyaghrivarunadi qwadha alone help to reduce katisula (low back pain) slowly & both will help to reduce the katisula significantly.

Udara gurutvam & Udara grandhi (Udara gurutvam and Udara grandhi)

On going through the assessment of udaragurutvam (heaviness of abdomen) after treatment, the symptom was absent for 90.9% in group B, C & D, in group A 84.8% and in group E 93.9% had absent the same. In Group A the mean score for the symptom of udara gurutvam between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group B, the mean score for the symptom of udara gurutvam between three assessments was recorded.The mean score was reduced during second assessment and no change occurs during the third assessment assessment but the mean score was reduced during third assessment. In Group C the mean score for the symptom of udara gurutvam between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group D and in Group E, the mean score for the symptom of udaragurutvam between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment.

RM-ANOVA test was used to find out the mean differences across the three assessments and was found to be statistically significant and change in the mean score of udaragurutvam was significantly differed between assessments in all the groups except in Group A.

Pair wise comparison was stastically insignificant between the first

and second assessments and between second and third assessment in Group B & C.

Pairwise comparisons between the first and second assessments showed a mean difference of 0.212±0.072 which was significant at p=0.018. The comparison between second and third assessment was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment.

The result indicates that, Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika in group A helps to maintain the symptom udara gurutvam as such. Trayantyadi qwadha along with kanchanaraguggulu gulika and Vyaghrivarunadi qwadha help to reduce the udara gurutvam slowly, Trayantyadi qwadhaalone and kanchanaraguggulu gulika alone will help to reduce the symptom udara gurutvam during second assessment than third assessment.

Udaragrandhi (Udara grandhi)

While assessing the result of udaragrandhi (feeling of lump in the abdomen) after treatment, the symptom was absent for 90.9% cases in group A 93.9% in B, D &E and in group C for 97%.

In Group A the mean score for the symptom of udara grandhi between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group B, also the mean score for the symptom of udara grandhi between three

assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group C, also the mean score for the symptom of udara grandhi between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group D & in Group E, same thing happened ie. the mean score for the symptom of udara grandhi between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment.

Repeated measure of ANOVA was used to finding out the mean reduction in the scores for the symptom of udara grandhi was found to be statistically insignificant in Group A, B, D & E while in group C the result was significant ($p<0.05$). This shows, the mean score for the artavaraktasrava significantly changed between three assessments in group C and unchanged in Group A, B, D & E even after the third assessment. In group C, pair wise comparison was insignificant between first and second assessments and second and third assessments. Initial assessment and final assessment were also statistically insignificant.

Vyaghrivarunadi along with kanchanaraguggulu gulika, Trayantyadi qwadha along with Kanchanaraguggulu gulika, Trayantyadi qwadha alone and kanchanaraguggulu gulika alone does not produce significant change in the symptom udara grandhi. Trayantyadi qwadha and kanchanaraguggulu gulika in group C helps to maintain udara grandhi (the feeling of lump) as such.

On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between

second and third assessment which indicates that all groups got equal result regarding udara gurutvam and udara grandhi.

Maidhuna sula & Yonisrava (Dyspareunia &Vaginal discharge)

On going through the result of maidhunasula, the symptom was absent. In group maidhunasula was absent for 93.9% & in A, B & C and 81.8% in group D and 87.9% in group E.

In Group A & in Group C, the mean score for the symptom of maidhunasula between three assessments were recorded. The mean score during the first follow up assessment was reduced in the second assessment and no change occurs during the third assessment. In Group B, the mean score for the symptom of maidhunasula between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group D & in Group E, the mean score for the symptom of maidhunasula between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment.

On Repeated measure of ANOVA, the mean reduction in the scores for the symptom of Maidhuna sula (Dyspareunia) was found to be statistically insignificant in Group A & C while in group B, D & E the result was significant ($p<0.05$). In group B, pair wise comparison was slightly significant between first and second assessments insignificant between second and third assessments.

In group D & E pair wise comparison was insignificant between first and second assessments and second and third assessments.

This indicates that the consumption of Vyaghrivarunadi qwadha along with kanchanaraguggulu gulika and Vyaghrivarunadi qwadha alone will helps to maintain the symptom of maidhunasula without any increase. Trayantyadi qwadha along with Kanchanaraguggulu gulika produced significant change in the symptom maidhunasula during the second comparison, while there was no significant change afterwards till the third assessment. Trayantyadi qwadhaalone and kanchanaraguggulu gulika alone also help to maintain the symptom of maidhunasula.

Yonisrava (Vaginal discharge)

While assessing the result of yonisrava after treatment, it was absent for 100% in group B. In group A & D yonisrava absent for 93.9% and in group C the symptom was absent for 97% and in group E 84, 8%. In group A, the mean score for the symptom of yonisrava between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment. In Group B, the mean score for the symptom of yonisrava between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment. In Group C, the mean score for the symptom of yonisrava between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment. In Group D & in Group E, the mean score for the symptom of yonisrava between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment.

On Repeated measure of ANOVA, the mean reduction in the scores for the symptom of Yonisrava (Vaginal discharge) was found to be

statistically insignificant in Group A, C, D & E while in group B the result was significant. In group B, pair wise comparison was highly significant between first and second assessments insignificant between second and third assessments

This indicates that the consumption of Vyaghrivarunadi qwadha along with kanchanaraguggulu gulika and Vyaghrivarunadi qwadha alone, Trayantyadi qwadha alone and kanchanaraguggulu gulika alone help to maintain the symptom of yonisrava without any increase. Trayantyadi qwadhaalong with Kanchanaraguggulu gulika in group B, produced significant change in the symptom yonisrava during the second comparison, while there was no significant change afterwards till the third assessment.

On groupwise comparison, using ONE WAY ANOVA test, the first and second assessment and second and third assessment was highly significant statistically. Group wise multiple comparison during first and second assessment was statistically significant between the group B & C. The result shows that significant change occurs to yonisrava in the Group B comparing to other groups during first and second assessments. The comparison between the group A & C during second and third assessment was statistically significant at p=0.028. The result shows that significant change occurs to yonisrava in the Group C comparing to other groups during second and third assessments.

Bleeding time and clotting time

On statistical analysis using ANOVA test and Paired sample T test were used to analyse bleeding time and clotting time before and after treatment. The results were statistically insignificant. This indicates that there

was no change in bleeding time and clotting time before and after treatments in all the groups.

Haemoglobin

Paired sample T test was conducted to analyse change in Haemoglobin level in each Group before and after treatment and was statistically insignificant in all the five groups. This result showed that there is no significant difference was observed before and after treatment in respect of Haemoglobin level. So all the five different combinations of drugs had no effect in the level of Haemoglobin.

Comparison and efficacy of treatment in Uterine fibroid

The size and number of fibroids were assessed after three months of treatment in all the five groups using Kruskal-Wallis test, Anova test and Wilcoxon Signed Ranks Test.

The number of fibroids were analysed using Kruskal- Wallis test and it was statistically insignificant in all the five groups. This result indicates that the medicines in all the five groups maintain the number of fibroid as such without any increase.

Anova test was used to analyse the differences in the size of fibroids between the five groups and was statistically insignificant. This indicates that no significant change was observed in the size of fibroid before and after treatment in all the five groups.

Wilcoxon Signed Ranks Test was used to analyse the effect of five different combinations of drugs on the number of fibroid in each group. In all

the groups except in group C, the difference in number of the fibroid was observed as statistically insignificant. In group C the difference in number of the fibroid was found to be statically significant. This indicates that the drug Vyaghrivarunadi qwadha in the third group produce good result in reducing the number of fibroid comparing to other groups.

Discussion

Artavapravritti

Excessive secretion of artava or menstrual blood is termed as rakthapradara or asrgdara. In garbhasayagrandhi the normal function of apana vata has been disturbed. It may affect normal duration and interval of artavaraktasrava. Samprapthighatakas of asrgdara, include vata, pitta & kapha dosha and rasa & rakta. In garbhasayagrandhi mamsa dushti also occurs. Due to nidana seva vitiated vata increases the amount of raktha. Vyana vayu is responsible for for increasing rakthachamkramana in garbhasaya and apana vata for artava nishkramana. Increased amount of raktha enters into the garbhasaya gata sira and vitiated apanavata causes atyadhika artava srava or deerghanubandhi artava srava leads to asrugdara. Due to asrayasrayi bhava of raktha and pitta, pitta dosha is also vitiated in asrgdara. So in the treatment, vatakapha samana treatment along with vatapitta samana treatment required.

Samprapti ghataka in asrigdara

Dosa ..... Vata, Pitta, Kapha

Dushya ..... Rasa, rakta, artava

Upadhatu ..... Artava

Srotas ..... Artavavaha srotas, rasavaha srotas,

Raktavaha srotas

Srotodushti ..... Atipravritti

Asaya ..... Garbhasaya

Agni ..... Jataragni, Dhatvagni

Sthanasamsraya Rajovaha sira of garbhasaya

Pittakapha samana property of drugs in Trayantyadi qwadha and kaphavata samana property of drugs in Kanchanara Guggulu and Vyaghrivarunadi qwadha help to alleviate the symptoms. Kanchanara guggulu had the properties of vatakaphahara, chedana, bhedana, medohara which will normalize the rakthachamkramana through garbhasaya siras and anuloma property helps to normalize the function of apanavata. Pittakaphasamana property of Trayantyadi qwadha along with raktaprasadana, bhewdana property and vatakaphahara property of Vyaghrivarunadi qwadha along with sodhahara and anulomana properties also help to reduce garbhasayagrandhi and normalize the function of apanavata there by normalize the circulation through the garbhasaya there by normal artavaraktasrava is established.

Artavapravritti and Artavamatra

Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika in group A had a slow and steady positive effect on the symptom of artavapravritti and artavamatra. Trayantyadi qwadha in group D & Kanchanaraguggulu in group E, maintain the nature of artavapravritti and produced slight change regarding artavamatra. In Group B & C the symptom artavapravritti and artavamatra (amount) remain unchanged even after the third assessment. Trayantyadi qwadha along with Kanchanaraguggulu gulika in group B and Vyaghrivarunadi qwadha

alone in group C does not change the symptoms of artavapravritti .

Kaphavatahara property of Kanchanara guggulu and Vyaghrivarunadi qwadha help to stop the growth of garbhasayagrnadhi. Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela, help to normalize the function of apanavata and maintain the circulation there by achieved normal bleeding after treatment. Chedana property of maricha, bhedana property of varuna, bibhitaki, medohara property of guggulu. help to reduce the growth of uterine fibroid or garbhasaya grandhi there by reduce the complication of artava dushtis.

Kaphapittahara property of Trayantyadi qwadha help to maintain the size of Garbhasyagrandhi. Almost all drugs in Trayantyadi qwadha m have garbhasayasankocha, bhedana, lekhana, raktha prasadana properties which help in hethu vipareetha chikitsa. These reduce pelvic congestion, reducing the stasis and dilatation of various blood vessels draining the endometrium. Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara, ela, rakthaprasadana property of madhuka help to normalize the function of apanavata and maintain the circulation there by achieved normal artavaraktasrava after treatment. Chedana property of maricha, bhedana property of varuna, bibhitaki, kaduka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain the size of uterine fibroid or garbhasayagrandhi there by reduce the complication of artava dushtis.

Trayantyadi qwadha given in group D having Kaphapitta samana property. Major content in this qwadha is masura which is having the property

of sangrahi. Virechana property of trivrut and padolamoola present equal to masura may be the cause of the qwadha having no change on the artava chakra. Kanchanaraguggulu alone given in group E is having teekshna guna and so there is no considerable change on nature of artava pravritti . No result was obtained in group B & C due to ushna teekshna property of drugs administered in these groups.

Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara, ela, rakthaprasadana property of madhuka, chedana property of maricha, bhedana property of varuna, bibhitaki, kaduka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain artava prakriya during the treatment period in all the five groups.

On Groupwise comparison Kanchanaraguggulu given in group E produced significant change in amount of artavaraktasrava comparing to other groups. Kaphavata samana property of drugs in Kanchanara Guggulu help in shrinkage of fibroid whereby alleviating its lakshanas. Ingredients in Kanchanara Guggulu are srotovibandhahara, sothahara, medohara, chedana properties which also helpful to reduce the size of garbhasayagrandhi. All these help in reducing atyartava.

Artavakala (Duration of menstrual bleeding) & Interval of Artavaraktasrava

Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika, Trayantyadi qwadha along with Kanchanaraguggulu gulika, Vyaghrivarunadi qwadha, Trayantyadi qwadha, Kanchanara guggulu gulika had an effect to

maintain the normalcy of the interval between artava and duration of artava prakriya.

Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara and ela, rakthaprasadana property of madhuka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain artava pravritti with normal duration and interval during the treatment period in all the five groups.

Artava soola or krichrartava (Pain during menstruation)

Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika, trayantyadi qwadha along with Kanchanaraguggulu gulika, Vyaghrivarunadi qwadha alone, trayantyadi qwadha alone and Kanchanara guggulu gulika alone produced significant change during second assessment, while there was no significant change afterwards till the third assessment.

Among Tridosas, Vata is responsible for pain. For production of Ârtava, Vyâna and Apâna have a coordinate relation with each other. Vyâna Vâyu is responsible for rakthachamkramana through whole body including garbhasaya gatha siras and anulomana or munchana of artava is done by apâna vâyu. Due to the presence of Garbhasayagrandhi, artava vaha sroto dushti occurs as sanga and vimarga gamana. By means of srotovaigunya, vitiated dosha circulated through srotas leads to sanga and vimarga gamana in artavavaha srotas. Which obstruct the movement of apanavata (sanga and avarana) results in pratiloma gati of rajas present as krichrartava ie. Artavasula. Vitiated apanavata then produce avarana to artavavaha srothas will also causes sula during artavapravritti. As in all cases of artava sula, Vataprakopa is the

main cause; the treatment should be aimed at to normalize the vitiated vata. As vata is main causative factor of all yonivyapats, vata should be treated first. Snigdha, ushna, amla and lavana articles should be used for the relief from artava sula due to Vata. For avrita apana vayu, treatment should be agnideepaka, grahi, vatanulomana and pakvashaya shuddhikara.

Doshanulomana property of harithaki, nagara, deepana, pachana property of nagara, maricha, pippali, varuna, ela in kanchanaraguggulu gulika, Doshanulomana property of harithaki, nagara, deepana property of thrayanthi, katuka, virechana (pakwasayasuddhi kara) property of thrivrith, padolamula in trayantyadi qwadha, deepana, pachana property of vyaghri, varuna, sigru, nagara, Doshanulomana property of nagara & punarnava help to reduce avarana of apanavata. For alleviating sroto vaigunya, kaphamedohara yoga is required. All the yogas used in this study are having the property of kaphamedohara which would create srotosudhi should rectify vatavaigunya there by artava sula reduced.

Vastisula & Katisula (Lower abdominal pain & Low back ache)

Trayantyadi qwadha alone in group D and Kanchanara guggulu gulika alone in group E help to reduce vastisula slowly during third assessment than second assessment. Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika, Vaghrivarunadi qwadha alone in group A & C help to reduce the symptom vastisula also slowly. Trayantyadi qwadha along with Kanchanaraguggulu gulika in group B, doesnot produce any significant change during the assessment period.

Apana vata situated in pakwasaya ie. Sroni, vasthi, medra uru etc

and is responsible for the nishkramana of sukra, artava, sakrut, mutra and garbha. Vatakaphahara, chedana, bhedana, medohara properties of Kanchanaraguggulu may reduce garbhasayagrandhi and there by normalize the rakthachamkramana through Garbhasaya siras and also regularize the function of apanavata. It is predominantly a kaphamedohara yoga that would create srotosudhi and would rectify vata vaigunya. These functions of Kanchanaraguggulu gulika help to reduce vastisula more than that of other yogas and combinations which occurs due to garbhasayagrandhi.

Katisula (Low back ache)

Trayantyadi qwadha along with Kanchanaraguggulu gulika, Trayantyadi qwadha alone and Kanchanaraguggulu gulika alone does not produce any significant change during the assessment period. Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika and Vyaghrivarunadi qwadha alone help to reduce katisula (low back pain) slowly & both will help to reduce the katisula significantly.

Vatakaphahara, chedana, bhedana, medohara anulomana, sodhahara properties of Kanchanara guggulu, rakthaprasadana, bhedana and vatakaphahara, sodhahara, & anulomana properties of Vyaghrivarunadi qwadha help to reduce garbhasayagrandhi there by normalize the circulation through the garbhasaya siras there by decrease the upadravas like katisula.

Udaragurutvam & Udaragrandhi (Heaviness of abdomen and feeling of lump in the abdomen)

Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika in group A helps to maintain the symptom udaragurutvam as such. Trayantyadi

qwadha along with Kanchanaraguggulu gulika and Vyaghrivarunadi qwadha help to reduce the udaragurutvam slowly, Trayantyadi qwadha alone and Kanchanaraguggulu gulika alone will help to reduce the symptom udaragurutvam during second assessment than third assessment.

Vyaghrivarunadi along with Kanchanaraguggulu gulika, trayantyadi qwadha along with Kanchanaraguggulu gulika, trayantyadi qwadha alone and Kanchanaraguggulu gulika alone does not produce significant change in the symptom udaragrandhi. Trayantyadi qwadha and Kanchanaraguggulu gulika in group C helps to maintain udaragrandhi (the feeling of lump) as such.

Pratiloma gati of apana vayu also causes gulma in mahasrotas leading to udaragurutvam. Vatakapha samana and anulomana property of drugs in all the groups might have helped in maintaining the symptoms.

Bleeding time and clotting time

One of the complaint of uterine fibroid is atyartava or asrugdara. The bleeding time test is used to evaluate how much time to taken to control the bleeding. It is used to assess the function of platelet in bleeding, adhesion, and aggregation. On observation the bleeding time was with in normal limit for all the patients in all the 5 groups before treatment. The clotting time is the time of coagulation of blood in vitro and this factor is helpful to control the bleeding in certain conditions. As asrgdara is seen as one of the symptom in fibroids, the value of clotting time was relevant

Vitiation of Vata, Pitta and Raktha are the causative factors of Asrugdara having the symptom of artava rakthathipravritti . Medicines having rakthasthambhana property should be used for rakthapradara or asrgdara.

One of the complaint of Uterine fibroid (Garbhasaya grandhi) is rakthathisrava. pitta dushta raktha is said to be askandhi ie. does not clot easily and Kapha dushta raktha is having picchila (viscous) and tantumath (contains clot). The ingredients in all the drugs used in this study (Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanra guggulu) are having the property of Vatakaphahara rather than Pittasamana. So there is no change occurs to the bleeding time and clotting time after treatment.

Haemoglobin

All the five different combinations of drugs had no effect in the level of Haemoglobin. Asrugdara which may be seen as a symptom in uterine fibroid leads to Panduroga. Acharya Charaka in Panduroga chikitsa adhyaya explained that, dhatukshaya or apatarpana are responsible or unavoidable condition of disease Panduroga. Signs and symptoms of dhatukshaya are to be developed in disease panduroga are given in the chapter Panduroga chiktsa. Sneha kalpanas are indicated rather than other kalpanas. Jeevaneeya, ojovardhaka, thiktha madhura rasa pradhana drugs are responsible for increasing raktha dhathu. The medicines used in all the groups are qwadha s and gulikas which are having the property of vatakapha samana, bhedana and chedana. That might be the reason of all the the different combinations of drugs used in this study had not obtained any change in the level of haemoglobin.

Comparison and efficacy of treatment in Uterine fibroid

In the samprapthi of grandhi vitiated vata and Pitta which will then vitiate kapha dosha along with mamsa, raktha and medas producing sopha having the nature of vritta (round), unnatha (protuberant) and vigradhitha (knotty or glandular).Carakacharya explained mamsagrandhi as mahath and

anarthi When grandhi develops in uterus having the characteristic features of mamsa grandhi, it is almost similar to that of uterine fibroid.

Vidradhi occurs due to vitiation of raktha. Vata, pitta and papha doshas aggravated and then vitiate twak, rakta, mamsa medas and asti and become localized at place and produce sopha which is slowly increasing. Abhyanthara vidradhi is deep rooted and hard like a tumour.

Considering the kapha predominant nature of grandhi i.e.; snigdham, mahantam, anarti, kadinam, chirabhivridhi etc and its nature of grathanata along with the need of alleviating sroto vaigunya, a kaphavatahara yoga predominantly kaphamedohara yoga that would create srotasudhi and would rectify vata vaigunya were used. Medoanile guggulu was quoted by vagbhatacharya in the context of agrya oushadhas. Here a guggulu preparation which includes mainly kanchanara which is kashaya rasa and samgrahi, which would reduce snigdha, kadina nature of grandhi along with trikatu and varuna that are katu rasa pradhana which would give sroto visudhi has been used in this study.

Pittakaphahara yoga which is having the property of raktaprasadana has needed. For this Trayantyadi qwadha from vidradhi chikitsa is used. It contains kaphapittahara dravyas predominantly masura which is madhura rasa, samgrahi, sita virya and rakta prasadana.

Garbhasaya grandhi is a vatakapha predominant disease. The drug given in the C group was Vyaghrivarunadi qwadha. In this research, all medicines in A, B, C, D & E groups are agni deepnas. Because of that it is having the capability to eliminate or stop the pathology at its primary level. In

this disease agni mandya is happening, then it will lead to dhusti of dhathus. So by removing agni mandya using this medications it will make the samprapthi vighatana to the disease.

On samprapthi vighatana, consider the samprapthi sthana along with vitiation of apana vata. All the ingredients of this qwadha is having the property of vata kapha samana. Deepana, pachana, lekhana, bhedi and shodhahara property are helpful to reduce vata kapha. Varuna indicated for vidhradhi and sigru is having the property of medohara. Varuna is katu rasa pradhana which would produce sroto visudhi. All these properties help to reduce garbhasaya grandhi. Sigru and shundi are having the property of anuloma there by normalize the function of apana vata. The drug given in the C group was Vyaghrivarunadi qwadha only and it may act with these properties hence help to reduce the number of fibroid rather than its combination with Kanchanraguggulu, or Trayantyadi qwadha along with Kanchanaraguggulu or the consumption of Kanchanara guggulu alone.

Therefore Vyaghrivarunadi qwadha produce good result in reducing the number of uterine fibroids. On statistical evaluation, Vyaghrivarunadi qwadha, trayantyadi qwadha & Kanchanaraguggulu gulika both in single and in combination form proved to be very effective in reducing the associated symptoms like Athy artava, Yonisrava, Vastisula, Maidhunasula, Katisula, Adhmana and Gulma.

Conclusion

- On statistical analysis regarding the artava pravritti, Vyaghrivarunadi qwadha and Kanchanaraguggulu had better result than other groups.
- Kaphavatahara property of kanchanaraguggulu and Vyaghrivarunadi qwadha help to stop the growth of garbhasayagrnadhi. Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela, help to normalize the function of apanavata and maintain the circulation there by achieved normal artava pravritti after treatment.
- Kanchanaraguggulu gulika in group E, had a significant difference in amount of artava in comparison with other groups during second and third assessments.
- Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela, help to normalize the function of apanavata and maintain the circulation there by achieved normal amount of artava after treatment.
- In group wise comparison regarding duration, interval of menstrual cycle and pain during menstruation, all the groups produced same result in all the comparisons.
- Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara and ela, raktaprasadana property of madhuka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain artava pravritti with normal duration and interval of artharaktasrava during the treatment period in all the five groups.

- In group wise comparison significant change occurs to the vastisula in the E group (Kanchanara guggulu) comparing to other groups during first and second assessments.
- Kanchanaraguggulu is a kaphamedohara yoga that would create srotosuddhi and would rectify vata vaigunya there by reduce udarasula.
- Vyaghrivarunadi qwadha along with kanchanaraguggulu gulika and Vyaghrivarunadi qwadha alone help to reduce katisula (low back pain) slowly & both will help to reduce the katisula significantly.
- Vatakaphahara, chedana, bhedana, medohara anulomana, sodhahara properties of kanchanaraguggulu, Pittakaphasamana property of Trayantyadi qwadhaalong with raktaprasadana, bhedana and vatakaphahara, sodhahara, & anulomana properties of Vyaghrivarunadi qwadha along with sodhahara, anulomana also help to reduce garbhasayagrandhi there by normalize the circulation through the garbhasaya siras there by decrease the upadravas like katisula.
- On going through the assessment of udaragurutvam and udaragrandhi after treatment, all the five groups got equal result in all the comparisons.
- Prathiloma gati of apana vayu also causes gulma in mahasrotas leading to adhmana. Vatakapha samana and anulomana property of drugs in all the groups might have helped in maintaining the symptoms.
- No change in bleeding time, clotting time and level of Haemoglobin with respect to the drugs in all the 5 groups.

- The ingredients in all the drugs used in this study (Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanra guggulu) are having the property of Vatakaphahara rather than Pittasamana.
- On statistical analysis all the five types of medicines had no effect on reducing the size of fibroids.
- As in group C (Vyaghrivarunadi qwadha) the difference in size of fibroid was statistically significant, the Null Hypothesis is rejected and the Alternate Hypothesis "There is significant difference in the
- Efficacy of Vyaghri varunadi qwadha, Trayantyadi qwadh, or Kanchanaraguggulu either in single drug or in combination in uterine fibroid" is accepted.
- Garbhasaya grandhi is a vatakapha predominant disease. The drug given in the C group was Vyaghrivarunadi qwadha. All the ingredients of this qwadha is having the property of Vata kapha samana. Deepana, pachana, lekhana, bhedi and shodhahara property are helpful to reduce Vata kapha. Varuna indicated for vidhradhi and sigru is having the property of medohara. Varuna is katu rasa pradhana which would produce sroto visudhi. All these properties help to reduce garbhasaya Gandhi.
- Hence, this study proved that internal administration of Vyaghrivarunadi qwadha for three months in a dose of 20ml two times daily before food alone is effective in reducing the size of uterine fibroid.

Limitation and reccomendations

- Usually medication for longer duration is provided in uterine fibroid treatment. In this study duration of treatment is 3months. If the duration of medication had been for 6months or one year it might have had a different impact on uterine fibroid reduction in size and number.
- There are many limitations in sample collection due to un willingness to consume only the study medicine due to their associated symptoms like heavy bleeding.
- Larger sample size could have yielded a different result.

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LIST OF ABBREVIATIONS

Approx.	Approximately
Deg.	Degree
df	Degree of freedom
Dis.	Discharge
FU	Follow up
Gen. Dis.	General Diseases
Gen. illness	General Illness
Gr.	Group
Gyn. Dis.	Gynecological Disease
His.	History
LAP	Lower Abdominal Pain
LBA	Low Backache
Mens. Pain	Menstrual Pain
M.sula	Maithunasula
MD	Mean Deviation
MH	Menstrual History
NA	Not applicable
ND	Not Done
No.	Number
P/s.	Perspeculam
P/v	Per vaginal
PK	Pita Kapha
SD	Standard Deviation
SE	Standard Error
sig.	Significant
U.grandhi	Udara grandhi
U.gtvm/Udara g'tvm	Udara gurutvam
Ut. Pro.	Uterine Prolapse
UTI	Urinary Tract Infection
Vag.Dis.	Vaginal Discharge
VK	Vata Kapha
VP	Vatha Pitta

Ayurveda	Modern
Artava / Artava raktasrava	Menstrual bleeding / Bleeding
Artavasula / Krichrartava	Menstural Pain / Dysmenorrhoea
Artavamatra	Bleeding amount
Atyartava/Asirgdara	Excessive bleeding / Menorrhagia
Katisula	Low Back Ache
Maidhuna sula	Dyspareunia
Udara gurutvam	Abdominal Heaviness
Udaragrandhi	Abdominal Lump
Vastisula	Lower Abdominal Pain
Yonikandu	Pruritis
Yonisrava	Vaginal Discharge

Chapter - I

INTRODUCTION

The word Ayurveda means "Science (Veda) of Life (Ayus) or Lifespan". Ayurveda, the indigenous medical system of India, has integrated the concept of interconnectedness into its understanding of health and disease. This system of medicine is the traditional comprehensive health care system and has been prevailing in India for more than 5000yrs[1]. The fundamental principles of Ayurvedic system remain consistent and it is not related to passage of time. It is a specialized medical system encompassing all medical fields including surgery[2]. The origin of Ayurveda is attributed to Atharva Veda where mention is made several diseases with their treatments. Later, from the 6th Century BC to 7th Century AD there was systematic development of the science and it is called Samhita period, when a number of classical works were produced by several authors and during this period there is evidence of organized medical care. Ayurvedic principle comprises "*Swasthasya swasthya rakshanam*" which is meant by protection, preservation, and promotion of the health of the healthy. No other medical science today speaks of maintaining the health of healthy people as one of its objectives. Also, "*Vikara prashamanam*" pacifying the disease of the diseased[3].

Ayurveda gives primary importance to womens health as she is considered as the root cause for coming generation. Altered life style in todays world has made

women more prone to diseases. Todays enescapable stress which will affect the health. The basic reason why women are reeling under myriad problems is because she has not been following the codes of healthy living. She has disregarded the codes for the bodily health as well as healthy mind also. In present day life women are effectively facing challenges encountered by stressful life resulting in Mithya Ahar, vihar, over exertion & malnutrition and all these things will leads to various types of gynaecological disease.[4]

In description of Ashtangas there is no separate division as Prasutitantra and Streeroga. Due to the oneness of mother and baby Ayurveda treats Prasutitantra and Stree roga under Koumarabhruthya. This may be the cause of absence of explanation of some streerogas in Ayurveda. Uterine fibroid is one such disease which has no direct reference in Ayurvedic classics.

Uterine fibroids are the commonest benign tumours of the uterus as well as in the female body These tumours arises from the uterine myometrium and consists of varying proportion of smooth muscle and fibroblasts[5]. Each individual fibroid is monoclonal and arises from a somatic mutation in a progenitor myocyte. Multiple chromosomal abnormalities are detected in approximately 50 per cent of fibroids; the commones being translocation between the long arms of chromosomes 12 to 14 followed by deletion on the long arm of chromosome Y[6] These are considered to be the one of the most common condition requiring hysterectomy. In the United States, uterine fibroids are the main indication for gynaecological surgery and result in approximately 600, 000 hysterectomies and 60, 000 myomectomies per year.[7]

Fibroids are rare before the age of 20 and they most commonly cause symptoms between the age of 35 and 45 years. They are more common in nulliparous or relatively infertile women[8]. They are clinically apparent in about 25% of women[9], and with newer imaging techniques, the true clinical prevalence may be higher. Careful pathological examination of surgical specimens suggests that the prevalence is as high as 77%.[10].

The exact cause is unknown. But there are so many risk factors for the formation and growth of fibroid[11].

Increased risk	**Decreased risk**
Age more than 40	Increased parity
Meanarche at a younger age (below 10)	Late menarche
Family history of Uterine fibroids	Smoking
Nulliparity	Use of oral contraceptives

Risk factors of uterine fibroids were investigated in a long term follow up study of women using various methods of contraception. An individual control was selected who matched the patient on age, date of entry into the cohort, and family planning clinic at recruitment. Case-control analysis showed that reproductive experiences were closely linked to development of fibroids. Risk of fibroids decreased consistently with increasing number of term pregnancies; women with five term pregnancies had only a quarter of the risk of women who had had none. Risk also decreased consistently with increasing duration of oral contraceptive use; the risk of

fibroids was reduced by some 31% in women who had used oral contraceptives for 10 years.

Risk was strongly related to weight of the woman. A women who weighed under 55 kg had a particularly low risk, and overall the risk rose roughly 21% for each 10 kg increase. Smoking was associated with a decreased risk of fibroids.[12]

More than 50% uterine fibroids are asymptomatic and can be discovered on vaginal examination or by Ultrasound[13].Fibroids which are rarely associated with mortality, but which cause significant morbidity and have an adverse effect on quality of life.[14]

Symptoms of fibroids are generally classified into the following catagories, abnormal uterine bleeding, pelvic pressure symptoms , pain, and reproductive dysfunction. Abnormal uterine bleeding occurs in the form of prolonged bleeding and excessive bleeding with clots. Increased endometrial surface area in submucous fibroid, associated endometrial hyperplasia will cause bleeding abnormalities. When a large fibroid compress lymphatics produce oedema of lower limbs. When broad ligament fibroid will press the sciatic nerve leading to pain. Large fibroids in the posterior wall may cause constipation and anterior wall may cause urinary symptoms[15] As the tumors grow, pressure is exerted on adjacent organs, especially the urinary tract and rectosigmoid. The associated urinary tract manifestations include frequency, outflow obstruction, and ureteral obstruction with hydronephrosis[16].

The mechanism by which the fibroids affect the fertility is uncertain, but it is believed that the submucous fibroids distort the uterine cavity and affect the

implantation of embryo. other symptoms related to pregnancy are abortion, premature labour, malposition, malpresentation, obstructed labour and abnormal uterine contraction[17].

Infertility may be associated with submucosal fibroids [18,19] or a markedly distorted endometrial cavity induced by big intramural myomas, which both may interfere with embryo implantation or sperm transportation[20].

In one recent retrospective controlled study, although no correlation was found between location and number of myomas and IVF outcome. Women with intramural myomas larger than 4 cm had significantly lower pregnancy rates as compared with those with myomas smaller than 4 cm. This study suggested that subserosal and intramural myomas of 4 cm or less in size did not affect outcome in assisted reproduction cycles and a negative influence could be expected if the size of the myoma is bigger than 4 cm[21].

The cause of excessive bleeding in uterine fibroids has been related to vascular alterations of the endometrium. The obstructive effect on uterine vasculature created by intramural myomas leads to endometrial venus dilatation[22,23], which results in the congestion of myometrium and endometrium leading to profuse menstrual bleeding. The mechanism by which the fibroids affect the fertility is uncertain, it is believed that the submucous fibroids distorted the uterine cavity will affect the implantation of embryo. Other symptoms related to pregnancy are abortion, premature labour, malposition, , obstructed labour and abnormal uterine contraction[17].

Depending upon the relationship of fibroid with peritoneal coat and

endometrium, they divided into the following three types. Subserous, submucous, and intramural fibroid. Their site is determined by the position of their origin and by the direction in which they grow.majority of the fibroids are situated in the body of the uterus and in very few cases their growth confined to the cervix. Extra uterine fibroids may develop in the broad ligament[8]

The growth of uterine fibroid is strictly related to estrogen and their receptors and stimulated by cytokines and growth factors[24]. Other theory is that estrogens can maintain progesterone receptor (PR) levels, and thus progesterone through its receptor may promote leiomyoma growth.[25] Diagnosis of fibroids can be made by means clinical symptoms , examination findings and investigations. Fibroids can be managed medically by Gonadotrphin-releasing hormone agonists, Progesterone receptor modulators, and Levanogestarol-secreting intrauterine system (Mirena IUS). Surgical managements include myomectomy, uterine artery embolisation, myolysis, and hysterectomy[26]. Malignant change of uterine fibroid is found in only 0.2% only[26].

A retrospective study reviewing 1332 women operated on for uterine myomas showed that leiomyosarcoma incidence was less than 2% in postmenopausal women and 0.23% in premenopausal women. One out of 371 women operated on for rapidly growing myomas was found to have a leiomyosarcoma. In another study, after surgery, leiomyosarcoma was found in only 3 (0.17%) of 1815 pathologic specimens. The mean age of patients with uterine leiomyosarcoma was[51] and patients were usually symptomatic. The diagnosis of uterine sarcoma should be considered in those postmenopausal women with a pelvic mass, abnormal bleeding, and pelvic pain[27].

Ayurvedic perspective

There is no specific mention of uterine fibroid in Ayurveda or tumuors in garbhasaya.In Ayurveda it is an anuktha vyadhi. The tumuors are considered as grandhees and when the tumour present in the garbhasaya they are considered as equivalent to grandhi in garbhasaya. Grandhi develops due to vitiation of dosha and dushya followed by their accumulation at one place producing protuberance and is relatively hard and rough in nature[28]. Vitiated vata affecting mamsa, rakta and medas mixed with kapha producing rounded protuberant knotty and hard swelling[29]. Acaryas explained different types of grandhis like vatika, paittika, kaphaja etc.[30,31,32,33,34]. Vagbhata opined that mamsa vitiated due to consumption of mamsa increasing diet produces smooth, big and hard grandhi like kaphagrandhi[35]. Here vitiating dosha is kapha and vata and dushya is mamsa. Manifestation of disease depends on how extend the dosha is vitiated. Due to nidana, guru , manda, hima, snigda, sandra and sthira properties of kapha is increasing. If kapha dushti is prevalent then granthi which is kathina, sthira and without any menstrual abnormality may be manifested. In case where there is excess vitiation of vata there occurs increase in chala and suksma properties leading to Krichrarthava with associatedsymptoms like malabandha, moothrkrichra, katisula, udarasula etc. Management of uterine fibroid through surgery is available to meet urgent need of the patient, but it has become a global challenge because a satisfactory conservatory medical treatment is not established till date. It is one of the most common gynaecological diseases that leads to hysterectomy.

Uterine fibroid management with Ayurveda directs at the samprapti-vighatana of different khataka. Vata, Kapha dominating Tridosha are involved in the

pathogenesis of this condition. Hence, Vata-Kaphahara medications are required. Dushyas are Rakta, Mamsa and Meda. Srotodushti typeisof Sanga, Vimargagamana and Atipravritti. So, by Aamapachana and Vatanulomana drugs this problem can be controlled, and to combat Agnimandhya medicines having Deepana (stomachic), Pachana (digestive) properties are required; with this hypothesis, Vata-Kaphahara (which alleviates vitiated Vata and Kapha Doshas), Sophahara Ayurvedic medicines will be effective in case of uterine fibroids. Ayurvedic medicines like kanchanaraguggulu, were chosen for this study. Kanchanara Guggulu is in clinical use for many centuries in the treatment of Gandamala , Arbuda, Grandhi, Kushta, etc.

Management of granthi in Ayurveda is mostly conservative compared to modern management line such as surgery, hormone therapy etc. (7)

Yonirogas In Ayurveda samhitas

Majority of gynaecological disorders come under the heading yonivyapath or yonirogas. All the acharyas mentioned total 20 yonirogas depending upon the vitiation of doshas[36]. Coming to the nidana, mityachara, mitya vihara, mityahara, artavadushti and beeja dushti were responsible for different types of yonirogas[37].

Considering the complications of fibroids like Atyarthava, treatment of yonirogas such as asrgdara, rakthayoni and asrja can be adopted [38, 39, 40, 41]. The uterine fibroids are one of the causes of repeated abortion and infertility. While going through this, explanation of jathaghni and vandhyatha are also included in literature review [42, 43, 44]. Another symptom of uterine fibroid is Artavasula or krichrartava so the description of vatiki yoniroga is also included[45,46,47].

Vyaghrivarunadi quadha and Trayantyadi quadha were selected to use in this study since these two medicines are indicated for anthar vidradhi. Kanchanara Guggulu gulika, which is mentioned in Sarangadhara Samhitha is indicated in Gandamala, Granthi, Apachi etc. Its reference is also seen in Bhaishjyaratnavali under Galagandadi Rogachikitsa[48,49]. It is one of the commonly used guggulu preparation for its varied level of disease indications. On evaluating the ingredient wise property the drugs are found to have garbhasayasankocha, deepana, lekhana, vatakaphasamaka properties. As these properties can relieve the symptoms of fibroid and also helpful to reduce the size of fibroid, so this drug was chosen.

Trayantyadi qwadha is mentioned in Ashtanga Hridaya chikitsa sthana in the chapter of Vidradhivridhi Chikitsa[50]. As the individual evaluation of these drugs revealed the properties of tridoshahara, sothahara, deepana, bhedana etc it was thought to be useful in allievating the symptoms of fibroids. One of the studies conducted by kanchanaraguggulu along with trayantyadi qwadha concludes that there is significant reduction in almost all types of fibroids accompanied by its shrinkage without any side effects[51].

In recent past, practitioners of Kerala have explored Chikitsamanjari, a text of Kerala tradition and have been using a qwadha indicated for antharvidradhi. Vyaghrivaranadi qwadha is mentioned in sahasrayoga and chikitsa manjari for anthar vidradhi[52, 53] All the ingredients of the qwatha had the property of vatakaphasamana. Trayantyadi qwadha and kanchanara guggulu is in clinical use for many centuries. Vyaghri varunadi qwadha has been reported for its effectiveness in uterine fibroid cases. But clinical studies have not been done so far. So to assess its effectiveness in

uterine fibroid and to find out a new and effective medicine, this yoga was used. The formulation (Vyaghrivarunadi qwadha) has been reported for its effectiveness in combination with Kanchanaragulgulu gulika in this condition, but clinical studies have not been done so far.

The gold standard for a new drug entity in clinical research is the randomized, double-blind, placebo controlled drug trial. However, with a large number and range of medicines already available, newer medicines are increasingly being developed for indications in which a placebo control group would be unethical. Some authors have rightly debated that placebo controlled trials are unethical. Such views would reinforce the trend toward using active comparators. In such situations, one obvious solution is to use an existing drug already licensed and regularly used as a standard of care for the indication in question as an active comparator. New treatment is then expected to match the efficacy of the standard treatment but may demonstrate other advantages in safety, convenience, or cost.

In an effort to unravel scientific evidence using modern scientific means, Ayurvedic drugs have begun to be evaluated in controlled drug trials. These trials, which are often placebo controlled, are usually designed to demonstrate superiority. Though the results have been usually reported as "encouraging and merit further drug development", the statistical significance has been elusive. In this melee to show efficacy, several positive results related to safety and other purported advantages (like improved quality of life, easy drug availability and less cost) with Ayurvedic drugs are lost or underreported. Currently used descriptive statistical methods (frequency, Confidence Interval (CI)) do not address intensity of adverse events or the intervention required

to treat them. As safety is the inherent strength of Ayurvedic medicines, better safety/ tolerability evaluation system is required to capture its extent. Moderate efficacy but excellent safety, which may be the case with several Ayurvedic medicines, may suffice to maintain the control in long term management of chronic disorders such as degenerative diseases. There is a trade-off between efficacy and safety but we have no means to put them together in a mathematical evaluation to judge the overall performance of a drug.

The study is titled as "Efficacy of Vyaghrivarunadi qwadha and Kanchanaragulgulu in comparison with Trayantyadi qwadha and Kanchanaragulgulu in Uterine fibroid (Anukthavyadhi) – A Randomised controlled trial"

The aim of the study is to evaluate the efficacy of Vyaghrivarunadiqwadha and Kanchanaragulguluin Uterine fibroid. Objectives of the study are

1. To evaluate the efficacy of Vyaghrivarunadi qwadha and Kanchanaragulgulu on symptoms and size of Uterine fibroid
2. To compare the efficacies of Vyaghrivarunadi qwadha and Kanchanaragulgulu, Trayantyadi qwadha and Kanchanaragulgulu, Vyaghrivarunadi qwadha, Trayantyadi qwadha, Kanchanaragulgulu on symptoms and size of Uterine fibroid.

Chapter II **Review of literature**.

2.1. Uterine Fibroid

2.2. Conceptual study of the disease

2.3. Drug Review

Chapter III **Methodology of Research**

Chapter IV **Results and Analysis**

Chapter V **Discussion, Summary and Conclusion.**

Chapter - II

REVIEW OF LITERATURE

2.1 Uterine Fibroid - Ayurvedic Perspective

2.2 Uterine Fibroid

2.3 Drug Review

2.1 UTERINE FIBROID
Ayurvedic Perspective

Ayurveda the science of life is one of the branches of Atharvaveda. It has a long tradition and deep attachment to the Indian culture. It has been passed from generation to generation since time immemorial. Deals not only with curation of disease but also its prevention. Ayurveda, has been classified into eight branches (Astanga). However, this classification into eight divisions dealing with different aspects of science of life[1]. One of the divisions 'Koumar-Bhritya' deals with pediatrics, and hence the maternal health leading to delivery of a healthy child and the related gynaecological issues also comes under this topic. There is nodivision such as prasuthitantra in ashtanga division.

Uterine fibroids cannot be directly correlated with any diseases mentioned in Ayurvedic classics.According to Ayurveda descriptions of two diseases, grandhi and arbuda is similar to that of tumour[2] but specific description of grandhi or arbuda related to reproductive organ is not available.

2.1.1 Arbuda

The word arbuda is derived from "*arb himse*"[3] which means a condition that kills or causes harm. Another derivation is"*aram*

*budhathi"*which denotes its fast growing capacity. (Sabdakalpadrumam, Amarakosham).

From the word meaning itself we can observe that arbuda is a term used in Ayurveda to denote a disease of malignant nature. Fibroids are slow growing tumors which take about 3-5 years to grow sufficiently to be felt per abdomen. They also regress in size after menopause.

Both Vagbhatas say that arbuda is bigger than granthi without mentioning any etiopathogenesis[4]. Malignant degeneration in uterine fibroid is very rare and occur in about 0.1% [5] and so it cannot be correlated to arbuda described in Ayurveda.

Susruthacharya explains that the main clinical features of grandhi, vidradhi and alaji is swelling or protuberance.

"शोफसमुत्थानाग्रन्थिविद्रध्यलजीप्रभृतयः"[2]

When going through the review of etiopathogenesis and symptomatology as per modern sciences, uterine fibroids can be considered as mamsa vridhijanya vikara and is correlated to Mamsa Granthi. The uterine fibroids arise from the myometrium due to transformation of single smooth muscle cells to neoplasams[6]. So the treatment of vidradhi and grandhi can be adopted for tumours.

2.1.2 Grandhi

The term grandhi is used for a tumour, lump or nodule and it develops due to vitiation of doshas and dushyas and accumulation at one place. The

character of grandhi is glandular or nodular swelling "ग्रन्थिसंज्ञयाग्रन्थ्याकारत्वंदरशयति"[7]. Inmadhukosa commentary of Madhava nidana it is explained that the name grandhi is given due to its specific appearance of knotty, hard and rough nature.[8]

2.1.2.1 Nidana and samprapthi of Grandhi

According to Susrutacharaya, grandhi develops due to vitiation of Vata & kapha doshas which then vitiates dhathus such as mamsa, rakta and medas and produce rounded, protuberant, knotty and hard swelling.

वातादयोमांसमसृक्चदुष्टाःसंदूष्यमेदश्चकफानुविद्धम।
वृत्तोन्नतंविग्रथितंतुशोफंकुर्वन्त्यतोग्रन्थिरितिप्रदिष्टः।।[9]

Vata is responsible for the faulty division of cells and kapha is helpful for the growth. Affected dhathu is mamsa ie. Muscular tissue and tumours develop when kapha enters into the mamsa dhathu and mamsavaha srotas.

As per the views of Vagbhatacharya the predominant dosha in the etiopathogenesis of grandhi is kapha and also included amongst the disorders of mamsa and medas[10]. Some text books like Madhavanidana, Bhavaprakasa & Yogaratnakara have included one more dushya ie. Siras in the etiopathogenesis of grandhi.

वातादयोमासमसृक्प्रदुष्टासंदूष्यमेदश्चतथासिराश्च।
वृत्तोन्नतंविग्रथितंचशफंकुर्वन्त्यतोग्रन्थिरितिप्रदिष्टः।।[11,12,13]

Charakacharya has not explaining specific samprapthi for grandhi.

2.1.2.2 Classification of Grandhi

Caraka[7]	Susruta[14]	Vagbhata[15]	Bhela[16]	Sarngadhara[17]
Vata	Vata	Vata	Vata	Vata
Pitta	Pitta	Pitta	Pitta	Pitta
Kapha	Kapha	Kapha	Kapha	Kapha
Medas	Medoja	Medas	Sira	Rakta
Sira	Sira	Sira	Snayu	Sira
Mamsa		Mamsa		Medas
		Asthii		Vrana
		Vrana		Asthi
		Rakta		Mamsa

2.1.2.3 Explanation of grandhi in samhitas

2.1.2.3.1 Caraka Samhitha

Carakacharya classified grandhi into six types. Doshaja grandhies produce the symptoms according to the vitiation of dosha ie. In vatajagrandhi dryness, piercing pain and its colour is black. Grandhi due to medas is extremely smooth and movable. Siragrandhees are pulsatile. Mamsagrandhi is large and painless[7]

Sadhyasadhyatha

The grandhi situated in kukshi, udara, gala and marmas, should be asadhya. Large grandhees and grandhi present for children, old or weak persons are also incurable and should not be treated[18].

Treatment of grandhi

General treatment of grandhi is explained in swayadhu chikitsa. In amavastha samsodhana is the main treatment and it should be done in all types of grandhees. After that swedana can be done by massaging the grandhi with stone, wood, thumb, stick or joint of bamboo. When it becomes pakwa, physician should incise the grandhi and root out with its capsule by means of instruments. After that cauterize that area properly otherwise grandhi will grows again gradually. If some part left behind it will get suppurated and changes into kaphaja visarpa. Considering this complication, an expert physician should treat it from the beginning and should be treated like vrana[19].

2.1.2.3.2 Susrutha Samhita

Susruthacharya classified grandhi into 5 types. i.e vata, pitta, kapha, medograndhi and siragrandhi. Vataja grandhi produces pain like stretching or perforating and it ruptures with severe pain. It is not very soft and its colour is black. When it becomes perforated, fresh blood is discharged. Pittaja grandhi is associated with burning sensation and having sucking type pain. It gets suppursted fastly its colour is yellowish red, red, or yellow and on rupture hot blood is discharged. kaphaja grandhi is very cold in touch, skin coloured, or slightly discoloured. Its nature is stony hard, big and is having slight pain intense itching. Its size increases gradually and on rupture thick pus comes out[20].

In medoja grandhi increase or decrease of size depends upon the the decrease of increase of body. It is smooth, big, and associated with mild pain and intense itching. Siragrandhi develop when a weak person doing

excessive exercise, the vayu becomes aggravated and influence the veins and produces a painful and mobile protuberant. The prognosis of siragrandhi is either krichrasadhya and asadhya depending upon its features. If the grandhi is painful and mobile then it is krchrasadhya and painless, fixed, large grandhi, and grandhi situated in marma then it becomes asadhya. Dalhanacharya in his commentary cited that, sixth type of grandhi develops due to mamsa and rakta and it's features are like arbuda[21]

Sadhyasadhyata

Grandhi present in marmas, and when it becomes fixed and painless are asadhya[22].

General management

In amavastha grandhi can be managed like sopha. Oleation should be done with taila, grutha, vasa or majja, singularly or in combination. Taila, ghruta, vasa and majja should be medicated with prasarini and dasamula singularly or in combination is beneficial in this condition[23]. In pakwavastha, when grandhi is not situated in marmasthana should be enucleated followed by scrapping with instrument and application of kshara[24].

Vatika grandhi chikitsa

Lepana should be done with kalka of himsra, rohini, amrtha, bharngi, syonaka, bilwa, agaru, krisnagandha, giji, and talaparni in amavastha. Upanahasweda is also should be done with the same drugs mentioned above. When it becomes pakva, incise the grandhi drained the pus properly and wash

with decotion of either bilwa, arka and narendra or else arkadi or vilwadi group of drugs. For vrana sodhana, apply kalka of tila, leaves of panchangula and rock salt or tila, citraka and rock-salt. For healing the wound, apply taila medicated with either paste of rasna and sarala or vidanga, yashtimadhu and amrtha or rasna, sarala, usira, vidanga and madhuka alongwith milk[25].

Paittika grandhi chikitsa

Apakwa pittagrandhi should be managed by raktamoksha with leeches. Sechana should be done with milk and seeta kashaya with kakolyadivarga is explained for internal use. Virechana is the sodhana treatment for paittika grandhi in apakwa avastha. For virechana, hareetaki churna mixed with juice of draksha and ikshu should be given. When it attains pakwa avstha, pus should be drained properly by making an incision on the grandhi. Wash the wound with kashaya prepared with kashayarasa drugs and for cleansing paste of tila and yashtimadhu should apply. Apply ghruta medicated with madhura group of drugs for healing[26].

Kaphaja grandhi

All the sodhana therapies should be done for purification of doshas followed by rubbing or massage with thumb, stone or bamboo-stick. If the grandhi is not cured by all the above treatments it is not situated in marma, incised it and remove the pus. To prevent its reccurence, after cessation of bleeding cauterize the wound properly by application of ghruta and honey. Then measures should be adopted for cleansing and healing the wound[27].

Medoja grandhi

Amavastha

In medograndhi lepana should be done with paste of tila over the grandhi and cover it with two layers of cloths. After that, massage over this cloth without burning by heated iron or else with kalka of tila. Incise the grandhi and drained the pus and should be cauterize that area[28].

Pakwavastha

When the grandhi becomes pakwa, it should be incised, washed with cow's urine and cleaned. Cleaning should be done with thick paste of tila mixed with suvarchala salt or swarjikakshara alongwith haritala, rocksalt, honey, ghrtha and yavakshara. After proper cleansing oil medicated with both karanja, gunja, bark of vamsa, inguda and cow urine should be applied or massaged[29].

2.1.2.3.3 Ashtanga Samgraha

Vagbhata in Ashtanga Samgraha have mentioned nine types of grandhees including three types of grandhees ie. Raktaja, asthija and vranaja. In vatika grandhi pain is thoda or bheda type. its colour is black, freely mobile and suddenly increases or decreases in size. It is soft and when it ruptures fresh blood is discharged.Features of Paittika Gandhi are burning pain, sucking or blazing type of pain. It gets suppurated fastly, it is yellowish red, red or yellow in colour and here also after rupture hot and vitiated blood is discharged. Features of Sleshmaja grandhi include the grandhi is hard, cold, skin coloured and has itching and become painless. After suppuration thick pus comes

out.Due to increased use of medo vriddhija ahara viharas, medas will increase. This vitiated medas carried out by vata, lies under the skin.

The grandhi is freely mobile, smooth and soft. Its clinical features are similar to sleshmaja grandhi and the increase or decrease of size of the grandhi depends upon the increase or decrease of medas. On rupture, thick coppery, black or white meda is discharged. Siraja grandhi occurs due to vitiation of vata dosha. This aggravated Vata will influence blood and network of veins and causing their compression, constriction, tortuosity and desiccation. Siraja grandhi is non pulsatile and painless. In mamsa grandhi, mamsa vitiated due to consumption of diet which increases mamsa and produces smooth, big and hard grandhi which resembles kaphaja grandhi. Asthi grandhi develops after fracture of bone or trauma and it is protuberant or depressed. Vranagrandhi is a type of knotty structure having burning sensation and pain and develops due to consumption of all rasas by a person having unhealed ulcer or immediately following its healing or non application of bandage over a fresh ulcer or wound or undischarged vitiated blood following trauma with a stone. Raktagrandhi develops due to vitiation of doshas which in turn vitiates rakta. Influence of organisms results in involvement of siras and mamsa and there by numbness is developed.[30]

Sadhyasadhyatha

Vataja, pittaja, kaphaja, raktaja and medoja grandees are curable. Thick, rough, mobile and situated in vital parts, throat and abdomen are

incurable. Above explained curable grandhis have the features like thick, rough, mobile and situated in vital parts etc are also incurable[31].

Treatment

All grandhees should be treated firstly with sodhana karmas. After proper snehana vamana and virechana should be done with ghruta medicated with either both the bruhatis, pippali and citraka or bruhati, citraka, vyaghri and kana. Then samsarjana karma followed by sirovirechana should be done with draksha, both rajanis, vidanga, sundi and putidaru for the grandhees situated in head and neck. After nasya dhooma, kabala and gandusha should also be used.

Lepana should be done with kalka of ankola, madhuka, matulunga, himsra, putidaru, root of bilva, sarala, kushta, vaca, stem bark of varuna ativisha and ajagandha or with kalka os syama, suradaru, samanga, kosataki, punarnava and sarshapa. To relieve inflammation, pain and stiffness of grandhi, a poultice made with yavasakthu, madhuka, kushta, satapushpaand devadaru mixed with ghruta should be applied[32].

Vatajagrandhi

Vagbhata described internal use of mahasneha prepared with the drugs of dasamoola. Lepana should be done with lukewarm paste of amrutha, nimbabeeja, bharngi, syonaka, bana, talapatri, krsnagandha and agaru with milk. If it is not cured siravedhana should be done[33].

Pittajagrandhi and Raktajagrandhi

In apakwa pittajagrandhi raktamoksha should be done with leech. Parishechana should be done with the decotion prepared by Nyagrodhadi gana. Virechana should be done with powdered haritaki with swarasa of draksha or ikshu. When it becomes pakwa incise grandhi and drained the pusproperly. Wash the wound with decotion of arkadigana drugs and cleansing should be done. After that for proper healing, apply medicated oil prepared with rasna, sarala, useera, vidanga, madhuka along with milk[34].

Kaphagrandhi

After proper shodhana therapy swedana and vimlapana shoud be done. Lepana was described with the paste of bhallathaka, saindhava, ajagandha and sarshapa. If the grandhi is not cured and is not situated in marma, incise the grandhi and drained the pus. After stoppage of bleeding, the wound should be properly cauterised by application of ghrtha and honey etc. If the cauterization is improper there is chance of recurrence to the grandhi. So that to prevent this, the wound should be cleaned properly by applying poultices consisting of kshara, madhu and guda after proper cauterization. Then treatment for its proper healing should be done[35].

Mamsa, vrana grandhi

Mamsagrandhi should be treated by keeping in mind that it should be relapsable[36].

Medograndhi

According to Vagbhata chikitsa of kaphagrandhi can be adopted

to treat apakwa medograndhi. Apply tilakalka over the grandhi and cover it by cloth. Then it should be massaged heated repeatedly. It can be treated by incising the grandhi with instruments and draining the meda. After proper draining, it should be cauterised.

If the medograndhi becomes pakwa it should be incised and washed with cow's urine. The wound should be cleaned by application thick poultice of pasted tila mixed with madhu, rock salt, suvarchika, saindhava, kanchanakshiri, haritala and swetika. After this oil medicated with karanja, gunja, bark of vamsa, inguda and cow's urine should be applied or massaged. After proper cleaning it should be treated by vrana ropana medicines[36].

Siragrandhi

Recently developed siragrandhi should be treated by internal use of sahacharadi taila, upanaha with vatahara drugs, vasthi and siravedha[37].

2.1.2.3.4 Ashtanga Hridaya

Classification and symptoms are same as that explained in Ashtanga sangraha.In apakwa grandhi, treatment prescribed for sodha should be adopted. Especially with vatahara drugs. It should be oleated with ghrtha medicated with brhati, citraka, vyaghri and kana. Proper sodhana should be done, after that anoinment, sudation and massage over the grandhi should be done[38].

2.1.2.3.5 Madhavanidana / Bhavaprakasa / Yogaratnakara

Vatagrandhi has stretching, perforating, pricking, throwing and piercing type of pain and is black, soft, and after rupture of grandhi fluid comes

out. Pitta grandhi suppurated very fastand it is yellowish red in colour. Hot blood comes after its rupture. Kaphaja grandhi is skin coloured, stony hard, had only mild pain, and it is big. After rupture of grandhi thick pus expelled out. Medoja grandhi is smooth and had no pain. On rupture secretion resembling medas has expelled. Siragrandhi after doing heavy excercise it becomes protuberant and round. This siragrandhi when situated in vital parts is incurable[39].

In Bhavaprakasa and yogaratnakara similar descriptions are seen about grandhi like madhavanidana[40, 41]

Cikitsa

Lepana with swarjika, mulaka kshara and powder of conch shell cures grandhi[42]. Grandhi in amavastha should be treated like sopha[43].

All the grandhees except siragrandhi should be managed by sastrakarma if not cured by medicines. Due to sastrakarma a wound is produced and it shuld be dressed with jatyadi ghruta or managed with other vrana ropana oushadhas[44].

If the grandhi is not situated in vital parts and not subsiding with medical treatment it should be enucleated. A wound thus produced should be bandaged with cloth and if it is suppurated incise the grandhi and the wound should be cleaned and apply vrana ropana oushadhas. The wound should be washed with appropriate kwadhas. Honey and ghruta mixed with kshara should

be applied for cleansing. After cleansing, sechana should be done with oil medicated with vidanga, patha and rajani.

Lepana with fruit kernel of putrajiva pasted with water cures kalasphota, vishasphota and painful grandhis located at axilla, ears and neck. Lepana of kalka of lasuna and rajika cures grandhis located at cardiac region and neck. Grandhis are cured by application of gandhaka, arka dugdha, tala and jaipala pasted together[45].

2.1.3 Vidradhi

शीघ्रविदाहित्वात्विद्रधितिनिरुच्यते[46]

In Ayurveda, the term vidradhi is used to refer an abscess. According to Acharya Caraka, vidradhi occurs due to the excessive vitiation of rakta and it gets suppurated quickly, hence the term vidradhi.

Doshas getting aggravated, vitiate the skin, blood, muscle, fat and bone tissues and becoming localised at a lace and produce a troublesome swelling which slowly bulges up, which is deep rooted, painful, round and wide is called vidradhi.[47]

2.1.3.1 Nidana

Vidradhi arise due to the intake of food which are paryushith (stale), atyusna, ruksha, shushka and vidahi, sleeping over uneven bed, indulgence in improper activities and factors that bring about vitiation of rakta.[48]

2.1.3.2 Samprapthi

Doshas getting aggravated, vitiate the twak, rakta, mamsa, medas and asthi and become localised at a place and produce a swelling which is slowly bulging up, deep rooted and painful and is called vidradhi as per ayurveda[47].

Classification

According to the site, vidradhi is classified into two – Bahya (external) and Aanthara (internal). The bahya develops in many parts of the body and is hard and bulgedup. The aanthara is more dreadful, deep rooted, hard like tumour, growing upwards like anthill and quickly killing the person like fire or a sharp weapon.It arises over nabhi, basthi, yakrt, pleeha, kloma, hrudaya, kukshi, vamkshana, vrikka and apana.According to the samprapthi. It is of six types-one from each doshas, one by combination of all three doshas, one by kshatha and one by asrk[49].

2.1.3.3 Lakshana

Susrutha Samhitha

Vatika vidradhi is black or light red coloured, hard with severe pain, difficult in nature of onset and ripening. Paithika vidradhi resembles the ripe fruit of udumbara or blue in colour, accompanied with fever and burnng sensation, quick in onset and ripening. Kaphaja vidradhi resemble the shape of sharava, white in colour, stable, having mild pain and slow in onset and ripening and accompanied with itching. Exudation in these three kinds are thin

watery, yellow and white in colour respectively. Vidradhi having many kind of colours, pain and exudates, greatly bulging up, uneven, big and irregular in ripening are the symptoms of sannipathika vidradhi. Aaganthu vidradhi occurs when a person gets wounded, when he indulges in improper food and activities, due to the heat of wound dispersed by vata, aggravates rakta and pitha and give rise to fever, thirst, burning sensation and symptoms of paithika vidradhi. Rakta vidradhi is surrounded by black coloured eruptions, accompanied with burning sensation, pain, fever and has the symptoms of paithika vidradhi[50].

In women who had abnormal deleveries and who indulge in unsuitable food and activities, rakta vidradhi can arise which cause burning sensation and fever. It can also arise in women who had proper delivery, when blood does not flow out of the body and then it is also called makkalla. If this does not subside within seven days, it is going to ripen[51].

Asthividradhi occurs due to the ripening of bone marrow, when it does not get an opening out due to the obstruction by bone and muscle. Pus remains outside and produces severe burning sensation as though burnt by fire aided by the combination of heat of both bone and bone marrow. Due to activities of patient, it gets an outlet, the exudation comes out resembling fat, unctuous, white, cold and thick. It is also called Majjaparipaka[52].

Ashtanga Samgraha

Vidradhi caused by vata has severe pain, blish red in colour, is slow developing and maturing, with irregular stages and has pain such as

puncturing, excising, rotating, flatulent and throbbing and o the nature of spreading to other parts and producing sound. That caused by pitha has red coppery or black colour, causing thirst, delusion, fever and burning sensation, quick in developing and maturing. That caused by kapha is yellowish white, has itching, causes excess salivation, rigors, inactivity, yawning, loss of appetite and feeling of heaviness of body, slow in developing and maturing. That caused by sannipata has the symptoms of all three dosas. That caused by rakta is surrounded by black vescicles, blue in colour, with severe burning sensation, pain and fever and symptoms of pitta vidradhi[53].

Ashtanga Hrudhaya

Vaghbhata in Ashtanga Hrudaya describes 6 types of vidradhi, the signs and symptoms of which are similar to that explained in Ashtanga Samgraha[54].

Caraka Samhitha

Caraka explains only types of four of vidradhi- vatika, paittika, slaishmika and sannipathika. The signs and symptoms are same as mentioned above. The discharge from vatikka is thin, unctuous, red, grey and foamy, paittika is similar to decoction of tila, masha and kulatha and that of slaishmika type is white, slimy, thick and profuse. The discharge from sannipathika type shares the characteristics of all the three[55].

2.1.3.4 Upadrava

The complications arise in vidradhi according to the site[56].

Site	Upadrava
Nabhi	Hikka
Basthi	Muthrakrichra, puthi muthram
Yakrit	Swasa
Pleeha	Uchvasa rodha
Kloma	Trit, galagriha
Hridaya	Sarvanga pragraha, pramoha, tamaka, kasa, hridayothatanam vyadha
Kukshi	Kukshi parshvanthara arthi, atopam
Vamkshana	Sakthigraha
Vrikka	Katiprushta parsva vyadha
Payu	Pavana nirodhanam

2.1.3.5 Saadhyasadhyatha

Sannipathika vidradhi and those located on hrudaya, nabhi and basthi bursting after maturing either internally or externally coming out through mouth, those occuring in emaciated persons and those associated with upadrava are to be rejected for treatment[57]

2.1.3.6 Chikitsa

The treatment for vidradhi is similar to that of sopha and should be done in the amaavastha.

Vataja Vidradhi

It should be treated with warm lepa of vata mitigating drugs added with ghritha, taila and vasa. Meat of of anupa and audaka animals added with the drugs of kakolyadi gana, sneha, amla and lavana can be used for upanaha. It may also be done using vesavara, krsara or payasa. The person should be given swedana and raktamoksha continuously. By the above treatments also if the vidradhi attains pakavastha, then it should be made to ripe, cut open, cleaned and washed with pancamoola kwatha added with more salt and filled with oil prepared from rugs of bhadradhi gana and madhuka. It be cleansed with drugs of purgative group with trivrt and made to heal using oil prepared from prithakparni etc and trivrt taila[58].

Pittaja Vidradhi

It should be applied with a paste made of sarkara, laja, madhuka and sariva or payasa, usira and candana – all macerated with milk. Sechana can be done with decoction or infusion of jivaniya gana, milk, sugarcane juice or ghee boilt with jivaniya gana added with sugar. Powder of trivrt and harithaki added with honey should be given for licking. Blood should be taken out by leeches. After this the ripe vidradhi should be cut opened, washed with panchavatkala or oudakaja kwatha, and poultice of tila, yashti, madhuka added with honey and ghee can be applied and the abscess tied with a band of thin cloth. Ghee prepared with prapaundarika, manjishta, madhuka, usira, padmaka, haridra, milk or that of ghee prepared from ksirashukla, prithakparni, samanga, rodhra, candhana and leaf buds or bark

of nyagrodha etc heal the wound. Karanjaadi ghritha is highly efficient in pittaja vidradhi[59].

Kaphaja Vidradhi

It should be fomented continuously using brick, sand, stone, cow dung, husk, dust, urines of animals and others made hot. The patient should be administered kwatha with kaphahara dravyas, emesis, application of paste and poultices and raktamoksha with alabu. After this the ripe vidradhi should be cut opened, and washed with aragwadha kashaya. The wound should be filled with paste of haridra, trivrt, sakthu and tila mixed with honey and bandaged. Medicated oil should be prepared from kulathika, danti, trivrt, syama, arka, and tilvaka added with gomutra and saindhava[60].

Raktaja Vidradhi

The treatment of pittaja vidradhi can be employed in raktaja vidradhi also. In case of abhyanthara vidradhi in apakva stage, kwatha of varunaadi gana added with usakadi gana can be given. Medicated ghee from drugs of these two groups also cures the same. Oil of these two ganas can be used in asthapana vasthi. Anuvasana is also beneficial. Decoction of madhusigru added with suitable drugs should be used for drinking, external application along with food. Madhusigru can also be consumed with water, dhanyamla, urine of animals or sura. Silajathu can also be consumed with decoction of drugs which mitigate the doshas, or guggulu, sunthi and suradaru can be consumed. Snehana, upanaha and anulomana should always be done[61].

Raktamoksha is highly beneficial in all vidradhis. The vidradhi which is ripe and bulged up should be punctured and treated like a wound. When the vidradhi is exuding eiher upward or downward then decoction of drugs varunaadi or madhusigru with maireya, amla sura or aasava can be given. The patient should partake boiled rice prepared with decoction or root of sigru with sidharthaka or with yusha of yava, kola and kulatha. Tilvaka ghritha or ghee prepared with drugs oftrivrithadi gana may be consumed daily morning[62].

The treatment should always aim at prevention of ripening of vidradhi, if that is not possible, success of treatment is doubtful.

Majjagata vidradhi

When the vidradhi is localised in majja, treatment should be commenced after intimating its incurability. Oleation, sudation, removal of blood and other treatments advocated for pakva vidradhi should be adopted[63].

Asthigata vidradhi

When the vidradhi is localised in asthi, the bone should be punctured and cleaned. After determining that it is not having any foreign materials, the wound should be washed wih decoction of bitter drugs. Tiktha ghritha is beneficial. When the flow of bone marrow does not cease, then drinking decoction of sodhana gana is advised. Medicated oil should be prepared with priyangu, dhataki, rodhra, katphala, tini, saindhava which has wound healing properties[64].

The symptoms seen in the uterine fibroid like excessive bleeding,

dysmenorrhoea, abortion, infertility[65] are also explained in Ayurveda by acaryas. In these diseases vitiation occurs to the arthavavaha srothas.Ayurvedasastra explains about female reproductive organs under the heading yoni and garbhasaya.

2.1.4 Yoni

"*Yowthi samyojayatheethi yoni*"[66] yoni is defined as the place where union take place i.e. union between stree beejam and purusha beejam (fertilisation).

Its shape resembles that of sankhanabhi and is possessed of 3 artavas. Out of these three artavas garbhasaya is situated in the third artava[67].

2.1.5 Garbhasaya

According to Ayurveda 7 asayas present in the human body and women possesses one extra asaya ie. Garbhasaya[68]. Its shape resembles that of rohita malsya and situated in between pithasaya and pakwasaya. It lies in the third artava of yoni. Garbhasaya is considered as the female organ concerned with reproduction and it is the place where garbha lies in garbhini[69].

गर्भे गर्भगतस्य अपत्यस्य वासस्थानम् इत्यर्थः [70]

2.1.6 Arthvavaha srotas

Arthavavahasrotases are two in number having their roots in the garbhasaya as well as in the arthavavaha dhamanies. Injury to any of these parts bring on vandhyathwa, maidhuna asahishnutwa and artavanasa[71].

2.1.7 Yonirogas in Ayurveda Samhitas

The word yoniroga denotes the disease that affecting the female reproductive organs. Almost all the gynaecological diseases comes under the heading yoniroga.A healthy yoni or reproductive organs is essential for the conception, growth and delivery of a healthy child. In Ayurveda samhitas 20 yonirogas are mentioned and they are classified according to the vitiation of doshas[72]. Though all the classics have described twenty yonirogas, however, there exists much difference of opinion regarding causative doshas.

2.1.7.1 Nidana of yonirogas

Due to the causative factors vitiation of dosha occurs. They are classified as mithyahara, mithyavihara, arthavadushti, beejadushti and daivatha (unknown cause).[78]

Mithyahara

For a healthy life normal fnction of doshas and dhatus are necessary. Proper intake of food healthy food, proper timing etc are very important for the proper nourishment of dhatu which in turn leads to a healthy life. Unhealthy food habits leads to improper dhatuparinama and is responsible for different types diseases. Over eating, eating of meat daily may cause various gynaecological diseases by producing over weight, diabetes etc. Inadequate or mal intake leads to nutritional deficiency which leads to lohitakshaya, arajaska etc yonirogas.

Table - 2.1.1 Classification of Yonirogas

Dosha	**Caraka**[73]	**Susruta**[74]	**Vagbhata**[75]	**Bhavaprakasa**[76]	**Sargadhara samhita**[77]
Vata	Vatiki, acharana, aticarana, prakcarana, udavarthini, putraghni, antharmukhi, soochimukhi, shushka, shanda, mahayoni	Udavartha, vandhy, viplutha, pariplutha, vathik	Vatiki, aticarana, prakcarana, vamini, udavartha, jataghni, antharmukhi, soochimukhi, shushka, shanda, mahayoni.	Vatiki, aticarana, prakcarana, vamini, khandita, jataghni, antharmukhi, soochimukhi, shushka, nanda, mahayoni.	Udavartha, vandhy, viplutha, pariplutha, vathiki
Pitta	Paithiki, rakthayoni, arajaska	Rudhirakshsya, vamini, sramsini, putraghni, pittala	Paithiki, rakthayoni	Paithiki, rakthayoni	Rudhirakshsya, vamini, sramsini, putraghni, pittala
Kapha	Slaishmiki	Athyananda, karnini, acharana, athicarana, sleshmala	Slaishmiki, vipluta	Slaishmiki, vipluta	Athyananda, karnini, anandacarana athicarana, sleshmala
Tridosha	Sannipathiki	Shanda, phalini. Mahathi, suchivaktra, sarvaja	Sannipathiki	Sannipathiki	Shanda, andini Mahathi, suchivaktra, sarvaja
Vatapitta	Pariplutha, vamini.		Priplutha, lohithakshaya	Priplutha, lohithakshaya	
Vatakapha	Upaplutha, karnini.		Upaplutha, karnini.	Upaplutha, karnini.	
Krimija			Viplt		

Mithyavihara

Unhealthy life style like lack of excercise, leads to obesity like conditions which in turn leads to various types of gynaecological diseases like lohitakshaya, arajaska etc. Coitus in abnormal position and excessive coitus lead to yonirogas such as aticharana, prakcharana, antharmukhi [79]etc. Unhygienic condition of external genitalia leads to the growth of certain organisms and leads to diseases as vipluta, upapluta, slaishmiki[80] etc. Vegadharanam or udeeranam is one of the cause of vitiation of vata. Which in turn produce different types of vatika yonirogas like udavartini, shushka, karni[81] etc.

Beejadushti

Beejam means stribeejam and a healthy stree beejam is essential for a healthy baby. Any vitiation to this beeja leads to the condition of sucimukhi, shanda [82]etc. The disease depends upon the parts of the beeja affected. When only a part of beeja vitiated, that results in the formation of suchimukhi where as the whole beeja affected then shnada yoniroga develop.

Daiva

Idiopathic or unknown factors come this cause daiva.

Arthava dushti

The word artava had different meanings and which depends upon the contest. It may be female hormones, ovum or menstrual blood. Some of the gynaecological diseases occurs due to imbalance of ovarian hormones and causes various types gynaecological diseases like, , nashtartava, lohitakshaya

etc. Abnormalities of ovum is one of the cause of vandhyatwa. Abnormalities of menstrual blood produce different types of diseases like asrgdara, raktayoni etc.

2.1.7.2 Complications of yoniroga

Carakacharya explained that when the yoni of a woman gets afflicted by doshas, the sukra cannot retain in the yoni and the female became infertile. Besides this she is also suffers from gulma, arsa, pradara, sthambha and soola[83].

2.1.7.3 Chikitsa

Yoni situated in pakwasaya which is the seat of vata. So yonirogas never develop without vitiation ov vata. Hence in the treatment of yonirogas pacify vata dosha first, then only any treatment for the particular disease will be effective. Treatment principle depends upon the type of vitiation of dosha[84].

2.1.7.4 Pathya-Apathya

Arishtam, asavam, pippali, lohabhasma with honey, yavannam, abhayarishtam, seedhu madyam, taila, lasunarasa.are indicated in yonirogas[85]

Manda is contraindicated in yoniroga. It will be prepared with more quantity of water. This should increase kapha and that inturn may increase vatavarana[86].

2.1.8 Arthavadushti

In Ayurveda different types of menstrual disorders have been described under the heading Artavadushtiand asrgdara. Eight type of artavadushtees are explained in classics. Eka doshaja, dwidoshaja, raktaja and tridoshaja[87].

2.1.8.1 Arthavadushti - Classification

Vatika artava dushti

When the artava vitiated by vata the artavarakta is red, black or dark violet in colour, thin, frothy and scattred. The menstrual blood excreted slowly with perforating or piercing type of pain. This can be considered as a condition of oligomenorrhoea with dysmenorrhoea[88].

Paittika artava dushti

In paittika artavadushti the menstrual blood is yellowish or bluish in colour, is free from unctuousness. It's smell is like that of pus, fungus, blood or putrid. The excreted blood is hot associated with severe burning and feeling heat at the time of excretion. According Harita acharya the color of menstrual blood resembling to the flower of japa or saffron or blood and has the symptom of dysurea. This pittaja artavadushti seems to be descriptions of oligomenorrhoea associated with infective conditions of the female genital tract[88].

Kaphaja artavadushti

The artava rakta is whitish or light yellowish in colour, mixed with majja (bonemarrow). The blood is too much thick, slippery unctuous settles

down if put in the water. Harita acharya added some more symptoms : retention of urine, stiffness, lethargy, drowsiness, and sleepiness[88].

Kunapa artavadushti

Kunapa artavadushti occurs due to the vitiation of rakta. The amount menstrual blood is more and its colour is red with associated symptoms like heat and burning etc[88].

Grandhyartava dushti

This occurs due to the vitiation of Vata and Kapha and produces the features of vitiation both Vata and Kapha[88].

Putipooyanibha

This type of artava dushti occurs due to the vitiation of Kapha and Pitta. Vagbhata opined that grandhyartava occurs due to vitiation of Rakta and Pitta[88].

Ksheena artava dushti

Ksheena artavadushti caused by vitiation of vata and pitta[88].

Mutrapurishgandhi artava dushti

This occurs due to vitiation of tridoshas[88].

Table - 2.1.2 Prognosis

Sadhyasadhyatha	**Susruta**[87]	**Vagbhata I**[89]	**Vagbhata II**[90]
Sukhasadhyam	Vatika, paittika, kaphaja	Vatika, paittika, kaphaja	
Krichrasadhyam			Vata, pitta, kahpa, dwandhaja
Asadhyam	Grandhi, puthipooya, ksheena, mutrapurisha gandhi	Grandhi, puthipooya, ksheena, mutrapurisha gandhi	Mutrapurisha gandhi

2.1.8.3 Complication

When the artava vitiated by doshas, or the woman suffering from menstrual disorders she became infertile due to the absence of beeja[91, 92].

2.1.8.4 Treatment

For the cleansing of artava, Uttaravasti has been prescribed by acharyas after all the sodhana karmas. The woman who is suffering from vataja, pittaja, kaphaja and raktaja artavadushti, after proper snehana and sodhana application of kalka or pichu by means of vata suppressing drugs. Hitahara and vaginal cleaning with the decotion of drugs capable of suppressing vata is also prescribed by acharyas[93].

Vatika artava dushti

1. In vatika artava dushti snigdha, ushna, amla lavana articles are prescribed by acharyas.
2. Ghrutha medicated with bharngi, madhuka and bhadradaru.
3. Milk prepared with kasmari, and kshudrasaha.

4. Kalka of madhuka and srigalavinna taken with madhu and ghruta
5. Kashaya prepared with nagara, pippali, musta, dhanwayasa, both bruhatis and patala mixed with jiggery and curd and this should consume for one week during menstruation.
6. Vaginal cleaning with kashaya prepared with sarala and mudgaparna[94].
7. Niruha vasti is like a nectar to a woman who is suffering from vatika artava dushti.

Paittika artava dushti

1. Madhura, seeta, kashayarasa substances is beneficial.
2. Kashaya prepared either with both kakolis and vidarimoola or utpala and padmaka or flowers of madhuka and fruits of kasmari mixed with sugar or kashaya of swetachandana mixed with honey.
3. Virechana with samyaka and gavakshi ksheera
4. Kalka of dhava and dhataki or madhuka, madhurarasa and mrudweeka mixed with ghruta.
5. Vaginal application of kalka of candana and payasya.
6. Vaginal washing with decotion of gairika and arishta[95].

Kaphaja artavadushti

1. In kaphaja artava dushti, katu, ruksha and kashaya rasa articles are effective.
2. Kashaya of kudaja, katuka, and aswgandha.
3. Vamana with madanaphala kashaya.

4. Madanaphala kalka apply in the vagina.
5. Vaginal cleaning with the kashaya of rodra and tinduka or with urine of goat[96].

Grandhi artava dushti

Consume kashaya prepared with patha, tryushana, vrikshaka[97] or with patha, trikandaka and vrikshaka[98].

Kunapa artava dushti

The symptoms of kunapartava dushti can be reduced by consuming kashaya of bhadrasriya and chandana. Vagina is cleansed by means of triphala kashaya and apply the kalka of triphala in the vagina[99].

Ksheenartava dushti : drugs having the property of increasing rakta should be adopted[99].

2.1.9 Artava kshaya

Susrutacharya explained artavakshaya as a separate disease characterised by delayed irregular scanty menstruation with pain[100]

2.1.9.1 Treatment

Arthavakshaya is treated with sodhana karmas and by using agneya dravyas. Dalhanacharaya says that vamana only should be done in arthava kshaya. Vamana removes soumya dhatu resulting into relative increase in agneya dhatu in the body there by artava increases. According to cakrapani use of

purifying measures helps to clear srotases. Vamana and virechana clear upward and down ward channels respectively. Thus both sodhana karmas are beneficial in artavakshaya[100].

2.1.10 Yonirogas having dysmenorrhoea

2.1.10.1 Vatiki

Susruta has mentioned only few local symptoms like roughness, stiffness and pricking pain[101].

According to Carakacharya a woman of vata prakriti, when consumes vata aggravating ahara and vihara leads to aggravation of vata. This vata when reaching the reproductive organs produces pricking pain, stiffness, sensation as if creeping of ants, roughness and fatigue. Due to vitiation of vata menstrual bleeding occurs with sound, painful, frothy, thin and dry[102].

Vagbhata mentioned the symptoms as feeling of stretching, vaginal flatus, and displacement, menstrual blood is scanty in amount and its colour is blackish or pinkish. This disorder produces severe pain in the groin region and flanks and gradually it converted to a gulma[103].

The symptoms of vatiki in Madhavanidana, and Bhavaprakasha, are almost similar to the explanation of Susrutacharya[104, 105,].

2.1.10.2 Udavartini

According to susrutacharya udavartini is having painful frothy menstruation[106].

Caraka says that due to vegadharana vata gets vitiated and this aggravated vata then moves in reverse direction fills the yoni. So the yoni affected with pain, initially pushes the artava rakta in upward direction then expelled with difficulty. The woman feels relief immediately following discharge of menstrual blood. Here the rajas or artavarakta moves upwards in opposite direction hence it is termed as Udavartini[107].

The explanation of vagbhata[108] is like that Carakacharya and Madhavanidana[109] and Bhavaprakasha[110], have followed susrutacarya.

Both these yonirogas occurs due to the vitiation of vata and the predominant symptom is painful menstruation.

Samprapthi

The vitiated vata when travels through the srotases srotodushti occurs. Here the type of srotodushti is sanga and vimargagamana. Then the menstrual blood get obstructed in yoni and produces various symptoms along with dysmenorrhoea[107].

Chikitsa tatwa

1. After proper snehana and swedana, sodhana karmas should be used.
2. After sodhana karma, other treatments such as uttaravasti, parisheka, lepana, pichu etc should be used.
3. The treatment prescribed for disorders of vata should also be used[111].

Chikitsa

These yonirogas are managed by means of sodhana and samana treatment. Sodhana therapies always preceded by snehana and swedana. Balataila is indicated for snehapana in vatika yonirogas[112] and for abhyanga acharyas mentioned lavana taila[113]. After snehana and swedana sodhana therapies as vamana, virechana and vasti should be indicated. Among sodhana therapies vasti has got prime importance because vata is the main causative factor in all yonirogas[114]. Vasti therapy is of three types. Anuvasanavasti, niruhavasti and uttaravasti. Out of these three the main therapy for yonirogas is uttaravasti. Because the sthanasamsraya of yonirogas is at yoni, uttaravasti is the local therapy done at yoni. This should also help to correct the vitiated apanavata. Uttaravasti or anuvasana vasti is prescribed with taila medicated with kwadha and kalka of dasamula and trivrit[115].

Samana chikitsa

1. Ghrtha prepared with kalka of kasmari, triphala, draksha, kasamardda, parushaka, punarnava, both rajanis, kakanasa, sahachara and guduci in the amount of one aksha.
2. Milk medicated with rasna, swadamshtra and vrishaka.
3. Vacopakunchikadi kalkam : Kalka prepared with vaca, upakuncika, ajaji etc drugs and this should be fried in ghruta. Administration of this kalka mixed with madya will help to relieve the pain.
4. Drugs like vrishakam, matulunga and madayanthika are made into a paste and mixed with salt and madya. Intake of this medicine will alleviate pain

5. Yonikshalana with qwadha prepared with guduci, triphala and danti.[116].

Yonirogas / strirogas having excessive bleeding

2.1.11 Asrgdhara

"Asrk sonitham deeryateti"[117]

"Asrk deeryate chyavathe yasminnithyasrugdhara" [118]

The condition of excessive bleeding is termed as Asrgdhara.

"Rajaha pradeeryathe yasmat pradarasthena sa smruthah[118], [119]

Excessive secretion of rajas or menstrual blood is termed as pradara.

2.1.11.1 Nidana of Asrgdara

Consumption of excessive salty, sour, katu, vidahi and unctuous ahara, curd, sukta, mastu, and madya womens aggravated vayu, then vitiate rakta.[122]

According Harita samhita milk carrying channels of Infertile woman are filled with vata, thus she has absence of milk secretion, and she also suffers from excessive menstrual bleeding[123].

Bhela opines that if blood goes to abnormal passage, then the women suffers from excessive bleeding or pradara[124]

According to Madhavanidana, Bhavaprakasha, Yogaratnakara, consumption of viruddhahara, madya, addhyasana, indigestion, abortion, excessive coitus, riding, walking, grief, emaciation and day sleeping results in Asrgdara[125, 126, 127].

Asrgdara occurs due to aggravation of vata especially apanavata as it is responsible for expulsion of menstrual blood.

2.1.11.2 Samprapti

Due to the above explained nidana increases the amount rakta its amount and then reaching rajovaha sira of the uterus increases the amount of rajas. This increased menstrual blood is expelled out in the form of heavy bleeding in amount and duration[129].

In Asrgdhara causative dosha is Vata and dushya is Rakta. Rakta and Pitta are similar in properties so naturally Rakta vitiation aggravates the Pitta also. This aggravated pitta covers the apanavata thus vayu gets aggravated. The symptoms and treatments are similar to that of raktapitha[129].

2.1.11.3 Samanya lakashana

The menstrual bleeding is excessive in amount orprolonged duration, even in the period other than menstrual phase and having the features of specific doshas along with the symptoms such as body ache and pain[130].Dalhana had descrbed that asrgdara is having burning in the lower part of abdomen, vamkshana, sroni, prushta and vrikka[131].

According vagbhata excessive bleeding during menstrual or intermenstrual period is known as asrgdara, pradara or raktayoni[132].

Asrgdara is classified into four types, ekadoshaja (vatika, paitika and kaphaja) and saanipataja. In vatika asrgdara menstrual blood is frothy, thin, rough, blackish or reddish in colour and expelled with or without pain. Pain present in lowback, flanks and cardiac area. Due to the excessive consumption of sour, salt, hot and alkaline substances, pitta aggravated and changes the colour of menstrual blood as blue, yellow or blackish. This aggravated pitta increases the amount of menstrual blood and expelled with pain, it also produces mental confusion, fever, thirst and giddiness. Kaphaja asrgdara occurs due to vitiation of kapha prodoshaja aharas and viharas and this vitiated kapha in turn vitiates menstrual blood and produces the following symptoms. The menstrual blood excreted with mucous and it becomes thick in character and discharged with mild pain. The symptoms like vomiting, anorexia, dyspnoea and cough also present. In sannipathika asrgdhara the symptoms of three doshas present. The menstrual blood is foul smelling, slimy and discharged out of the uterus with the colour like ghee, marrow or muscle fat[134].

According to Susrutacharya the features blood due to vitiation of Vata is frothy, reddish or blackish in colour, rough and is discharged repeatedly in small amounts. In pitta vitiation the blood is blue, yellow or green or blackish or resembles water mixed with smoke or rasanjana or cow's urine in colour had fishy smell, katu in rasa, ushna doesnot clot if it in water it streads like moon light. In Kapha vitiation the blood is water mixed with gairika, snigdha,

sita, picchila, increased in amount, excreted very slowly and like a mamsapesi. In tridoshaja the features of all the three doshas present and its colour is like kanjika, and is foul smelling[135].

Madhavanidana, Bhavaprakasha and Yogaratnakara have mentioned specifc features for asrgdara according to the vitiation of dosha. Menstrual blood is rough, frothy, reddish, expelled frequently with mild pain in vatika dushti, in pattika asrgdara, the colour of menstrual blood is blue, yellow or blackish the aggravated pitta increases the amount of menstrual blood and expelled with pain. In kaphaja asrgdara, that the excreted blood is mixed with mucus, it is slimy and its colour resembles that of washing of paddy plant. that In thridoshaja asrgdara the colour of the excreted blood resembles honey, ghrtha or haritala and putrid smell. According to these acharyas also tridoshaja asrgdhara is incurable. [136, 137, 138].

2.1.11.4 Upadrava

Durbalata, bhrama, murcha, thama, trisha, daha, pralapa, pandu and tandra occurs as a complication of asrgdara[139, 140].

2.1.11.5 Sadhyaasadhyatha

Asrgdara having continous bleeding, suffering from trishna, daha, jwara, pandu, and durbala is incurable[141].

According to Harita, the woman is suffering from fever at the time of periods, having very short inter menstrual period and continuous bleeding is incurable[142].

2.1.11.6 Chikitsa

The medicines having the property of sthambhana is effective to reduce the symptoms related to asrgdara. So that we can adopt the treatments of Raktarsa, Raktathisara and Rakta pitta for a woman who is suffering from excessive or prolonged bleeding[143].

In sodhana cikitsa virechana is very useful to reduce the bleeding.

Virechanena hi pittakshayad arthavasya kshaya eva syaditi.[144]

Vasti prayoga

Asthapanavasti, anuvasanavasti and uttaravasti is beneficial to reduce the heavy bleeding during menstruation.uttaravasti should be given only after giving 2 or 3 asthapana vastis[145]

Madhukadi anuvasana vasti

Kalka of madhuka, usira, kasmari, katuka, utpala, candana, syama, padmaka, jimutaka, sakrahwa, ativisha, and ambu should be cooked with ghruta, which already mixed with one fourth oil and eight times milk then mixed with decotion of nyagrodhadi group of drugs. This vasti cures daha, asrgdara etc diseases caused due to pitta[146].

Rodhradi asthapana vasti

Rodra, candana, manjishta, rasna, anantha, bala, riddhi, sariva, vrisa, kasmari, meda, madhuka, padmaka, trinapanchmula each karsha should be taken and prepare decotion with eight times water and reduced to ¼th.

kalka of jivaka, madhuka, utpala, prapaundarika, jivanti, meda, renu, parushaka, abhiru, misi, saindhava, vatsaka, usira, padmaka, kaseru and sugar together three palas, honey and ghruta each four palas milk two palas, meat soup one pala and sugarcane juice two palas should be mixed with eight pala kwadha. After cooling this should be used for Vasti[147].

Mustadi yapanavasti

Musta, patha, amrta, eranda, bala, rasna, punarnava, manjishta, aragwadha, usira, trayamana, aksha, rohini and laghupanchamula each one pala along with eight madanaphalasshould be prepared decotion and mixed with two prastha milk and again boiled till only the amount of milk left. This should be mixed with one fourth quantity of meat-soup of wild animals, ghruta, honey, saindhava and pastes of yashti, misi, syama, kalingaka, and rasanjana and used for vasti[148].

Samana chikitsa

External measures

1. North wards situated root of vyaghrinakhi grown in sacred place uprooted on a specific day like uttara phalguna nakshatra and tied in the waist cures excessive bleeding[149].
2. One hundred pala of satapushpa should be boiled with five drona of water, when one fourth remains, it should be again boiled with appropriate drugs along with one adhaka oil four adhaka milk prepared taila. Nasya or pana or abhyanga should be done with this Satapushpa oil[150].

Internal medicines

Qwadha

1. Seeta kwatha prepared with darvi, rasanjana, musta, purified bhallataka, sriphala, vrisha and kiratatiktaka and consume the qwatha mixwd with honey. Qwadha prepared withthe drugs of nyagrodhadi gana is beneficial[151].
2. Kwadha prepared with flowers of dhataki and pugi for three days[152].
3. Kwadha of ela, samanga, salmali, haritaki and magdhika mixed with honey and sugar[153].

Kalkas, curnas and swarasas

1. Kalka of tanduliyaka with honey and consume with rice water. Kalka of rasanjana or laksha together or individually should be taken with goat's milk[154].
2. Powdered madhuka and sugar each one karsha with rice waterpowdered root of kankatika mixed with sugar and honey. Kalka of kusa mixed with rice water for three days. Use of swarasa of udumbaraphala mixed with honey followed by diet consisting of milk and rice sweetened with sugar[155].
3. Swarasa of vasa, guduci or satavari along with one karsha powder of madhuka and four karsha sugar pasted with rice water. Kalka or curna of bala with milk. Equal quantity of kusa and vatyalaka with rice water. Kalka of root of bhumyamalaki with rice water. Use of powdered sunthi, tirinda, or kutajashtaka, with ghruta and sugar cures heavy bleeding[156].

4. Pushyanuga curna with honey thandolodaka cures heavy menstrual bleeding[157].

Ksheera paka, modaka and avaleha

1. Ksheera paka prepared with stem bark of asoka.
2. Modaka prepared with powdered fruits of alaabu or Malaya mixed with equal quantity of sugar and honey[158].
3. Jeerakavaleha[159], khanda kusmandavaleha and brhatkusmandavaleha[160].

Ghruta and Taila

1. Mudgadya ghruta, salmali ghruta and sitakalyanaka ghruta[161].
2. Satavari ghruta, satapushpataila[162].
3. Mahatiktaka ghruta, Satavri taila[163].

2.1.12 Raktayoni

The symptom of Raktayoni is excessive menstrual bleeding[120]

2.1.13 Asrja

Due to excessive use of ahara and vihara which is capable of aggravating rakta and pitta, thereby the rakta in the yoni gets vitiated by pitta. The vitiated rakta and pitta situated in yoni will affect the woman even in garbhavastha also and produces excessive bleeding during periods[121].

2.1.14 Jataghni / putraghni

It is condition of repeated abortion. Due to vata kopa nidanas Vata

aggravated and this Vata repeatedly destroy the foetuses born from vitiated rakta. Though in this disease foetuses of both the sex are destroyed, however, since destruction of male foetuses dominates, hence it is termed as putraghni[164]. The foetuses after attaining stability are repeatedly destroyed due to bleeding along with features of vitiated pitta like burning and heat[165]. Vagbhata opined that Vata gets aggravated due to rookshata and kills the foetuses repeatedly which have conceived and developed from vitiated artava, then the condition is termed as jataghni[166].

2.1.14.1 Treatment

Uttaravasti with ghruta medicated with the decotion of kasmari and kudaja should be done[167].

Kasmaryadi ghruta and Phalasarpis are also prescribed for repeated abortions[168].

2.1.15 Vandhyata

Infertility is defined as anability to conceive after iyear of regular unprotected coitus[169]. In Ayurveda for conception and development of a healthy baby, four factors are essential. They are ritu, kshetra, ambu and beeja. Ritu is fertile period, kshetra is healthy yoni (internal genital organs), ambu is proper nutrition, bija both stribija and pumbija. All these factors are needed for conception and development of a healthy fetus[170].

2.1.15.1 Nidana

Yonipradosha, mansika rogas, sukra dushti, artava dushti, ahara dosha, viahara dosha, akalayoga (absence of contact at the time of fertile period) and balakshaya (abnormality of garbhasaya) have been explained as the causes of delay in achieving conception[171].

Yonipradosha

The word yoni refers to the entire reproductive organs. Yoni pradosha means abnormalities of vagina, cervix, uterus and fallopian tubes.

Manasika roga

For achievement of pregnancy the couple should be of normal psychology.

Sukra dosha

Abnormalities of sperm like oligozoospermia, asthenozoospermia etc leads to infertility. Healthy sperm is essential for fertilisation and proper growth of the embryo. Pitrija bhavas are carried to the embryo through sperm.

Artava dosha

The word artava refers to ovum or menstrual blood and or ovarian hormones. Ovum carries matrja bhavas to the embryo. Abnormality of ovum and ovarian hormones will affect the normal menstrual period and produce infertility.

Ahara dosha

Health of the individual depends upon balanced diet. Dietetic abnormalities will affect dhatu which in turn affect normal secretion of hormones resulting into failure to achieve pregnancy. Over eating leads to obesity which also will affect ovulation and results to anovulatory cycles.

Vihara

Amnormal mode of life and suppression of natural urges aggravates vata which produce various types of gynaecological rogas. Coitus in abnormal posture like hump – back or lateral position, discharge of semen over sameerana nadi in all these conditions semen is not properly deposited inside the vaginal canal. Thus sperms cannot enter into the uterus causes infertility.

Akalayoga

This is meant by coitus in improper time. Absence of contact at the fertile period will affect fertilisation and leads to infertility.

Balakshaya

Healthy garbhasaya is essential for proper implantation and growth of the embryo without causing abortion. Loss of strength of garbhasaya occurs in two ways. One is cervical incompetence and other is unhealthy endometrium. Both these conditions will affect the proper implantation and growth of the embryo leads to a condition of vandhyatwa[172].

2.1.15.2 Classification

Classification of vandhya has not been explained by any of the

acharyas except Harita. According to Harita, Vandhya can be divided into 6 types. Kakavandhya (inability to conceive after first child birth), anapathya (primary infertility), garbhasravi (repeated abortions), mrtavalsa (repeated still births), balakshaya, and garbhakosabhanga (injury to the uterus)[173].

In the description of Asrja yonivyapath acharya caraka has mentioned the word apraja. Vandhya has been described as "nashtartava" and it may be considered as due to the abnormality of uterus or ovaries secondary dysmenorrhoea or anovulation occurs. Which leads to a condition of infertility. Considering all these points together andhyata can be into the following three types.

1. Vandhya - absolute infertility
2. Apraja - primary infertility, woman will conceive after treatment.
3. Sapraja – secondary infertility, inability to conceive after giving birth to one or more children[121].

2.1.15.3 Chikitsa

After proper snehana and swedana, sodhana karmas such as vamana, virechana, asthapana vasti and anuvasna vasti should be done. The man should be given milk and ghruta medicated with drugs having madhura rasa and the woman treated with taila and masha[174].

1. Narayanataila should be used in the form of nasya, abhyanga, pana and vasti. With the use of this oil infertile woman will get a child.

Kamadevaghrutam, paniyakalyanaka ghrutam, phalaghrutam, laghuphalaghrutam and satavari tailam are beneficial in the treatment of infertility[175].

2. The infertile woman should be given vasti with satapaka taila or balataila or thraivrtha taila after all the sodhanakarmas[176].
3. Use of vasti with the oil prepared with lasuna is beneficial. The woman using lasuna never remains infertile. [177].
4. When there is relief of gynaecological and menstrual disorders due to pitta and reproductive organs become healthy, the following medicines can be used. Curna of chandana, usira, manjishta, girikarni and sugar with milk or root of sweta arka, sweta girikarnika, with milk. If the disorders are due to pitta are cured, sweta, girikarni, sweta gunja and sweta punarnava with milk should be used. The menstrual disorders are due to kapha are cured, oral use of triphala, girikarni, aragwadha, vatsaka and payasya with milk makes the woman fertile.[178]
5. Bala, sita, atibala, mdhuka, vatasringa and gajakesaram mixed with honey, milk and ghruta should be used. A woman taken bath on the 4th day of menstruation and use milk medicated with kwadha of aswagandha in the morning hours or root of lakshmana mula uprooted during pushyanakshatra and pounded with milk by a virgin is also useful[179]. By using all these measures woman conceives and deliver normally to healthy child.

6. Lasuna[177] and milk is beneficial for an infertile woman. Meat increases sukra gives nourishment and helps in getting pregnancy to the woman[180].
7. Phalasarpis : As per a study conducted for infertility, uttaravasti with phalasarpis was very much effective. Statistically highly significant result were found on spinnbarkeit ($p<0.01$) and significant result were found in amount and viscosity ($p<0.05$).[181]

2.1.15.4 Pathyapathya

Apathya: kaccura, surana, amla, kanji, food having vidahitwa and tikshnatwa are contraindicated.

Pathya : root of vandhyakarkataki, languli, katutumbi, devadali, both bruhatees, suryaballi and bhiruka. Wearing cloths and garland left over by the woman having son, and coitus during ritukala are beneficial for infertility[182].

Olden days, only the Indian systems of medicine were prevalent. Acharyas explained in detail about the nidana, samprapthi and lakshana of every disease. In those days diagnosis of disease was explained in various classical text book based on symptoms and drugs were administered accordingly. In the absence of modern day diagnostic techniques, the diagnosis and treatment as per the classical texts was very successful also.

Research studies on fibroid uterus and menorrhagia

1. Ayurvedic intervention in the management of uterine fibroid : A case series

Shigru Guggulu two tablets, Kanchanara Guggulu two two tablets and Haridrakhanda 3gm were prescribed to take orally after meal at an interval of 12hours with anupana of milk for seven weeks to seven patients. At the end of seven weeks this combination was found to be very effective in relieving uterine fibroid.

2. Role of Virechana Karma in the management of uterine fibroid along with Metrorrhagia- A Case Study

The patient was treated with virechana karma. The medicine used for virechana was Thrivrut avaleha with thriphala qwadha. All the major complaints like irregular excessive menstrual bleeding, the lower-abdominal pain completely reduced, and weight also got reduced. The size of the fibroid also reduced in vertically as well as horizontally.

3. Management of Uterine Fibroid along with Metrorrhagia through Virechana, Lekhan Basti and Uttar Basti - A Case Study

A patient was treated with *Virechana Karma* with *Trivrut Avaleha* with *Thripala Kwatha in the first month and Lekhana Basti* with *Lekhaneya Maha Kashaya* for 10 days,

Second month and third month : Varunadi decoction 50ml for 8 weeks morning and evening after meal and *Uttara Basti with Palash*

*KsharaTaila (*5ml) for 6 days in two consecutive cycles. After 3 months of medication the result of the study shows the following findings. Lower-abdominal pain, body weight and size of the fibroid got reduced and the menstrual cycles became regular.

4. A clinical evaluation of gomutra haritaki on garbhashaya arbuda (uterine fibroid)

3gms Gomutra Haritaki was given orally before meal for 3months with Anupana of Madhu. The drug had shown significant result on symptoms like, Excessive bleeding, dysmenorrhoea, irregular menses, lower abdominal pain, obesity and reducing fibroid size.

5. A clinical evaluation of hemakanda ghruta on garbhashaya arbuda (uterine fibroid)

5ml Hemakanda Ghruta was given orally before meal for 3months with Anupana of Kanchanara Twak Kashaya. After the course of study there is significant reduction on the symptoms like, Menorrhagia, dysmenorrhoea, irregular menses and lower abdominal pain.

Olden days, only the Indian systems of medicine were prevalent. Acharyas explained in detail about the nidana, samprapthi and lakshana of every disease. In those days diagnosis of disease was explained in various classical text book based on symptoms and drugs were administered accordingly. In the absence of modern day diagnostic techniques, the diagnosis and treatment as per the classical texts was very successful also.

2.2 UTERINE FIBROID

Uterine fibroid is one of the commonest gynaecological complaint among the women in their reproductive period. It is a benign solid tumour of the uterus and composed of smooth muscle and fibrous tissue, so named as uterine leiomyomas, fibromyomas or myomas.[1] Prevalence rate of this tumour ranging from 20 to 50% depends upon ethinicity, age and other factors . using vaginal probe ultrasonography, 62% of premenopausal women were noted to have occult fibroids[2].. Etiology is unknown but several factors may influence their formation, which include genetic predisposition, steroidal hormones, vascular abnormalities and growth factors including platelet – derived growth factors, heparin – binding epithelial growth factors, hepatoma - derived growth factors and and basic fibroblast growth factors.[2] Many women with fibroids have no symptoms and may find out during gynaecological examination or imaging technologies. The symptoms associated with these tumors include menorrhagia, dysmenorrhoea, pelvic pain, reproductive dysfunction like early pregnancy loss, subfertility and later pregnancy complications, pressure symptoms like frequent urination. The gold standard diagnostic modality for uterine fibroids is ultrasound sonography.

Management of uterine fibroid is a global challenge because there

is no satisfactory conservative treatment. However, it can be managed medically or surgically It is one of the gynaecological complaint responsible for surgical treatment namely myomectomy, or hysterectomy. As it is hormone dependent, reccurence rate is more after myomectomy so the definitive management is hysterectomy. Medical treatments for uterine fibroids includegonadotrophin releasing hormone analogues, progesterone receptor modulators, oral contraceptives, progestins, androgenic steroids, prostaglandin synthetase inhibitors, and.Levenogeterol secreting intrauterine system (Mirena IUS)[3]. These medical treatments aims to control the symptoms in order to delay or replace surgery.

2.2.1 The tumours of the Uterus

Following are the common tumours arising in the body of the uterus. These tumours are of two types.

Benign tumours[4]

1. Adenoma
2. Myoma or Fibroid

Malignant [4]

1. Carcinoma
2. Sarcoma
3. Choriocarcinoma
4. Mesodermal mixed tumour
5. Secondaries

2.2.2 Uterine fibroid

Fibroids often referred as myomas or leiomyomas are the commonest benign tumours of the female genital tract during the reproductive period. These tumours arises from the smooth muscle of uterus and not from the fibrous tissue of the Uterus. They are composed of benign monoclonal tumours of smooth muscle cells with extracellular collagen and elastin.[2] "It is estimated that nearly 20% of women of reproductive age harbour uterine myomas of different sizes and >30% beyond the age of 30years have myomas.[5] These are the single most common cause for hysterectomy prior to menopause, being responsible for 20 to 77 % of all hysterectomies performed.[6] The majority of these monoclonalestrogen-dependent uterine neoformations[7] afflict mostlywomen during reproductive age, and 80% of them suffer from this during their whole lifetime [8] .Myomas are benign, so that it almost alwayscause morbidity rather than mortality [9].

Oestrogen, growth hormone and possibly human placental lactogen have been implicated in the growth of myomas. The evidence in support of estrogen dependence for their growth are

1. Myomas are very rarely found before puberty, and their growth generally cease and get atrophied after menopause.
2. After menopause new myomas occur very rarely.
3. The association of fibroids in women with hyper oestrogenism is evidenced by endometrial hyperplasia, dysfunctional bleeding and endometrial carcinoma.

4. Myomas are known to increase in size during pregnancy and with oral contraceptive pills.
5. Progesterone inhibits the growth of myomas. Relatively large doses of Progestogens orally for 14 to 21 days of the cycle cause shrinkage of the tumour.[10]

2.2.2.1 Incidence

The true incidence of fibroids is uncertain[11], least 20% of women at the age of 30 have got fibroid in their wombs. Most of them (50%) remain asymptomatic. [1] Fine serial sectioning of uterus from 100 consecutive women who underwent hysterectomy found that myomas present in 77%, including some as small as 2 mm[13] .

2.2.2.2 Pathology

Gross features

The consistency of myoma is spherical, lobulated and firm and It is surrounded by a pseudocapsule, which is formed by the compression of the myometrial tissue surrounding the myoma [5]. The capsule consists of connective tissue which fixes the tumour to the myometrium.[10] .Because of the presence of this pseudocapsule the myomas can be easily enucleated from the uterine wall. The cut surface of the tumour is pinkish white and has whorled appearance. These myomas are generally lighter in colour than surrounding myometrium.

The vessels which supply blood to the tumour lie in the tumour and send radial branches into the tumour. Because of this arrangement of blood

supply, the central portion of the tumour receives the least blood supply and degeneration is noticeable early and most often in this part of the tumour. On the other hand calcification begins at the periphery and spreads inwards along the vessels.[10] Myoma may be single or multiple, upto 200 have been reported in a single uterus. In multiple myomas the enlarged uterus feels firm and nodular. Their size varies from a few millimetres to the size of a football, filling whole of the abdomen.[5]

Microscopical picture[14]

The essential element of myoma is unstriped muscle cells. Bundles of these cells are seen running in all directions and it is their distribution which gives the cut surface its whorled appearance. The nuclei of these cells are rode shaped and strikingly uniform in shape and size.

2.2.2.3 Aetiology

The aetiology of uterine myomas is not definitely known.Multiple tumours in the same uterus are derived from individual myometrial cells rather than occurring through a metastatic process as per clonality studies using the homozygosity of glucose-6-phosphate dehydrogenase forms. This together with their high prevalence, suggests that initial development arises from a frequently occurring event, the nature of which is unknown. [15]

Hormones

The hormones Oestrogen, growth hormone, placental lactogen have been involved in the growth of fibroids.[10]

Parity

Fibroids are more common in nulliparous women. Increased parity decreases the incidence and number of clinically apparent myomas[16]. Consumption of oral contraceptives and the presence or growth of myomas do not have definite relationship. . One study found an increased risk of myomas with oral contraceptives [17], but a subsequent study found no increased risk with use or duration of use [18].

Racial and genetic factors

The women of certain races, notably African, are especially prone to develop uterine **myomas.**[19]Irrespective of race these fibroids also have familial incidence.

Weight

A prospective study found that the risk of myomasincreased 21% with each 10 kg increase in body weightand with increasing body mass index [20]

Smoking

Smoking may reduce the incidence of myomas. Factors decreasing the bioavailability of estrogen at the target tissues are; 1.reduced conversion of androgens to estrone secondary to inhibition of aromatase by nicotine, 2. increased 2-hydroxylation of estradiol, and 3.stimulation of higher sex hormone–binding globulin levels[21-23]

Tissue injury

Cellular injury or inflammation resulting froman environmental agent, an infection, or hypoxia have beenproposed as mechanisms for initiation of myoma formation[24].

2.2.2.4 Control of growth

More information is available on the growth of the uterine fibroid than its aetiology. Growth factors are of importance in the control of growth of fibroids and their composition. Higher concentrations of the angiogenic fibroblast growth factor have been found in fibroids than in the surrounding myometrium. there is clear difference in the functions of transforming growth factor â, granulocyte-macrophage colony-stimulating factor and epidermal growth factor (EGF), amongst others in fibroid and normal myometrial tissue[25].. Sex steroids also have an important role in the growth of fibroids. They act through their receptors. The steroid combines with the receptor, and gets translocated to the nucleus of the cell. Steroid receptors are seen in higher concentrations in the fibroid than in the surrounding myometrium as per the conclusion of studies conducted in the subject.The role of Progesterone is less clear. However the number of Progesterone receptors are more in the fibroids than in the surrounding myometrium. Studies using progesterone administration suggests that Progesterone may stimulate the growth of the fibroids.

2.2.2.5 Classification

Depending upon the part of the uterus fibroids can be broadly

divided into two types [12]

1. Uterine body
2. Cervix

Most of the fibroids are situated in the body of the uterus but in 1-2% of cases they are seen in the cervix usually to its supravaginal portion. A cervical myoma is usually single and is either interstitial or subserous.[19]

Uterine body

Fibroids snfined to the uterine body can be again divided into three types according to their relationship to the peritoneal coat and to the endometrium[14].

1. Intramural
2. Subserous
3. Submucous

Intramural (75%)

Myomas lie within the uterine wall separated from the adjacent normal myometrium by a thin layer of connective tissue, which forms the false capsule. Small nutrient arteries penetrate this capsule. Large intramural fibroids enlarge and distort the uterine cavity [26]

Subserous (subserosal) (15%)

In this type the fibroids grow towards the peritoneal cavity or between the layers of broad ligaments. It partially or completely covered by

peritoneum. When completely covered by peritoneum it usually attains a pedicle. They are called as pedunculated subserous fibroids. Very rarely these pedunculated suserous fibroids may become separated from the uterus and is called as wandering or parasitic fibroids. Sometimes the subserosal fibroid may be pushed out in between the layers of broad ligament and is called as broad ligament fibroid. These broad ligament fibroids are different from true broad ligament fibroid which have no attachment to uterine wall, but have their origin in smooth muscle fibers within the broad ligament. [27]

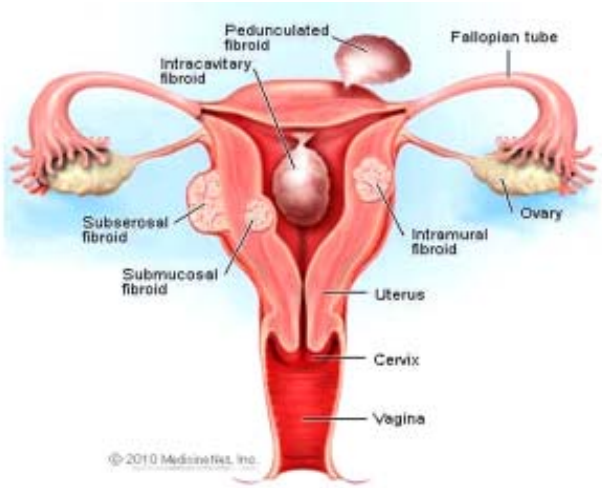

Figure -2.2.1
Location of uterine myomas

Submucous (5%)

These are less common type of fibroid. Here the fibroids grow towards the uterine cavity and covered by endometrium. They can make the uterine cavity irregular and distorted. Sometimes these fibroids attains pedicle and becomes pedunculated submucous fibroids and it may come out of the cervix. It may be infected and ulcerated to cause metrorrhagia[12]. These fibroids are the least common variety but it produce maximum symptoms.[28]

Cervical fibroid

These are relatively uncommon and they are usually single.The

cervical fibroid seen in the supra vaginal part of the cevix, may beinterstitial or subperitoneal type and rarely may be polypoidal.Based upon the position occupied, it may be anterior, posterior, lateral or central. The external os of the cervix becomes difficult to recognize when the Interstitial growths which may displace or expand the cervix . In the vaginal part of the cervix, the fibroid is usually pedunculated and rarely sessile.[28]

Pseudocervical fibroid

A fibroid polyp arising from the uterine body when occupies and distends the cervical canal, it is called pseudocervical fibroid.[28]

2.2.2.6 Symptoms

The majority of small and some large fibroids are asymptomatic. Symptoms associated with fibroids may be variable, ranging from mild to severe, causing distress and impinging significantly on health related quality life[25] and symptoms depend upon the site and size of fibroid.

Menstrual disturbances

The characteristic symptom of fibroid is abnormal uterine bleeding and the patient typically experiences periods with excessively heavy with associated flooding, gushing, clotting and dysmenorrhoea. The common complaint is menorrhagia which is gradually increase with successive cycles. Some times more than one litre of blood being lost every period. It is commonly seen in submucous and interstitial fibroids. The causes of menorrhagia due to myomas are : increased surface area of the uterine cavity, increased vascularity

and congestion of the uterus [30]. Along with this some other explanations are : "compression of veins by the tumour with consequent dilatation and engorgement of venous plexuses in the endometrium and myometrium, and intereference with uterine contractions which are alleged to control the blood flow through the uterine wall.[31] Metrorrhagia is seen commonly in submucous fibroid when complicated with surface ulceration, sarcomatous change and associated endometrial polyp and endometrial carcinoma. An infected polyp will cause purulent discharge. "Metrorrhagia in a women over 40 requires D&C to rule out endometrial cancer.[32]

Women aged 35 to 49 was selected by random sampling and evaluated by bleeding patterns and by abdominal and transvaginal sonography to determine presence, size, and location ofmyomas (54). 878 women were screened, out of these , 564 (64%) had myomas, and 314 (36%) did not. ''Gushing blood'' reported for forty-six percent of the women with myomas during their menstrual periods compared with 28% without myomas.. Gushing blood and length of periods were related to size of myomas but not topresence of submucous myomas or to multiple myomas[33]

In some instances women with myomas may have menorrhagia. This may be dueto venous ectasia resulting from mechanical compression of veins by myomasor altered function, expression or storage of vasoactive growth factors produced by myomas.[24,34,35\

Pain

Pelvic pain or pressure is a fairly common symptom in women with leiomyomas, although women with myomas are only slightly more likely to experience pain than women without myomas[36]. Due to associated pelvic congestion, congestive dysmenorrhoea may occur. When a fibroid is complicated by torsion, haemorrhage, and red degeneration, acute lower abdominal pain is seen. Pain in a rapidly growing fibroid in an elderly woman may be due to sarcoma.[32] A myoma does not cause pain unless it is complicated by extrusion from the uterus as a polyp. [19] If the submucous fibroid is trying to get expelled through the cervix, it will produce pain similar to labour pains.[37]

Pressure symptoms

The bulky uterus in case of fibroid uterus may put pressure on adjacent organs leading to myriad of symptoms. This also depends upon the size site of the fibroid. Smaller ones cause only a sensation of weight in the pelvis.

Bladder

The bladder is the most common pelvic viscera involved with anterior and lower uterine fibroids[38]. Urinary frequency occurs due to the mechanical irritation and reduced capacity of the bladder. When a fibroid is impacted in the pelvis, it may cause acute retention of urine and then overflow incontinence by pressing on the bladder neck. This is more likely to happen with cervical fibroids.[26] In uterine leomyomas the occurence of urethral obstruction, hydronephrosis, and subsequent kidney failure are extremely rare[38].

Gastrointestinal Tract

The pressure effects on the GIT are less conspicuous. The mechanical effect of large tumours can be responsible for various forms of dyspepsia and intestinal obstruction. When a leomyoma is impacted in the pelvis, it may cause constipation.[30]

Vein and lymphatics

Pressure symptoms occurs only if the fibroid is too large to exert pressure on the veins. Due to the pressure effects on veins oedema or varicosities on the legs may arise. This is very rare[30].

General effects

Anemia

"Manifestations of anaemia such as palpitation, lassitude, and even loss of weight are common and can constitute the presenting symptoms; they result from menorrhagia. A rare finding is polycythaemia which disappears when the leimyoma is removed. In such cases myoma is usually large and situated in the broad ligament[39] . Polycythaemia increases the risk of thromboembolism. The explanations for this phenomenon are

1. The tumour is itself erythropoitic- a high level of erythropoietin activity has been reported within uterine fibroids
2. Arteriovenous shunts have also been found in these tumours
3. The tumour presses on the ureter and effects the erythropoietic function of the kidney.

Hypoglycaemia

"This only occurs when the fibroids show unusual cellular activity and is more likely if they are retroperitoneal. Some pancreatic stimulus is postulated in explanation.[31]

2.2.2.7 Effects on reproductive function and during pregnancy

There is an association between subfertility and fibroids and it may cause repeated miscarriages and preterm labour.

"Wallach et al have suggested that fibroids may reduce fertility by the following mechanisms"

- Significantly large fibroids distorting the proximal tubo- ovarian antomy.
- Intracavitary or submucous fibroids causing menstrual disturbances and obliterate the cavity
- Large intramural fibroids distort the endometrial cavity there by elongating the absolute distance of sperm transport.
- Submucous fibroids and intramural fibroids with larger cavitary component interfere with proper implantation thereby causing infertility or miscarriage.
- Cervical fibroids alter the position of cervix and it will affect the fertility of woman.
- Endocrine imbalance – hyperoestrogenic state[40].

The symptoms depending upon the site and size of the fibroid. Infertility , early miscarriage and premature labour are seen in submucosal fibroids. Miscarriage and premature labour occur when fibroid interferes with enlargement of the uteus, initiates abnormal uterine contractions or prevents efficient placentation. Intramural fibroids cause dysmenorrhoea and fertility problems. Apart from this, large fibroids may causes malpresentation of the foetus, obstructed delivery, post partum haemorrhage[41] .The fibroid is large enough to distort the shape of the uterus leads to malpresentation or malposition or prevents engagement of fetal head. Labour may be obstructed by cervical and broad ligament fibroids which are fixed in the pelvis and by pedunculated subserous fibroids which become trapped in the pouch of Douglas.If the placenta is implanted over a fibroid it causes Postpartum haemorrhage[42].Data from studies on patients undergoing assisted reproduction technology (ART)suggest that submucosal fibroids and intramural fibroids distorting the uterine cavitycompromise success with ART; therefore, such fibroids should be removed. Evidencepoints to improved outcomes after such intervention[43]

2.2.2.8 The effect of pregnancy on fibroids

Leiomyomas do not grow more rapidly during pregnancy. They invariably enlarge but this is because of congestion, oedema and degeneration and they usually to their original size afterwards. Similar changes are sometimes seen during pseudopregnancy induced by oestrogen – progestogen preparations[42]. Several reports have suggested that first- and second-trimester

miscarriage rates arehigher in women with fibroids, and fibroids have been implicated in recurrent pregnancyloss[44,45].Red degeneration, presenting with acute pain in pregnancy, is probably the classicallyrecognized complication specifically associated with fibroids in pregnancy. Its incidencein terms of symptoms and sonographic evidence is about 5%.[46,47]

2.2.2.9 Diagnosis

Diagnosis is usually made on the basis of the symptoms like menorrhagia, dysmenorrhoea or pelvic pressure symptoms or as an incidental finding at routine vaginal examination if it is asymptomatic.

Physical signs

The physical findings depend upon the number and size of the fibroids. Patients may have signs of varying degrees of anaemia so inspect the eyes, hands and sole of feet for signs of pallor.

Abdominal examination

If the fibroid is more than 14weeks, it may be palpated through abdomen. It is firm in consistency, irregularly nodular with a well defined margin. It is movable and move from side to side not from above downwards. On percussion it is dull in nature because the intestines lie behind and beside it. Healthy myomas are not tender[48].

Bimanual examination

This examination is more useful to detect small fibroids and size and contour of uterus as well as the presence of adenexal mass[49]. In a case of

small submucous fibroid there may be minimum enlargement of the uterus. Bimanual examination shows the uterus is enlarged. It may regular or irregular enlargement. Uterus is not felt separate from the swelling and cervix moves with the movement of the swelling. In a subserous fibroid it may feel separate from the uterus, especially if it is pedunculated. [48] By conducting pelvic examination based on findings of an enlarged, irregularly shaped, firm, and non tender uterus, clinically significant subserosal and intramural fibroids can be diagnosed [50,51]

Imaging technology

The uterus is often found to be enlarged on both abdominal and bimanual examinations. However, it may be difficult to distinguish between an enlarged uterus and uterine myomas and so further imaging is mandatory[52]. The following investigations may be carried out in cases of fibroids. However, all the investigations may not be required in every patient.

1. Ultrasonography
2. Ct scan
3. MRI scan
4. Hysterosalpingography.
5. Hysteroscopy
6. Laproscopy[53].

Ultrasonography

Transvaginal USG and abdominal USG will be useful to detect

fibroids." Most leomyomas are hypoechoic or heterogenous compared with normal myometrium, and calcification may cause posterior shdowing. Degenerating fibroids often appear cystic.

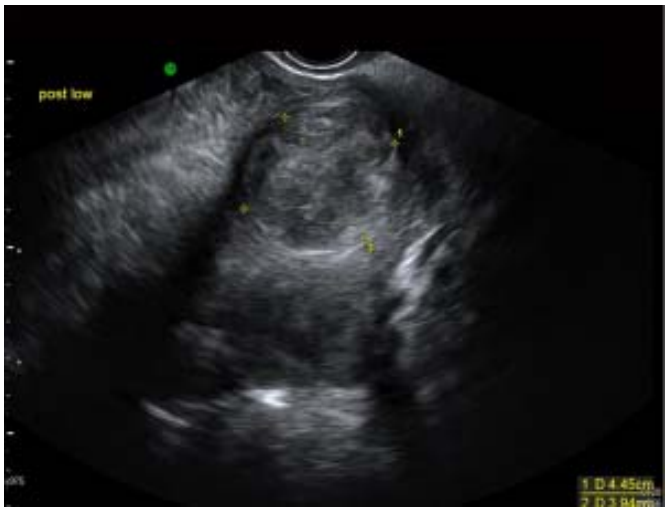

Figure 2.2.2 - Ultrasonography of uterine myoma

Transnsvaginal ultrasonography had improved image quality over abdominal ultrasonography.During Transvaginal sonography normal saline can be injected into the endometrial cavityto delineate submucosal and intracavitarylesions.Saline injected TVS not only enhances the view of the endometrium and myometrium but also allows three dimensional view of uterine cavity and ovaries. This is helpful to determine whether further investigations like endometrial biopsy or hysteroscopy is needed. This is also helpful to determine the size, location,number and depth of myometrial penetration[54]. "Using a colour Doppler can determine the amount of blood flowing to the fibroid giving an indication of its benign and malignant nature[41]."

CT scan

CT scan is not the investigation of choice for the characterization of pelvic masses. Uterine fibroids are often seen incidentally on CT scans performed for other reasons. A bulky, irregular uterus or a mass in continuation

with the uterus is typically found. Degenerative fibroids may appear complex and contain areas of fluid attenuation.. Calcification is seen in approximately 4% of fibroids[56]

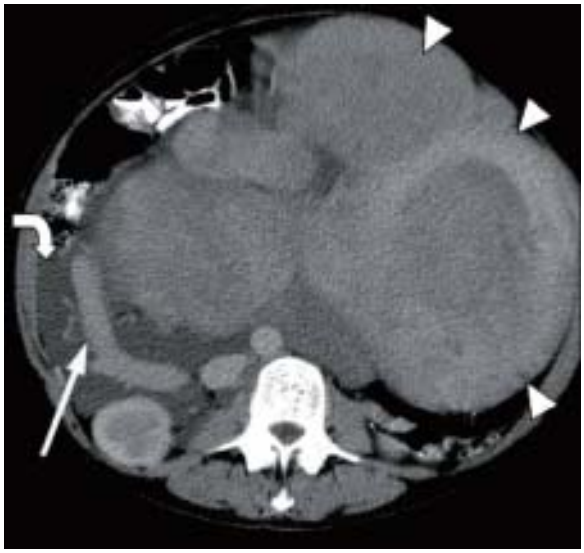

Figure – 2.2.3 CT image if uterine myoma

Magnetic Resonance Imaging

" MRI is more helpful to evaluate the exact growth of submucous fibroid. Additionally it is helpful to determine the size, number and location of uterine fibroids." [58] It is useful particularly for larger or multiple fibroids and to differentiate between fibroids and focal adenomyosis.

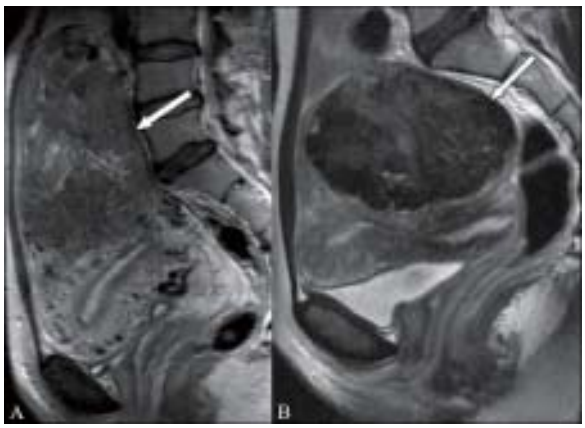

Figure 2.2.4 MRI image of uterine myoma

Hysterosalpigography

Hysterosalpingography is useful for the diagnosis of submucous uterine fibroids and polyps. It is also useful to detect intracavitary lesions and to establish tubal patency in cases of infertility." When compared with

hysteroscopy the limitations of HSG include pelvic irradiation and iodinated contrast medium, patient discomfort and lack of specificity.[59]

Hysteroscopy

"Hysteroscopy will help to detect submucous fibroids in unexplained infertility and repeated pregnancy wastage "[60]

It is also help to diagnosis endometrial polyps, synechiae, endocervical lesions, foreign bodies, endometrial atrophy, endometrial hyperplasia and arterio venous malformations. "Hysteroscopy when used for detecting endometrial lesions has a low a false negative rate.For Hysteroscopy a number of distension medias are available. Determination of lesion size is not accurate with hysteroscopy as with TVS. The advantages of hysteroscopy include immediate evaluation, direct visualisation of the endometrium and endocervix. A number of distension media are available for Hysteroscopy. Diagnostic Hysteroscopic procedures are aften performed with carbon dioxide or normal saline. Most of the gynaecologists prefer carbon dioxide for its optical clarity and patient comfort during insufflations. Operatative procedures should never be performed with carbondioxide because of the risk of carbondioxide embolism. Complications are very rare in hysteroscopy but may occur include uterine perforation, infections, excessive bleeding, and complications related to the distending medium. [61]

Laproscopy

If the uterine size is less than 12 weeks and associated with pelvic

pain and infertility investigations like Laproscopy is helpful. It can help to differentiate a pedunculated fibroid from ovarian tumour[60].

2.2.2.10 Differential diagnosis

Uterine fibroids have to be distinguished from all other causes of enlargement of the uterus.

Adenomyosis

Adenomyosis occur in younger age and usually associated with dysmenorrhoea. It usually involves the posterior wall of the body of the uterus and causes uniform enlargement to the uterus. in these cases it may be difficult to differentiate clinically between adenomyosis and a solitary intramural or submucous fibroid . During operation an adenomyoma may look like a myoma, but the adenomyoma has no pseudocapsule[62].

Pregnancy

A cystic degenerated fibroid causing a soft enlarged uterus can be mistaken for pregnancy[32]. It may, however, be difficult to differentiate between a pregnancy and myomas. The following features help in establishing a correct diagnosis.

- Amenorrhoea.: in pregnancy there is a history of amenorrhoea, whereas fibroids never cause amenorrhoea.
- Consistency of the uterus.: during pregnancy the uterus is soft . Fibroids which have undergone degeneration may also become soft, but otherwise they are firm

- Clinical signs of pregnanacy : pregnancy signs such as breast sign and soft cervix present in pregnancy.
- Pregnancy test : it is help to the diagnosis of pregnancy
- Ultrasonography : It is virtually diagnostic[62].

Myohyperplasia

Generalised myohyperplasia occurs in cases such as metropathia haemorrhagica. It is difficult to diagnose clinically, but USG confirms the diagnosis[61].

Ovarian tumours

It is difficult to differentiate between a subserous myoma and a solid ovarian tumour. Ultrasonography confirms the diagnosis but if there is any doubt, laprotomy must be performed for diagnosis and treatment[62].

Pelvic inflammatory disease

In chronic PID cases there may be formation of masses in the pelvis so it may be confused with fibroid. It can be differentiated from fibroid by the clinical symptoms. The typical symptoms such as tenderness on bimanual examination is always present in PID. If adhesions present movement of the uterus may be restricted. Diagnosis of fibroids can be made by ultrasonography[62].

Endometriosis chocolate cyst

"The clinical features are similar, but the uterus is normal in size and adherent to the pelvic mass " [32]

Rudimentary horn of the uterus

A rudimentary horn may feel like a subserous myoma on palpation.even on laproscopy, it may be confused with a myoma. Diagnosis can be made by Hystero salpingography or by establishing Laprotomy[62].

Ectopic pregnancy

"Chronic ectopic pregnancy with pelvic haematocele can give clinical impression of a fibroid. However, the history is different, ultrasound will clear the doubt."[53]

Endometrial cancer

Endometrial cancer and myoma coexist in elderly woman with same clinical features. To rule out malignancy endometrial curettage is required[53].

Pelvic kidney

The history is unlike in uterine fibroid. The tumour is fixed, behind the normal sized uterus. ultrasound will reveal abscence of the abdominal kidney and IVP will locate the pelvic kidney[53].

2.2.2.11 Complications of uterine fibroid.

Degenerations

Degeneration occurs to the fibroids due to reduced blood supply to the tumours. These are the types of degenerations seen in myomas[63].

Hyaline degeneration

1. Atrophic degeneration.

2. Cystic degeneration.
3. Calcific (calcareous) degeneration
4. Septic degeneration
5. Red (carneous) degeneration
6. Myxomatous (fatty) degeneration

Hyaline degeneration

It is the commonest type of degeneration of large fibroid having more connective tissues. This degeneration affect the central part of the fibroid where the blood supply is very less. The feel becomes soft elastic in contrast to firm feel of tumour.[64] The degenerated areas may be scattered as small patches or as interlacing areas throughout the tumour. Due to the softness of these areas myoma loses its whorled appearance[65].

Atrophic degeneration

The size of the tumour decreases but do not disappear. This commonly seen after menopause and after delivery due to the reduction of oestrogen hormone[63]. This reduced level of oestrogen diminish the vascularity of fibroid there by shrinkage occurs to fibroid and it becomes firmer and more fibrotic.

Cystic degeneration

Cystic degeneration occurs when the hyaline degeneration progress. There by cystic cavities appear due to liquefaction of hyalinised areas and thses are like gelatinous material[65]. Cystic degeneration occurs in approximately 4% of leiomyomas and typically occurs after hyaline degeneration[67]

Calcific degeneration

In calcific degeneration, carbonate and phosphate salts are deposited in the periphery of the tumour . It is seen commonly in subserous fibroids and it can be identified by radiography[65]. When whole of the tumour is converted into a calcified mass, it is called "womb stone"[64].

Septic degeneration

Due to decreased blood flow necrosis may occur in the centre of a large fibroid. The most common causes of diminished blood supply are severe infection of the tumours and torsion of a pedunculated fibroid[65] .

Red degeneration

This degeneration is commonly seen during pregnancy and puerperium. The cause may be ischaemia or necrosis due to thrombosis of the veins. It feels soft and assumes purple red colour and develops fishy odour. The discolouration is caused by diffusion of blood pigments from the thrombosed vessels[65].The tumour becomes tense and tender and causes severe abdominal pain with constitutional upset and fever[66] (Hawkins & bourne shaw's text book page 318).Red degeneration occurs in 8% of tumors complicating pregnancy, although the prevalence is about 3% of all uterine leiomyoma[68].

Myxomatous degeneration

This is very rare. The most frequent symptom of uterine fibroid degeneration is pain and which is often severe and localized to the site of the fibroid. Severe pain associated with fibroid degeneration often lasts for two to four weeks. In addition to pelvic pain, degeneration of fibroid may cause a

low-grade fever and a temporary elevation in the white blood cell count. In some cases, a degenerating uterine leiomyoma may cause menorrhagia, which can also result in a drop in hemoglobin levels. Symptoms of patients with degenerated leiomyomas were abdominal pain including acute onset of pain, menorrhagia, and bulk-related symptoms. These symptoms are similar to those of non-degenerated leiomyomas except acute onset of abdominal pain, which is unusual. A degenerating uterine leiomyoma is may be misdiagnosed, and sometimes confused with subacute salpingo-oophoritis. A pedunculated subserosal leiomyoma can undergo torsion ischemic necrosis, which is associated with pain similar to that of adnexal torsion[69].

2.2.2.12 Other complications

Torsion

A subserous pedunculated fibroid may undergo torsion at its pedicle. This will interrupts the venous supply and the tumour becomes engorged . Patient experiences very severe pain and causes emergency operation. At times this fibroid detached completely from the uterus and the so called wandering fibroid or the parasitic fibroid[70].Differential diagnoses include ovarian pathologies such as torsion and complications of ovarian cysts[71].

Haemorrhage

The rupture of a large vein on the surface of a myoma resulting in a condition of intra peritoneal haemorrhage requiring urgent treatment[72] .The first case was probably that reported by Von Rokitansky in 1861 as an autopsy

finding. He wrote, ''a tear of a subserosal vein in a fibroid led to haemorrhage into the peritoneal cavity"[73]It is postulated that increased abdominal pressure can cause passive congestion and rupture of the superficial veins. Menstruation and pregnancy can also cause venous congestion and rupture[74].

Infection

Infection is common in submucous fibroid and in fibroid polyp when they project into the cervical canal or into the vagina. It causes blood stained purulent discharge. Infection is also common during post partum period or post abortal period and causes PPH and puerperal sepsis[75].

Ascites (Pseudo-Meigs syndrome)

Ascites commonly caused by pedunculated subserous fibroids due to mechanical irritation of the peritoneum. Rarely, the Ascites is accompanied by a right sided hydrothorax and produce pseudo-Meigs syndrome. [72]

Sarcomatous change

Sarcomatous change is very rare and seen in about 0.1% of cases of leiomyomas. [76].This change usually starts in the centre of the tumour. If the size of the fibroid increases rapidly or becomes painful and tender, a malignant change should be suspected[65]. Intramural and submucous tumours have a higher potential for sarcomatous change than suserous fibroid. Malignant change is rarely seen in women under the age 40. It is commonly seen in a post menopausal woman when the tumour suddenly grows and causing pain and post menopausal bleeding. The consistency is soft and friable and not firm like a simple myoma.

Another important sign is non capsulation[77]. In the majority of cases, the clinical differential diagnosis of the tumors is difficult before a histopathologic evaluation of surgical specimens is performed. Magnetic resonance imaging (MRI) has proven to be one of the most useful imaging modalities in making the preoperative differentiation between these tumors, but even with MRI it is difficult to distinguish between uterine sarcomas and uterine leiomyomas with degeneration. [78,79]

2.2.2.13 Treatment

Uterine myomas, as benign tumours, can generally bemanaged expectantly unless they cause symptoms[29]. Management of myomas depends upon the symptoms that they cause and their effects, if any, on general health of the patient and their routine work[52]. Small asymptomatic fibroids do not require removal. They can be treated by medicines and require observation on every 6months. So that it is helpful to understand the growth of the fibroid[53].

Indications for surgery of asymptomatic fibroid

- "Infertility caused by cornual fibroid, causing blockage to the fallopian tube
- Habitual abortion due to submucous fibroid.
- A fibroid more than 12 weeks size and a pedunculated fibroid can cause torsion.
- An asymptomatic fibroid causing pressure on the ureter, ie. Broad ligament fibroid and pressure on the bladder.

- Rapidly growing fibromyoma in a menopausal woman implies malignancy and requires surgery.
- All asymptomatic fibroid requires treatment" [52,80]

Table 2.2.1 Recommended treatment options for Women with Uterine Fibroid Tumours

Patient Characteristics	Treatment Options
Asymptomatic women	Observation
Symptomatic women who desire fertility preservation	Non surgical treatment of myomectomy
Symptomatic women who do not desire Future fertility but wish to preserve the uterus	Non surgical treatment or myomectomy myolysis, or uterine artery emoblisation
Women who desire fertility preservation and have had a preganancy complication by uterine fibroid tumous	Myomectomy
Infertile women with distortion of uterine cavity	Myomectomy
Women with severe symptoms who desire definitive treatment	Hysterectomy

According to the age, parity, desire to retain her uterus and symptoms of the patient, one of the following modes of treatment may be adopted.

1. Expectant
2. Medical management

3. Uterine artery embolisation
4. Myomectomy
5. Hysterectomy
6. Hysteroscopic Resection of Myomas[81]

1. Expectant treatment

This is advised when the patient is nearing menopause, there are no symptoms, the tumours are small and there is no complication. At menopause the level of oestrogen hormone declines which causes regression in the size of fibroids. So if the fibroids are small and the size of the uterus is less than 12weeks of gestation, and the tumours are asymptomatic, it is better to keep the patient under observation with periodical scanning at interval of six months. If there is sudden increase in the size of the fibroid indicates some complication of the fibroid and requires surgery[81].

2. Medical treatment

Approximately 30% of women with fibroids require treatment for their symptoms, which can include heavy menstrual bleeding and abdominal pain[83].The main objectives of medical management are relief of symptoms and reduction of the size of fibroids. Therapy is highly dependant on the number, size, location, desire for fertility, and symptoms associated with fibroids. When the fibroids are closer to the endometrial cavity, they will more likely to produce earlier symptoms and to require treatment even at small sizes. Submucosal or Intramural fibroids are more likely to cause menorrhagea and dysmenorrhoea,

where as subserosal or pedunculated fibroids may become very large before causing more symptoms[84].

Gonadotropin - Releasing Hormone Agonists

The most established medical option is administration of a gonadotrophin-releasing hormone (GnRH) agonist. These drugs lead to the down regulation of pituitary receptors. This will result initially in stimulation of gonadotrophin release, which is followed by gonadotrophin out put reduction and consequent reduction in ovarian steroid production. This occurs within 2-3 weeks of commencing treatment[52]. GnRH analogues are prescribed for 3-6 months to reduce the size of the fibroids. These analogues act by causing pseudo menopause by suppression of the ovaries. This treatment will reduce the size of the size of myomas and provide only temporary relief from symptoms but on stoppage of treatment , the size returns to original size ther by the symptoms may also returne. This is only a temporary treatment. It helps to reduce menorrhagia and provide an opportunity to build up a patient for surgery[81].It has been documented that there is a reduction in mean uterine volume of between 40% and 50%, and the most size reduction occurring within the first 3 months of therapy. Then after wards, the size reduction is very slow. The reason for this is likely to be related to the alteration in the blood supply to the uterus with GnRH agonist administration. Continued GnRH therapy induces amenorrhoea in the majority of patients due to hypoestrogenic state. Within 3 months of therapy the menstruation will stop. Menopausal symptoms such as hot flushes, night sweats, vaginal dryness, bone loss and

diminished libido may occur due to this therapy.The treatment is done only for 6months because there is a risk of osteoporosis in case of prolonged therapy . Use of GnRH therapy for a prolonged period with add-back estrogen and progesterone can protect the woman against loss of bone density and provide relief of fibroid related symptoms. Among women with high risk factors for surgical management of fibroid, GnRH therapy may provide relief of symptoms until menopause occurs. For anemic patients, combined GnRH therapy and iron are helpful in increasing haemoglobin levels. Hyaline degeneration and focal necrosis occurs in 1% to 2% of patients being treated for fibroids with GnRH agonists, presumably due to intense vasoconstriction.

This may be accompanied by low-grade temperature and fever. Vasospasm may also cause arteriolar sloughing and possible fibroid prolapse. Finally, degeneration may cause the distinct pseudocapsule surrounding the fibroid to be less distinct and more difficult to delineate at the time of surgery[85]. The principal disadvantage of GnRH analogue administration are that the fibroids re-grow when treatment has stopped.

GnRH analogues are given by one of the following routes.

- Nasal spray – 6 hourly
- Subcutaneous injection – 12 hourly
- Deep intramuscular injection every month.
- Subcutaneous injection every month.

Monthly deep intramuscular injections are the route of choice for

the treatment of the fibroids[81].The use of these drugs before surgery remains controversial, but may be beneficial, especially in submucosal myomas. Because they can reduce anemia, fibroid size, endometrial thickness and vascularisation , consequently, improving the visual field for hysteroscopy and reducing fluid absorption during surgery[86, 87, 88]

- ***Oral contraceptive pills and non steroidal anti-inflammatory agents.***

Mild dysmenorrhoea and menorrhagia may be relieved by nonsteroidal anti-inflammatory agents and oral contraceptive pills after other causes of bleeding and pain have been excluded. The mechanism of action of low-dose OCPs includes suppression of ovulation, decreased uterine contractions, stabilization of the endometrium, decreased prostaglandin levels and reduction in menstrual blood flow[89].

- ***Progestogens***

Progestogens are widely used in the management of DUB but are not effective in the of bleeding with fibroids. They may be specifically indicated in perimenopausal women with fibroid where bleeding is of anovular dysfunctional type rather than a direct consequence of the fibroid[37].

- *Androgenic steroids*

Androgenic steroids such as danazol or gestrinone are useful in reducing menstrual blood flow by their direct effect on the endometrium and negative feedback inhibition of pituitary gonadotrophin release. It can be used

only for a short period waiting for the operation or to raise the haemoglobin level before operation[37].

♦ *Progesterone receptor modulators*

· Antiprogestins are not widely used in clinical practice eventhough they have been shown to lead to the shrinkage of uterine leomyoma. Administration of PRM produce amenorrhoea in a vast majority of cases without causing anovulation. They have direct effect on the endometrium and it is thought that the main site of action is endometrial vasculature. Asoprisnil is an oral PRM has been used in uterine fibroid as a short term therapy and is help to reduce uterine bleeding and improve health related QoL of the lady prior to hysterectomy[90].The effectiveness of the PR antagonist mifepristone on fibroids over an intake period of 3, 6 and 12 months with an oral daily dosage of either 5 or 10 mg has been studied in several trials. Reduction of heavy bleedings, reduction of symptoms and improved fibroid-specific improved quality of life have been demonstrated in a large meta-analysis. However, a significant reduction of fibroid volume could not be observed[91] .Internal use of PR modulator Asoprisnil will suppress the uterine bleeding and decreases the volume of leiomyoma while maintaining follicular phase estrogen concentration. It exhibits partial and mixed agonist and antagonist effects. Asoprisnil suppresses uterine bleeding in 28, 64 and 83% of subjects at 5, 10 and 25 mg, respectively, and reduces leiomyoma and uterine volumes. Furthermore, uterine artery blood flow is reduced[92,93].

♦ ***Prostaglandin synthetase inhibitors***

These may be used to relieve the pelvic pain in cases of fibroid[94].

♦ ***Levonorgestrel secreting intrauterine system (Mirena IUS)***

This device has effectively using in DUB cases and suggests that it may be one of the reasons why the hysterectomy rate was declined over recent years. "However , the use of this device in women with fibroids has not been widely studied as some consider it to be a relative contraindication."[90]

3. Uterine artery embolization

"Uterine artery embolization was first used in 1979 to successfully treat a patient with severe post partum haemorrhage whose condition failed to respond to standard bilateral hypogastric artery ligation."[95] "Ravina in 1991 first performed uterine artery embolisation preoperatively to reduce vascularity and size of the fibroid. Menorrhagia was relieved in 80-90%, pressure symptoms in 40-70% and the volume decreased by 50% at the end of 3 months."[96] In selected cases this procedure is now employed effectively.

Principle : The principle of uterine artery embolization is injection of tiny polyvinylglycol particles of the size of grains of sand into the uterine artery on both sides through properly placed catheter. This causes blockage of the feeding vessel to the fibroid thereby causing ischaemic necrosis, reducing the size.

Procedure : This procedure can be done under intravenous sedation with local anaesthesia. The patient lies in supine position. A small

incision is made below inguinal ligament and a small catheter is introduced into the femoral artery through the incision. Subsequently, tiny polyvinylglycol particles are introduced slowly and the vessel is completely blocked. Similar procedure is repeated on the other side. Post operative stay usually ranges between 4 and 18 hrs. Oral analgesics may be given and the patient will recover within a week[97].

The blood supply to the normal myometrium renews itself via the rich pelvic collateral circulation with contributions from ovarian and vaginal arteries. However, the fibroids do not usually revascularize to a significant extent. This leads to shrinkage of the fibroids and subsequent relief of fibroid related symptoms. :In contrast to the effects of GnRH agonists, where shrinkage of fibroids is maintained only as long as treatment continues, embolisation results in sustained shrinkage for some time after treatment[98] .

Contraindications:[99]

- Pedunculated submucous and subserous fibroids.
- Infertility and desire of pregnancy.
- Pregnancy.
- Acute pelvic infection
- Contrast medium allergy
- Arteriovenous malformations
- Adenomyosis

Post operative complications

One of the frequent morbidity of UAE is postembolisation syndrome, which includes fever, pain, malaise, and nausea and lasts from a few hours to a few days. The syndrome typically occurs after embolisation of any solid organ and is thought to be an immune-mediated response. It has been reported to occur in 50% of patients but is easily controlled with analgesics, antipyretics, and anti-inflammatories[100]This is not as a result of infection but is thought to be due to cytokine release at the time of necrosis of fibroid. [101]

- Infection
- Vaginal discharge and bleeding
- Ischaemic pain – in case of successful therapy.
- Pulmonary embolism
- Failure to cannulate the uterine arteries.[96]

Other complications

- "Radiation exposure, Premature menopause, Infertility"[102]
- "Preterm delivery, Malpresentations, Spontaneous abortions, PPH"[72]

During this procedure there is radiation occurs to the ovaries . this in combination with disruption of uterine blood flow may increase the chance of ovarian failure in some women after this procedure. Rate of ovarian failure is increased in women over the age of 45years. "While a few non-randomized studies have assessed UAE versus myomectomy, a randomized study suggests

that of the two treatment options, myomectomy is associated with superior reproductive outcomes in the first 2 years after treatment in terms of miscarriage, pregnancy and labour rates." [103]

The average uterine shrinkage is 40%, although in some instances this can be greater. A cervical or submucosal fibroid may also pass vaginally in the weeks or months following treatment, resulting in an anatomically normal uterus. Variable recurrence rates for fibroids have been reported after embolization as occurs with myomectomy. Unlike hysterectomy, there is no guarantee that the procedure will eliminate all menstrual symptoms and revascularisation with subsequent regrowth of fibroids does occur in some women. Some women may require further treatment either with hysterectomy, myomectomy, endometrial ablation or a repeat embolization[98, 101].

4. Myomectomy

Victor Bonney who is considered as the pioneering surgeon in myomectomy, although the first myomectomy was done by the Atlee brothers in 1844[104]. Myomectomy is doing in women who wish to retain fertility and which involves removal of the fibroids only with conservation of normal myometrial tissue. Myoma can be removed through the vaginal or abdominal route. This can be done as laproscopic or hysteroscopic procedure[90,98].

Indications

- "Patient's age less than 40years
- Patients desires conservation of reproductive system

- Unexplained infertility
- Repeated pregnancy loss due to fibroids"[105]
- "Infertility associated with intracavitary fibroidssignificantly large multiple intramural fibroids, cornual fibroid pressing on the uterotubal junction
- Faster growing fibroid
- Pressure symptoms like abdominal pain and retention of urine
- Uterine size will be >22weeks of pregnancy
- Size of the fibroid will be more than 14cm in size with broad base"[106].

Contra indications

- **Infertility :** If the fallopian tubes are blocked or husband has severe oligozoospermia / azzospermia, there is little chance of spontaneous pregnancy. If assisted reproductive technology also failes and patient's age is above 40 then it is better to do hysterectomy
- **Associated malignancy** if there is associated carcinoma of endometrium or any other part , the treatment is performed against malignancy myomectomy is not performed
- **Sarcomatous change :** if there is suspicious of sarcomatous change in the myomas, then myomectomy is contraindicated, and hysterectomy should be performed.
- **Pregnancy :** if myomas are associated with pregnancy, then because of increased congestion of the uterus, myomectomy should be post poned till three months after delivery[105].

Pre operative preparation for the surgery[105,107]

1. Blood should be checked especially Hb%, blood sugar
2. Cross matched blood should be arranged for transfusion
3. In infertility other causes for infertility like semen analysis and hysterosalpingography should be carried out.
4. If continuous or irregular bleeding and discharge is present as symptom , preliminary curettage should be done to exclude an associated endometrial carcinoma.
5. Clear and informed consent should be bring from the patient
6. Bowel preparation one day prior to surgery is done.

Types of myomectomy

1. Laproscopic or abdominal myomectomy

Abdominal myomectomy is the operation of choice for all types and sizes of myomas except polypoidal submucous myomas.

2. Hysteroscopic myomectomy or vaginal myomectomy[105]

Abdominal myomectomy/ Laproscopic myomectomy

"Abdominal myomectomy was described 1845 by Dr. Atlee but didnot gain widespread acceptance until 1930s , when Victor Bonney reported his experience with more than 400 consecutive myomectomies. He is credited with the resurgence of myomectomy as a viable alternative to hysterectomy and with the development of the Bonney clamp, which decreased bleeding associated with myomectomy."[108] myomectomy is usually preferred to women who had suffering from infertility.

The surgery should be done under general anaesthesia with endotracheal intubation. Patient is catheterised with a Foley's catheter and abdomen should be cleaned with anteseptic lotion and draping should also be done[109]. An incision is made on the anterior wall of the uterus. On opening the abdomen, the tubes and ovaries should be first be examined to see they are normal. Bleeding should be controlled by Bonney's clamp, or a rubber tube tourniquet, placed around the lower part of the uterus. Incisions in the uterus should be as few as possible. Each should be so planned that as many leiomyomas as possible can be reached through it by burrowing in the anterior wall. Incisions on the anterior and posterior walls should be midline and vertical, in least vascular area[107].

A number of techniques have been used tominimize blood loss. Historically, a variety ofclamps and rubber tourniquets was employed; probably the most famous was that invented by Ronney-the doyen of fibroid surgery. The Bonney'sclamp is applied across the base of the uterus at its junction with the cervix; this occludes the uterine arteries as they pass up to the lateralside of the uterus[110]. Morerecently a blend of cutting coagulation diathermy has been used for myomectomy which dispenses with the use of clamps or tourniquets. Another technique involving a single vertical midline anterior incisionin the uterus, and in doing so restricted blood loss, as the incision is made in the leastvascular area of the uterus; clamps are not used with this method[111].If blood loss is minimized the risk of postoperative adhesion formation is also decreased. The anterior vertical midline incision is also

associated with fewer risks to subsequent fertility-if adhesions do form they usually do not involve the tubes or ovaries as multiple or posterior incisions do [111]Bonney also described the 'hood technique' in an attempt to reduce the risk of adhesion formation[110]. Instillation of dextran, hiscon and normal saline, all to achieve a flotation effect and minimize adhesions, has also been employed

In case of laproscopic surgery, one intra umbilical primary port for a 10mm zero degrees telescope with camera is placed. Two 5mm ports kept at left and right iliac fossa placed approximately at the junction of 1/3 and 2/3 distance of an imaginary line joining the umbilicus with the anterior superior iliac spine on either side. Third ipsi lateral port is placed at intersection of imaginary line drawn from the left lower port and horizontal line from the umbilicus on the left side[112].

A 30 degree Trendelenburg position is given to move the bowels away to ensure proper visualisation of the pouch of Douglas. A palpation probe is used to measure the exact dimension of the fibroid, to differentiate from other pathologies like adenomyosis and to assess the consistency of the fibroid for any signs of degeneration. Dilute vasopressin 1 ampule in 100ml of Ringer's lactate is injected in the cleavage between the fibroid capsule and uterine muscle. An incision is made on the fibroid with a monopolar spatula or needle adequate enough to remove the fibroid[112].

"The standard option is a vertical incision. However , as most of the uterine vasculature runs almost transversely, it may seem more logical to

make a transverse incision. Theoretically, this type of incision would enable blood loss to be reduced, especially where an intramural fibroid is deeply embedded and well vascularised. Vertical incisions are easier to suture laproscopically."[112] A myoma screw is put in left upper port to fix the fibroid and gently pull it as spatula dissects the surrounding tissue. After effective traction, the base of the fibroid with tissue attachment is seen, which is cut with spatula and current. After removal, it is parked in the appendicular area and other fibroids are then removed, if any. After removal of fibroids, a thorough lavage is given. Suturing of the uterine flaps after the enucleation of the fibroid by ipsilateral ports is then done. Adequate haemostasis is achieved and the needle is removed. An intraperitoneal drain is placed at the end of the operation. Dress the abdominal incision. Antibiotics are given and discharge the patient within 48hrs[112].

Vaginal myomectomy

Vaginal myomectomy is indicated in submucous fibroid[80].

Disadvantages of myomectomy

1. Operative and post operative haemorrhage
2. Menorrhagia may persisit post-operatively
3. Reccurrence of myomas in future.
4. Post-operative adhesions
5. Very rarely rupture of scar in future pregnancy.

Myolysis of uterine fibroid

Laparoscopic myoma coagulation is based on the theory that the coagulating effects of lasers or the bipolar needle can necrose myometrial stoma, denature protein, destroy vascularity, and result in substantial shrinkage of myomas when deprived of their blood supply. The technique was altered by the use of a 5-cm modified bipolar needle to pierce myomas using bipolar current at 50 to 75 W. Endometrial ablation, a procedure that uses the laser or roller-ball to destroy the uterine lining and achieve amenorrhea for patients who experience menorrhagia secondary to their fibroids, has been performed since 1981 and 1989, respectively[113,114]. Amenorrhea rates after ablation have been 25% to 84%, with patient satisfaction rates up to 80% at 1 year. A study by Unger and Meeks"[115]indicated that 34% of women require hysterectomy within 5 years of ablation and that this number increases with time. Since the introduction of myolysis, the author has combined this procedure with endometrial ablation in patients with symptomatic fibroids who also exhibit persistent recurrent uterine bleeding refractory to medical therapy. It was hypothesized that this combination procedure would further reduce rates of subsequent hysterectomy

Various modes are used for myolysis[102]

1. Nd: YAG (Neodium : yttrium – aluminium –garnet) laser bare fibre
2. Monopolar needle-
3. Bipolar coagulation needle
4. Hyperthermia electrode
5. Recently – cryomyoma probe.

5. Hysterectomy

Hysterectomy is the surgical removal of uterus and it is the permanent solution for fibroids in women over the age of 40s and not anxious for more children. The cervix as well as body should be removed in most of the cases but the ovaries if normal should be conserved in premenopausal women[116]. Uncontrolled haemorrhage and unforeseen surgical difficulties during myomectomy may also causes hysterectomy[96].

Types of Hysterectomy

1. Abdominal hysterectomy
2. Vaginal hysterectomy
3. Laproscopic assisted vaginal hysterectomy
4. Laproscopic hysterectomy
5. Robotic hysterectomy

Vaginal hysterectomy is possible in mobile uterus and uterine size is less than 14weeks. Laproscopic assisted vaginal hysterectomy (LAVH) avoids abdominal scar, minimizes the pain, and shortens the recovery period and hospital stay[96].

Contraindications of LAVH[96]

1. Size of the uterus is more than 14-16weeks size.
2. Cervical fibroid, broad ligament fibroid , pelvic adhesions and endometriosis.

Complications of hysterectomy [96]

1. Haemorrhage either primary or secondary
2. Sepsis
3. Trauma may occurs to the bladder, ureter and bowel in broadligament and cervical fibroid.
4. Abdominal hernia and scar.
5. Anaesthetic complications
6. Paralytic ileus and intestinal obstruction due to post operative adhesions.
7. Thrombosis, pulmonary embolism and chest infection.
8. Dyspareunia and chronic pelvic pain due to adhesions.
9. Vault prolapse.
10. Residual ovarian syndrome and atrophy due to decreased vascularity causing premature menopause.

Abdominal hysterectomy is advocated if the size of the fibroid is more than 12weeks gestational size and in those with rapidly expanding fibroids..

Hysteroscopic Resection of Myomas

This is done using the diathermy resectoscope which comprises of a 26 French gauge unmodified continuous flow resectoscope fitted with a 4mm forward oblique telescope. 6mm loop or 8mm loop is introduced in to the uterine wall and cuts out tissue of 4mm depth . The loop is a monopolar device in which the electric current passes through the loop electrode attached to the operating hysteroscope.

Procedure

Dilate the cervix with cervical dilators , laminaria tent or by inserting misoprostol tab into the vaginal cavity. Introduce operative hysteroscope into the uterine cavity and visualise the endocervix, lower uterine segment and tubal ostia. A non electrolyte medium such as glycine 1.5% is used for distension of the uterine cavity. The electrical wattage generally used with a monopolar current is 60 to 80 W cutting current. As the wire loop is drawn towards the surgeon , small fragments of leiomyoma are created. They are removed by polyp forceps. An intrauterine pressure of 80 to 120 mmHg is usually required. Intermittently the intrauterine pressure should be diminished and this will help to enucleate the uterine fibroid.

Complications of hysteroscopic surgery[117]

1. Uterine perforation
2. Cervical laceration, bowel and bladder injury.
3. Haemorrhage.
4. Fluid overload: excessive fluid absorption may cause hyponatraemia, hypotension, haemolysis and bradycardia. In severe cases congestive heart failure, pulmonary and/or cerebral oedema leading to confusion, coma or even death.

The woman who wish to preserve their fertility, high dose oestrogen should be prescribed. This will help to the re-epithelisation of the endometrtium with the aim decreasing the risk of intrauterine adhesions after hysteroscopic myomectomy[118].

Conclusion

Uterine fibroids or myomas are the commonest benign tumours found in women. As it is an estrogen dependant tumour it is seen during reproductive period. Continuous oestradiol secretion,uninterrupted by pregnancy and lactation, isthought to be an underlying risk factor in thedevelopment of these tumours.

2.3 DRUG REVIEW

Dravya is the substratum which shelters guna and karma and has samavayi sambandha with them. It has the ability to perform action independently comparing with guna and karma[1]. Dravya is one which gives shelter to panchapadarthas namely rasa, guna, virya, vipaka and sakti which in turn perform their own reaction[2]. According Carakacharya, "*nanoushadhibhutam jagathi kinchit dravyastheethi*" there is nothing in the world which cannot be used as a medicine[3]. A dravya can be utilized for cikitsa, only when it possess four important characteristics such as bahuta (abundance), yojnyatva (wide applicability), anekavidha kalpana (multiple form) and sampat, (potency)[4]. Each padartha has been considered important and accordingly debated to the prime one. Eventhough the sapthapadarthas are responsible for karma, they reside in dravya and so have no independent existence without dravya. So dravya becomes important of all padarthas. "*Dravyameva rsadeenam sreshtam te hi tadasraya*"[5]. Dravya is very important as it has the following qualities. Vyavasthithathwam (stable), nityatwam (eternal), khajathyavasthanam (specificity), panchendriyagrahanam (perceptible through five senses), asrayathwa (shelters), arambhasamarthyam (initiation for treatment), sastrapramanyam (classical references), kramapekshitam (dependence of rasadi with dravya), akadesasadhyatwam (fractionalisation) taratamyoganupalabdhi (no geading), vikalpasamarthya (possibility of various formulations) and pratighatasamarthyam (occupying the

space)[6]. Dravya or drug is a substance by which vaidya or physician can cure diseases. It is the second most important factor in padachathushtayas – Physician being the first[7].

भिषग्द्रव्याणुपस्थातारोगीपादचतुष्टयं।

Panchamahabhuta theory is one of the fundamental theory accepted in ayurveda. Caraka mention that all dravyas in this universe are composed of pancamahabhutas[8]. They differ among one another due to the relative difference in the predominance of the bhutas. Ayurveda make use of this very principle of panchamahabhouta in describing diseases and treatment. Sareera is composed of Tridoshas and any disturbance in the equilibrium of Tridoshas are considered to cause diseases[9]. Sareera is made up of panchamahabhutas and imbalance of doshas cause different types of diseases in the panchabhoutika sareera . It can be cured by the use of Drugs which in turn are panchabhoutika.

The action of every drug in the human body is described on the basis of five factors ie; rasadi panchaka which are Rasa, Guna, Virya, Vipaka and Prabhava. Caraka in vimanasthana described the procedures for the selection and use of various dravyas for the treatment of diseases as, prakruti, guna, prabhava, desa, ritu, manner and method of preservation and storage, matra, method of preparation, mode of administration, vyakti (the persons for whom they are indicated, their capabilities of increasing or alleviating the dosas)[10]. The judicious administration of a drug is the most essential part in managing a disease.

Uterine fibroids are non cancerous growths or tumors of the uterus. These tumors are probably of unicellular origin,[11] and their growth rate is influenced by estrogen, growth hormone, and progesterone. Although studies have not clarified the exact process, uterine fibroid tumors arise during the reproductive years and tend to enlarge during pregnancy and regress after menopause. The use of estrogen agonists is associated with an increased incidence of fibroid tumors[12]. In Ayurveda, tumour can beconsidered as a growth associated with kaphavata predominance with involvement of rasa, raktha and mamsa dhatu. Vagbhata had opined that mamsa vitiated due to consumption of mamsa increasing diet produces smooth, big & hard granthi like[13].

In the present study the combined efficacy of Kanchanara Guggulu and Trayanthyadi qwadha, Kanchanaragulgulu and Vyaghrivaranadi qwadha, were assessed. Kanchanara Guggulu gulika, which is mentioned in Sarangadhara Samhitha is indicated in gandamala, grandhi, apachi etc.Its reference is also seen in Bhaishjyaratnavali under Galagandadi Rogachikitsa[14, 15]. It is one of the commonly used guggulu preparation for its varied level of disease indications. On evaluating the ingredient wise property the drugs are found to have garbhasayasankocha, deepana, lekhana, vatakaphasamaka properties. As these properties can relieve the symptoms of fibroid also and helpful to reduce the size of fibroid, so this drug was chosen. In a case series study by using kanchanaraguggulu, sigruguggulu and haridrakhandam, it was concluded that this combination is very effective in uterine fibroids to reduce both its size and the symptoms[16]. Trayantyadi Kashaya is mentioned in

Ashtanga Hridaya chikitsa sthana in the chapter of Vidradhivridhi Chikitsa[17]. As the individual evaluation of these drugs revealed the properties of tridoshahara, sothahara, deepana, bhedana etc it was thought to be useful in allievating the symptoms of fibroids. One of the studies conducted by kanchanaraguggulu along with trayantyadi qwadha concludes that there is significant reduction in almost all types of fibroids accompanied by its shrinkage without any side effects[18]. Vyaghrivaranadi kashaya is mentioned in sahasrayoga and chikitsa manjari for anthar vidradhi[19, 20]. All the ingredients of the qwatha had the property of vatakaphasamana. Trayantyadi qwadha and kanchanara guggulu is in clinical use for many centuries. Vyaghri varanadi qwadha has been reported for its effectiveness in uterine fibroid cases. But clinical studies have not been done so far. So to assess its effectiveness in uterine fibroid and to find out a new and effective medicine this yoga was used.

2.3.1 Kanchanaragulgulu

काञ्चनारत्वचोग्राह्यंपलानांदशकंबुधैः।
त्रिफलाषट्पलाकार्यात्रिकटुस्यात्पलत्रयम
पलैकंवरुणंकुर्यादेलात्वक्पत्रकंतथा
एकैकंकर्षमात्रंस्यत्सर्वाण्येकत्रचूर्णयेत।
यावत्चूर्णमिदंसर्वंतावन्मात्रस्यगुग्गुलु
संकट्यसर्वमेकत्रपिण्डंकृत्वाचकारयेत।
गुडिकाशाणमात्रेणप्रातर्ग्राह्यायथोचितम
गण्डमालांजयत्युग्रामपचीमर्बुदानिच।

ग्रन्थींव्रणांश्चगुल्मांश्चकुष्ठानिचभगन्धरम।
प्रदेयश्चानुपानार्थंक्वाथोमुण्डीतिकाभवः।
क्वाथखदिरसारस्यपथ्याक्वाथोत्रकोष्णकम।

Kanchanara guggulu tablet is a commonly used guggulu preparation which is a classical reference found in Sargadhra samhita and Bhaishajya ratnavali. The main indication of the tablet is galaganda, arbuda, apachi, and various types of grandhis[14, 15]. In the context of Prasutitantra and streeroga the use of this vati in curing various types of grandhis like garbhasaya grandhi (utrine fibroid) is taken into action. Various research programmes were conducted in the past to test the efficacy of Kanchanara guggulu tablet in curing Garbhasaya grandhi conditions[16, 18].

Indications of Kanchanara guggulu tablet

Gandamala	Vrana
Apachi	Gulma
Arbuda	Kushta
Grandhi	Bagandhara

2.3.1.1 Kanchanara[21]

Kanchanara consists of the dried, stem bark of Bauhinia variegata Blume (Fam.Leguminosae): a medium sized tree occurring in sub-Himalayan tract extending eastwards to Assam, Eastern, Central and South India.

Botanical name	:	Bauhinia variegate Blume
Family	:	Caesalpiniaceae

Synonyms

Sanskrit[22]	:	Chamirika, yugmapathraka, thamrapushpa, kovidara
English	:	Mountain Ebony
Hindi	:	Kachanar, Kanchanar, Kachnar
Kannada	:	Keyumandar, Kanchavala
Malayalam	:	Chuvanna Mandharam
Marathi	:	Kanchana, Raktakancana
Tamil	:	Sigappu mandarai, Sihappu mantarai

Description

Bark is dark brown, sometimes with silvery patches, rough, compact, exfoliating in woody strips and scales. Outer surface with small transverse and longitudinal cracks, internal surface white and taste is astringent.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total Ash	:	Not more than 11 per cent.
Acid-insoluble ash	:	Not more than 0.2 per cent.
Alcohol-soluble extractive	:	Not less than 2 per cent.

Water-soluble extractive	:	Not less than 6 per cent
Chemical composition	:	Tannins

Pharmaceutical properties and action[23]

Rasa	:	Kashaya
Guna	:	Laghu, ruksha
Virya	:	Seetha
Vipaka	:	Katu
Karma	:	Sleshmapithasamana, grahi, deepana
Therapeutic indications	:	Krimi, kushta, gudabhramsa, gandamala, vrana
Phytoconstituents	:	Hentriacontane, Octacosanol, â – Sitisterol, Stigmasterol.
Important formulations	:	Kancanara Guggulu
Therapeutic uses	:	Krmiroga, Gandaamala, Apaci, Gudabhramsa, Vrana
Dose	:	20-30 g of the drug for decoction

2.3.1.2 Haritaki[24]

Haritaki consists of the pericarp of mature fruits of Terminalia chebula Retz. It is a a moderate sized or large tree found throughout India, chiefly seen in deciduous forests and areas of light rainfall, but occasionally also found in slightly moist forests. Flowers appear

from April, August and fruits ripen from October-January.

Botanical name	:	Terminalia chebula Retz
Family	:	Combretaceae

Synonyms

Sanskrit[25]	:	Pathya, Abhaya, Siva, Vijaya
English	:	Myrobalan
Hindi	:	Harre, Harad, Harar
Kannada	:	Alalekai
Malayalam	:	Katukka
Marathi	:	Hirda, Haritaki, Harda, Hireda
Tamil	:	Kadukkai
Telugu	:	Karaka, Karakkaya

Description

Intact fruit color is yellowish-brown, shape is ovoid, 20-35 mm long, 13-25 mm wide, wrinkled and ribbed longitudinally. Its pericarp fibrous, 3-4 mm thick, non-adherent to the seed, taste is astringent.

Identity, purity and strength

Foreign matter	:	Not more than 1 per cent
Total Ash	:	Not more than 5 per cent
Acid-insoluble ash	:	Not more than 5 per cent
Alcohol-soluble extractive	:	Not less than 40 per cent
Water-soluble extractive	:	Not less than 60 per cent

Constituents	:	Tannins, anthraquinones and polyphenolic compounds

Properties and action (karma)[26]

Rasa	:	Pancharasa except lavana
Guna	:	Laghu, ruksha
Virya	:	Ushna
Vipaka	:	Madhura
Karma	:	Thridoshaghna, Doshanulomana, deepana, pachana, poushtika Rasayana, Cakshushya, ayushya, hridya, medhya
Therapeutic indications	:	Vayasthapani, budheendriya balaprada[24].
Important formulations	:	Abhayarishta, Agastya Haritaki rasayana, Danti Haritaki, Dasamula Haritaki, Brahma Rasayana, Triphaladi Taila.
Therapeutic uses	:	Vibandha, Aruci, Udavarta, Gulma, Udararoga, Arsa, Jirnajvara, Visamajvara, Prameha, Kasa, Tamakasvasa, Hrdroga. Its dose is 3-6 gms in powder form

3. Amalaki [27]

Amalaki consists of pericarp of dried mature fruits of Emblica officinalis Gaertn.Syn. Phyllanthus emblica Linn. mostly collected in winter season after ripening and in Kashmir in summer. It is a small or medium sized

tree, found both in natural state in mixed deciduous forests of the country ascending to 1300 m on hills; cultivated in gardens, homeyards or grown as a road side tree.

Botanical name	:	Emblica officinalis Gaertn
Family	:	Euphorbiaceae

Synonyms

Sanskrit[28]	:	Amrtaphala, amalaka, Dhatriphala
English	:	Emblic Myrobalan
Hindi	:	Amla, Aonla
Kannada	:	Nellikayi, Bela nelli, Pottadenollikayi
Malayalam	:	Nellikka
Marathi	:	Anvala, Avalkathi
Tamil	:	Nellikkai, Nelli
Telugu	:	Usirika

Description

Amalaki consists of curled pieces of pericarp of dried fruit occuring either as separated single segment; 1-2 cm long or united as 3 or 4 segments. Bulk colour grey to black, pieces showing, a broad, highly shrivelled and wrinkled external convex surface to somewhat concave,

transversely wrinkled lateral surface, external surface shows a few whitish specks. Its texture is rough, cartilaginous, tough and its taste is sour and astringent.

Identity, purity and strength

Foreign matter (Including seed and seed coat)	:	Not more than 3 per cent.
Total Ash	:	Not more than 7 per cent.
Acid-insoluble ash	:	Not more than 2 per cent.
Alcohol-soluble extractive	:	Not less than 40 per cent.
Water-soluble extractive	:	Not less than 50 per cent.
Constituents	:	Ascorbic acid and gallotannins

Properties and action[29]

Rasa	:	Amla, Kashaya, Madhura, Tikta, Katu
Guna	:	Ruksha, Laghu
Virya	:	Seeta
Vipaka	:	Madhura
Karma	:	Tridoshajit, Vrishya, Rasayana, Cakshushya
Important formulations	:	Cyavanaprasa, Dhatri Lauha, Dhatryadi, Dhatryadi ghruta, Thriphaladi churna
Therapeutic uses	:	Raktapitta, Amlapitta, Prameha, Daha
Dose	:	3-6 g of the drug in powder form

4. Bibhitaki[30]

Bibhitaki consists of pericarp of dried ripe fruits of Terminalia belerica Roxb. It is a large deciduous tree, 10-12 m or more high, commonly found in plain and forests upto 900 m elevation, fruits ripen towards November.

Botanical name	:	Terminalia bellerica Roxb
Family	:	Combretaceae

Synonyms

Sanskrit[31]	:	Vibhita, Aksha, Akshaka
English	:	Beleric Myrobalan
Hindi	:	Bahera
Kannada	:	Tare kai, Shanti Kayi
Malayalam	:	Tannikka
Marathi	:	Baheda
Tamil	:	Thanrikkai
Telugu	:	Thanikkaya

Description

Fruit of bibhitaki is nearly spherical to ovoid, 2.5-4.0 cm in diameter, fresh ripe fruits slightly silvery or with whitish shiny pubescent surface, mature

fruits grey or grayish brown with slightly wrinkled appearance, rind of fruit shows variation in thickness from 3-5 mm. Its taste is astringent.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent
Total Ash	:	Not more than 7 per cent
Acid-insoluble ash	:	Not more than 1 per cent
Alcohol-soluble extractive	:	Not less than 8 per cent
Water-soluble extractive	:	Not less than 35 per cent
Constituents	:	Gallic acid, tannic acid and glycosides

Properties and action[32]

Rasa	:	Kashaya
Guna	:	Ruksha, Laghu
Virya	:	Ushna
Vipaka	:	Madhura
Karma	:	Kaphapittajit, Bhedaka, Krminasana, Cakshushya, Kesya, Kasahara.
Important formulations	:	Triphala churna, Triphaladi Taila,
Therapeutic uses	:	Svarabheda, Netraroga, Kasa, Chardi, Krimiroga, Vibandha
Dose	:	3-6 g of the drug in powder from

5. Nagara (Rhizome)[33]

It consists of dried rhizome of Zingiber officinale Roxb., widely cultivated in India, rhizomes dug in January-February, buds and roots removed, soaked overnight-in water, decorticated, and some times treated with lime and dried.

Botanical name	:	Zingiber officinale Roxb.
Family	:	Zingiberaceae

Synonyms

Sanskrit[34]	:	Aoushdha, Mahaushadha, Shundi, Visva, Visvabheshaja, Sringavera,
English	:	Ginger root, Ginger
Hindi	:	Sonth
Kannada	:	Shunthi
Malayalam	:	Chukku
Marathi	:	Sunth
Tamil	:	Sukku, Chukku
Telugu	:	Sonthi, Sunti

Description

Rhizome, laterally compressed bearing short, flattish, ovate,

oblique, branches on upper side each having at its apex a depressed scar, pieces about 5-15 cm long, 1.5-6.5 cm wide and 1-1.5 cm thick, externally buff coloured showing longitudinal striations and occasional loose fibres, fracture short, smooth, transverse surface exhibiting narrow cortex (about one-third of radius), a well-marked endodermis and a wide stele showing numerous scattered fibro-vascular bundles and yellow secreting cells, odour agreeable and aromatic, taste, agreeable and pungent.

Identity, purity and strength

Foreign matter	:	Not more than 1 per cent.
Total Ash	:	Not more than 6 per cent.
Acid-insoluble ash	:	Not more than 1.5 per cent.
Alcohol-soluble extractive	:	Not less than 3 per cent.
Water-soluble extractive	:	Not less than 10 per cent.
Constituents	:	Essential oil, pungent constituents (gingerol and shogaol), resinous matter and starch.

Properties and action[35]

Rasa	:	Katu
Guna	:	Laghu, Snigdha
Veerya	:	Ushna
Vipaka	:	Madhura
Karma	:	Dipana, Pacana, Anulomana, amadoshahara, Vatakaphapahara, Hridya
Important formulations	:	Saubhagyashundi, Trikatu churna, Vaiswanara churna

Therapeutic uses	:	Agnimandya, adhmana, Udararoga, Amavata
Dose	:	1-2 g of the drug in powder form.

6. Marica[36]

Marica consists of fully mature dried fruit of *Piper nigrum* Linn); a climber, cultivated from Konkan Southwards, especially in North Konkan Kerala and also in Assam; fruits ripen from December to March, depending upon climatic conditions; fruits harvested from December to April.

Botanical name	:	Piper nigrum Linn.
Family	:	Piperaceae

Synonyms

Sanskrit[37]	:	Vellaja, Krishna, Ushna
English	:	Black Pepper
Hindi	:	Kalimirch
Kannada	:	Karimonaru, Menaru
Malayalam	:	Kurumulaku
Marathi	:	Kalamiri
Tamil	:	Milagu
Telugu	:	Miriyalu, Marichamu

Description

Fruits greyish-black to black, hard, wrinkled, 0.4-0.5 cm in dia.; odour, aromatic; taste, pungent.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total Ash	:	Not more than 5 per cent.
Acid-insoluble ash	:	Not more than 0.5 per cent.
Alcohol-soluble extractive	:	Not less than 6 per cent.
Water-soluble extractive	:	Not less than 6 per cent.
Constituents	:	Alkaloids (Piperine, Chavicine, Piperidine, Piperetine) and essential oil[36].

Properties and action[38]

Rasa	:	Katu, Tikta
Guna	:	Laghu, Ruksha, Tikta
Virya	:	Ushna
Vip¡ka	:	Katu
Karma	:	Sleshmahara, Pittakara, Kaphavatajit, Vatahara, Chedana, Dipana, Rucya, Jantunasana, Medohara,
Important formulations	:	Maricadi Gulika, Maricadi Taila, Trikatu Curna
Therapeutic uses	:	Svasa, sula, Krimiroga, Tvagroga
Dose	:	250 mg - 1 g of the drug in powder form.

7. Pippali[39]

Pippali consists of the dried, immature, catkin-like fruits with bracts of Piper longum Linn, a slender, aromatic climber with perennial woody roots, occurring in hotter parts of India from central Himalayas to Assam upto lower hills of West Bengal and ever green forests of Western ghats as wild, and also cultivated in North East and many parts of the South.

Botanical name	:	Piper longum Linn
Family	:	Piperaceae

Synonyms

Sanskrit[40]	:	Kana, Magadhi, vaidehi, Krishna.
English	:	Long Pepper
Hindi	:	Pipar
Kannada	:	Hippali
Malayalam	:	Pippali
Marathi	:	Pimpali, Lendi Pimpali
Tamil	:	Arisi Tippali, Thippili
Telugu	:	Pippalu

Description

Fruit greenish-black to black, cylindrical, 2.5 to 5 cm long and 0.4 to 1 cm thick, consisting of minute sessile fruits, arranged around an axis; surface rough and composite; broken surface shows a central axis and 6 to 12 fruitlets arranged around an axis; taste, pungent producing numbness on the tongue; odour, aromatic.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent
Total Ash	:	Not more than 7 per cent
Acid-insoluble ash	:	Not more than 0.5 per cent
Alcohol-soluble extractive	:	Not less than 5 per cent
Water-soluble extractive	:	Not less than 7 per cent
Constituents	:	Essential Oil and Alkaloids.

Properties and action[41]

Rasa	:	Katu, Tikta, Madhura
Guna	:	Snigdha, Laghu
Virya	:	Anusha
Vip¡ka	:	Madhura
Karma	:	Vatahara, Kaphahara, Dipana, Rucya, Rasayana, Hridya, Vrishya, Tridosha hara, Recana
Important formulations	:	Gudapippali, Amritarishta, Ayaskrti, Asvagandhadyarishta, Kumaryasava,

Candanasava, Cyavanaprasa Avaleha, Siva Gulika, Kaisora Guggulu

Therapeutic uses : Svasa, Kasa, Pliha Roga, Gulma, Jvara, Prameha, Arsa, Kshaya, Udara Roga, Hikka, Trishna, Krimi, Kushta, Sula, Amavata.

Dose : 1-3 gm

8. Varuna [42]

Varuna consists of dried stem bark of Crataeva religiosa, a small wild or cultivated tree found throughout the year in India, often found along streams, also in dry, deep boulder formation in Sub-Himalayan tracts.

Botanical name : Crataeva religiosa

Family : Capparidace

Synonyms

Sanskrit[43] : Varana, Tiktasaka, Kumaraka, setu

English : Three leaved caper

Hindi : Baruna, Barna

Kannada : Bipatri, Mattamavu, Neervalamara

Malayalam	:	Neermatalam
Marathi	:	Vayavarna, Haravarna, Varun
Tamil	:	Maralingam
Telugu	:	Bilvarani

Description

Thickness or bark varies, usually 1-1.5 cm according to the age and portion of the plant from where the bark is removed, outer surface, greyish to greyish-brown with ashgrey patches, at places, surface rough due to a number of lenticels, shallow fissures and a few vertical or longitudinal ridges, inner most surface smooth and cream white in colour, fracture tough and short, odour, indistinct, taste, slightly bitter.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total Ash	:	Not more than 13 per cent.
Acid-insoluble ash	:	Not more than 1 per cent.
Alcohol-soluble extractive	:	Not less than 1 per cent.
Water-soluble extractive	:	Not less than 8 per cent.
Constituents	:	Saponin and Tannin[56]

Properties and action[44]

Rasa	:	Tikta, Kashaya
Guna	:	Laghu, Ruksha
Virya	:	Ushna

Vipaka	:	Katu
Karma	:	Dipana, Bhedi, Vatasleshmahara
Important formulations	:	Varunadi Kvatha
Therapeutic uses	:	Asmari, Mutrakrcchra, Gulma, Vidradhi
Dose	:	20-30 g of the drug for decoction.

9. Ela [45]

Ela consists seeds of dried fruits of Elettaria cardamomum (Linn.) Maton and its varieties, a stout large perennial herb, growing naturally in moist forests of western ghats up to 1500 m, also cultivated in many other parts of south India at an elevation from 750-1500m.

Botanical name	:	Elettaria cardamomum Linn.
Family	:	Zingiberaceae

Synonyms

Sanskrit[46]	:	Truti, Sukshmela, dravati, truti
English	:	Cardamom
Hindi	:	Choti Ilayachi
Kannada	:	Elakki, Sanna Yalakki

Malayalam	:	Elam, Chittelam
Marathi	:	Velloda, Lahanveldoda, Velchi
Tamil	:	Siruelam
Telugu	:	Chinne Elakulu, Sanna Elakulu

Description

Fruit - 1-2 cm long ovoid or oblong and more or less three sided with rounded, angles, greenish to pale-buff or yellowish in colour, base rounded or with the remains of pedicle, apex shortly beaked, surface almost smooth or with slight longitudinal striations, small trilocular fruit, each containing about 15-20 seeds in a row of doubles, adhering together to form compact mass. Seed-dark brown to black, about 4 mm long and 3 mm broad, irregularly angular, transverscIy wrinkled but not pitted, with a longitudinal channel containing raphe, enclosed in a colourless, membranous aril, odour, strongly aromatic, taste, characteristic.

Identity, purity and strength

Foreign matter	:	Not more than Nil per cent.
Total Ash	:	Not more than 6 per cent.
Acid-insoluble ash	:	Not more than 4 per cent.
Alcohol-soluble extractive	:	Not less than 2 per cent.
Water-soluble extractive	:	Not less than 10 per cent.
Volatile oil	:	Not less than 4 per cent, v/w
Constituents	:	Essential oil

Properties and action[47]

Rasa	:	Katu, Madhura
Guna	:	Laghu
Virya	:	Seeta
Vipaka	:	Madhura
Karma	:	Rocana, Dipana, Anulomana, Hrdya, Mutrala
Important formulations	:	Eladi Modaka, Eladi Curna, Sitopaladi Curna
Therapeutic uses	:	Kasa, Svasa, Aruci, Chardi, Mutrakrcchra
Dose	:	250-500 mg of the drug in powder form.

10. Tvak[48]

Tvak is the dried inner bark (devoid of cork and cortex) of the coppiced shoots of stem of Cinnamomum zeylanicum Blume, a moderate sized evergreen tree usually attaining a height of 6-7 .5 m, cultivated on the Western Ghats and adjoining hills, bark collected during April-July and October-December.

Botanical name	:	Cinnamomum zeylanicum Blume.
Family	:	Lauraceae

Synonyms

Sanskrit[49]	:	Darusita
English	:	Cinnamon bark
Hindi	:	Dalchini
Kannada	:	Dalchini Chakke
Kashmiri	:	Dalchini, Dalchin
Malayalam	:	Karuvapatta, Ilavarngathely
Marathi	:	Dalchini
Tamil	:	Lavangapattai, Karuvapattai
Telugu	:	Lavangapatta, Dalchini chekka

Description

Bark pieces about 0.5 mm thick, brittle, occurs as single or double, closely packed ompound quills, upto a metre or more in length and upto about 1 cm in diameter, outer surface, dull yellowish-brown, marked with pale wavy longitudinal lines with occasional small scars or holes, inner surface darker in colour, striated with longitudinally elongated reticulation, fracture, splintery, free from all but traces of cork, odour, fragrant, taste, sweet, aromatic with sensation of warmth.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total Ash	:	Not more than 3 per cent.
Acid-insoluble ash	:	Not more than 2 per cent
Alcohol-soluble extractive	:	Not less than 2 per cent.

Water-soluble extractive	:	Not less than 3 per cent.
Volatile oil	:	Not less than 1 per cent, v/w.
Constituents	:	Essential oil, tannin and mucilage

Properties and action[49]

Rasa	:	Katu, Tikta, Madhura
Guna	:	Ruksha, Laghu, Tikshna
Virya	:	Usha
Vipaka	:	Katu
Karma	:	Kaphavatahara, Vishaghna, Kanthasuddhikara, Rucya
Important formulations	:	Sitopaladi Curna, Caturjata Curna
Therapeutic uses	:	Mukhasosha, Trsha, Pinasa, Krmiroga, Vastiroga, Arsa, Hrdroga
Dose	:	1-3 g of the drug in powder form.

11. Tvakpatra [50]

Tvakpatra consists of dried mature leaves of Cinnamomum tamala (Buch. Ham.). Nees & Eberm : a small evergreen tree upto 7.5 m high and occurs in tropical, sub- tropical Himalayas between 900-2300 m, often

raised from seeds, sown in nursery, leaves collected in dry weather from about ten years old plant during October-March.

Botanical name	:	Cinnamomum tamala (Buch. Ham.)Nees & Eberm.
Family	:	Lauraceae

Synonyms

Sanskrit	:	Patra, Varanga, Coca
English	:	Indian Cinnamon
Hindi	:	Tejpatra
Kannada	:	Tamalapatra, Dalchini Ele
Malayalam	:	Karuvapatta patram
Marathi	:	Tamalpatra
Tamil	:	Lavangapatri
Telugu	:	Akupatri

Description

Leaves-12.5-20 cm long, 5-7.5 cm wide at the centre, 3 converging nerves from base to apex young leaves pink, petiole 7.5-13 mm long, margin entire, apex acute or accuminate, both surfaces smooth, stomata paracytic odour, aromatic, taste, slightly sweet, mucilaginous and aromatic.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total Ash	:	Not more than 5 per cent.

Acid-insoluble ash	:	Not more than 1 per cent.
Alcohol-soluble extractive	:	Not less than 6 per cent.
Water-soluble extractive	:	Not less than 9 per cent.
Volatile oil	:	Not less than 1 per cent, v/w.
Constituents	:	Essential oils (d-↑phellandrene and eugenol)

Properties and action[51]

Rasa	:	Katu, Madhura
Guna	:	Laghu, Picchila, Tikshna
Virya	:	Ushna
Vipaka	:	Katu
Karma	:	Rucya, Kaphavatahara, Arsoghna
Important formulations	:	Citrakadi Taila, Kasisadi Taila, Vajraka Taila
Therapeutic uses	:	Aruci, Hrllasa, Arsa, Pinasa
Dose	:	1-3 g of the drug in powder form.

12. Guggulu [52]

Guggulu consists of exudate of Commiphora mukul Engl, a small perennial tree or shrub upto 1.2-1.8 m high, occuring in rocky tracts of Rajasthan, Gujarat, exudate is collected during winter season by making the incisions in the bark or in summer, falling from the bark itself.

Botanical name	:	Commiphora mukul Engl.
Family	:	Burseraceae

Synonyms

Sanskrit[53]	:	Mahishaksha, Kausika, Palankasha
English	:	Gum-gugul, Indian Bdellium
Hindi	:	Guggul, Gugal
Kannada	:	Kanthagana, Guggala, Mahishaksha guggulu, Guggulugida, Guggulu
Malayalam	:	Gulgulu, Guggulu
Marathi	:	Guggul, Mahishaksh
Tamil	:	Mahisaksi Guggalu
Telugu	:	Makishakshi guggulu, Guggipannu

Description

Drug occurs in vermicular or stalactitic pieces of pale yellow or brown coloured mass, makes milky emulsion in hot water and readily burns, when fresh viscid and golden coloured, odour, aromtic, taste., bitter and astringent.

Identity, purity and strength

Foreign matter	:	Not more than 4 per cent.
Total Ash	:	Not more than 5 per cent.
Acid-insoluble ash	:	Not more than 1 per cent.
Alcohol-soluble extractive	:	Not less than 27 per cent.
Water-soluble extractive	:	Not less than 53 per cent.
Volatile oil	:	Not less than 1 per cent, v/w
Constituents	:	Essential oil, gum, resin, steroids.

Properties and action

Rasa	:	Tikta, Katu, Kashaya
Guna	:	Laghu, Sara, Visada
Virya	:	Ushna
Vipaka	:	Katu
Karma	:	Vatakaphahara, Rasayana, Varnya, Balya, Bhagnasandhanakrt, Medohara.
Important formulations	:	Yogaraja Guggulu, Kanchanara guggulu, Kaisora Guggulu, Mahayogaraja Guggulu, Candraprabha Vati.
Therapeutic uses	:	Vatavyadhi, Amavata, Granthi, sopha, Gandamala, Medoroga, Prameha, Kushta
Dose	:	2-4 g of the drug

Properties of the drugs in Kanchanaraguggulu

Properties	In percentage

Madhura rasa	50
Amla rasa	17
Tikta rasa	58
Katu rasa	75
Kashaya rasa	50
Ushna virya	75
Sita virya	17
Anushna	8
Lakhu	100
Ruksha	58
Snigdha	17
Tikshna	33
Katu vipaka	58
Madhura vipaka	42
Vatakapha hara	67
Kaphapitta hara	8
Tridosha hara	25

Quality testing analysis result

Parameters	Result
Average weight	1.4gms
Loss on drying	11.20%
Total ash	6.78%
Water soluble ash	2.01%

Acid soluble ash	1.08%
Alcohol soluble extract	27.90%
Water soluble extractive	30.45%
Heavy metal analysis	
Cadmium	BDL (Below Detectable Level)
Lead	BDL
Mercury	BDL
Arsenic	BDL

2.3.2 Thrayanthyadi qwadha

It is described in Ashtanga Hridaya Vidradhichikitsa.[17]

1. Trayanti[55]

Trayamana consists of dried rhizomes of Gentiana kurroo Royle (Fam. Gentianaceae), a perennial herb with tufted and decumbent stem distributed sporadically in sub-alpine to alpine meadows between altitudes of 1500 to 3000 m.

Botanical name	:	Gentiana kurroa
Family	:	Gentianaceae
Synonyms	:	Trayanti, Girija, Balabhadra, Pakanika, Trayantika

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total ash	:	Not more than 7 per cent.

Acid-insoluble ash	:	Not more than 2 per cent.
Alcohol-soluble extractive	:	Not less than 28 per cent.
Water-soluble extractive	:	Not less than 13 per cent.
Constituents	:	Gentianic acid.
Important formulations	:	Trayamanadya Ghrta, Trayamana Kvatha, Mahapaisacika Ghrta.
Therapeutic uses	:	Atisara, Bhrama, Gulma, Hrdroga, Jvara, Raktapitta Raktavikara, Sula Sutikasula
DOSE- Curna	:	1 to 3 g[55].

Properties[56]

Rasa	:	Katu, Tikta
Guna	:	Tikshna
Virya	:	Usna
Vipaka	:	Katu
Karma	:	Dipana, Kaphapitta, Samana, Jwarahara, Yakrtroga Samana, Sutikasulanasana.

2. Haritaki [24, 25, 26]

3. Amalaki[27, 28, 29]

4. Bibhitaki[30, 31, 32]

5. Nimba[57]

Nimba (stem bark) consists of stem bark of Azadirachta indica A. Juss ; a moderate sized to fairly large, evergreen tree, attaining a height of 12-15 m with stout trunk and spreading branches, occurring throughout the country upto an elevation of 900 m.

Botanical name	:	Azadirachta indica A. Juss
Family	:	Meliaceae

Synonyms

Sanskrit	:	Arishta, Picumarda
English	:	Margosa Trees
Hindi	:	Nim, Nimb
Kannada	:	Bevu, Kahibevu, Nimba, Oilevevu
Malayalam	:	Veppu, Aruveppu
Marathi	:	Balantanimba, Kadunimb, Limba
Tamil	:	Veppai, Vembu
Telugu	:	Vemu, Vepa

Description

Bark varies much in thickness according to age and parts of tree from where it is taken; extemal surface rough, fissured and rusty-grey; laminated inner surface yellowish and foliaceous, fracture, fibrous; odour, characteristic; taste bitter.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent
Total Ash	:	Not more than 7 per cent
Acid-insoluble ash	:	Not more than 1.5 per cent
Alcohol-soluble extractive	:	Not less than 6 per cent
Water-soluble extractive	:	Not less than 5 per cent
Constituents	:	Bitter principles Nimbin and Nimbiol

Properties and action[58]

Rasa	:	Tikta
Guna	:	Laghu, Ruksha
Virya	:	Seeta
Vipaka	:	Katu
Karma	:	Kaphpittahara, Vishaghna, Kasaghna, Vranaghna, Pramehaghna, Hrillasnut,
Important formulations	:	Nimbadi Kvatha Curna, Nimbadi Curna, Sudarsana Curna
Therapeutic uses	:	Vrana, Kushta, Prameha, Kasa, Krmiroga, Jvara, Daha, Rakta Pitta

Dose : 2-4 g of the drug in powder form, decoction should be used externally.

6. Katuka[59]

Katuki consists of the dried rhizome with root of Picrorhiza kurroa Royle ex Benth; a perennial, more or less hairy herb common on the north-western Himalayas from Kashmir to Sikkim. Rhizome is cut into small pieces.

Botanical name : Picrorhiza kurroa Royle ex Benth.

Family : Scrophulariaceae

Synonyms

Sanskrit : Tikta, Tiktarohini, Katurohini

English : Hellebore

Hindi : Kutki

Kannada : Katuka rohini, katuka rohini

Malayalam : Kaduk rohini, Katuka rohini

Tamil : Katuka rohini, Katuku rohini, Kadugurohini

Telugu : Karukarohini

Description

Rhizome - 2.5-8 cm long and 4-8 mm thick, subcylindrical, straight or slightly curved, externally greyish-brown, surface rough due to longitudinal wrinkles, circular scars of roots and bud scales and sometimes roots attached, tip ends in a growing bud surrounded by tufted crown of leaves, at places cork exfoliates exposing dark cortex; fracture, short; odour, pleasant; taste, bitter. Root - Thin, cylindrical, 5-10 cm long, 0.05-0.1 cm in diameter, straight or slightly curved with a few longitudinal wrinkles and dotted scars, mostly attached with rhizomes, dusty grey, fracture, short, inner surface black with whitish xylem; odour, pleasant; taste, bitter.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total Ash	:	Not more than 7 per cent.
Acid-insoluble ash	:	Not more than 1 per cent.
Alcohol-soluble extractive	:	Not less than 10 per cent.
Water-soluble extractive	:	Not less than 20 per cent.
Constituents	:	Glucoside (Picrorhizin).

Properties and action[60]

Rasa	:	Tikta, Katu
Guna	:	Laghu
Virya	:	Ushna
Vipaka	:	Katu

Karma	:	Kaphapittahara, Dipani, Bhedini, Hrdya, Jvarahara
Important formulations	:	Arogyavardhini Gutika, Tiktaka Ghrta, Sarvajvarahara, Lauha, Mahatiktaka Ghrta.
Therapeutic uses	:	Kamala, Svasa, Daha, Jvara, Kushta, Vishamajvara, Arocaka
Dose	:	1 - 3 g of the drug in powder form.

7. Madhuka [61]

Madhuka consists of dried, unpeeled, stolon and root of Glycyrrhiza glabra Linn, a tall perennial herb, upto 2 m high found cultivated in Europe, Persia, Afghanistan and to little extent in some parts of India.

Botanical name	:	Glycyrrhiza glabra Linn
Family	:	Leguminosae

Synonyms

Sanskrit	:	Yashtimadhuka, Yashtika, Yashti, Madhuyashti, Yashtyahva
English	:	Liquorice root
Hindi	:	Mulethi, Mulathi, Muleti, Jethimadhu,
Kannada	:	Jestamadu, Madhuka, Jyeshtamadhu,

Malayalam	:	Irattimadhuram
Marathi	:	Jesthamadh
Tamil	:	Athimadhuram
Telugu	:	Atimadhuramu

Description

Stolon consists of yellowish brown or dark brown outer layer, externally longitudinally wrinkled, with occasional small buds and encircling scale leaves, smoothed transversely, cut surface shows a cambium ring about one-third of radius from outer surface and a small central pith, root similar without a pith, fracture, coarsely fibrous in bark and splintery in wood, odour, faint and characteristic, taste, sweetish.

Identity, purity and strength

Total Ash	:	Not more than 10 per cent.
Acid-insoluble ash	:	Not more than 2.5 per cent.
Alcohol-soluble extractive	:	Not less than 10 per cent.
Water-soluble extractive	:	Not less than 20 per cent.
Constituents	:	Glycyrrhizin, glycyrrhizic acid, glycyrrhetinic acid, asparagine, sugars, resin and starch

Properties and action[62]

Rasa	:	Madhura
Guna	:	Guru, Snigdha
Virya	:	Sita
Vipaka	:	Madhura

Karma	:	Vatapittajit, Raktaprasadana, Balya, Varnya, Vrshya, Cakshushya
Important formulations	:	Eladi Gutika, Yashtimadhuka Taila, Madhuyashtyadi Taila
Therapeutic uses	:	Kasa, Svarabheda, Kshaya, Vrana, Vatarakta
Dose	:	2-4 g of the drug in powder form.

8. Trivrt[63]

Trivrt consists of dried root of Operculina turpethum (Linn.) ; a large perennial twiner with milky juice and fleshy roots, found growing wild nearly throughout the country, ascending to 900 m, also occasionally grown in gardens; the roots being fleshy, care is taken in drying as they decay easily; roots therefore cut into pieces and the cut portions are exposed to sun for a day or so, after which it is finally dried in shade.

Botanical name	:	Operculina turpethum (Linn.)
Family	:	Convolvulaceae

Synonyms

Sanskrit	:	Syama, Tribhandi, koodarani
English	:	Terpeth Root, Indian Jalap
Hindi	:	Nishothra
Kannada	:	Vili Tigade
Malayalam	:	Trikolpokanna
Marathi	:	Nisottar
Tamil	:	Karum Sivadai
Telugu	:	Tella, Tegada

Description

Roots occur in pieces, 1.5-15 cm long, 1-5 cm dia., usually unbranched, cylindrical, elongated, bearing thin rootlets; thicker pieces, occasionally split and show central wood portion; surface dull grey, reddish-grey to light brown, showing deep furrows or longitudinal wrinkles giving a rope-like or columnar appearance; transversely cut surface shows thick, whitish bark and light yellow centre; fracture in bark, short; in wood, fibrous; odour, indistinct; taste, slightly acrid and nauseating when kept in mouth for some time.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total Ash	:	Not more than 10 per cent.
Acid-insoluble ash	:	Not more than 1.5 per cent.
Alcohol-soluble extractive	:	Not less than 10 per cent.

Water-soluble extractive	:	Not less than 8 per cent.
Constituents	:	Resinous Glycosides.

Properties and action[64]

Rasa	:	Madhura, Katu, Tikta, Kashaya
Guna	:	Ruksha, Laghu, Tikshna
Virya	:	Ushna
Vipaka	:	Katu
Karma	:	Vatala, Virecana, Kaphapittahara, Sukhavirecaka, Pittahara, Jvarahara
Important formulations	:	Hrdyavirecana Leha, Asvagandharishta, Avipattikara curna, Manibhadra Gula
Therapeutic uses	:	Malabandha, Gulma, Udara Roga, Jvara, áopha, Pandu, Pliha, Vrana, Krmi, Kushta.
Dose	:	1-3 g of the drug in powder form.

9. Patolamoola[65]

Botanical name	:	Trichosanthes dioica Roxb.
Family	:	Cucurbitaceae

Properties and Actions[66]

Rasa	:	Tikta
Guna	:	Laghu, Snigdha
Virya	:	Usna

Vipaka	:	Katu
Dosakarma	:	Tridosahara
Karma	:	Pachana, Vrishya, Agnideepthikara, Kasa, Jwaragna, Virechana.

पटोलंपाचनंह्यद्यंवृष्यंलघुअग्निदीपनं।
स्निग्धोष्णंहन्तिकासास्रज्वरदोषत्रयकृमीनं।
पटोलस्यभवेनमूलंविरेचनकरंसुखमं।

10. Masura[67]

Masura consists of dried seed of Lens culinaris Medic. (Fam. Fabaceae), a small, erect, pubescent herb, 15-75 cm high, cultivated throughout north India, particularly in Uttar Pradesh, Madhya Pradesh, Bihar and West Bengal, and to a smaller extent in Punjab, Rajasthan, Maharashtra and Gujarat.

Botanical name	:	Lens culinaris Medic.
Family	:	Fabaceae

Synonyms

Sanskrit	:	Supya, Pittabheshaja
English	:	Lentil
Hindi	:	Masur
Kannada	:	Masura Bele
Malayalam	:	Chanam payar, Vattupparupu
Marathi	:	Masur, Massora
Tamil	:	Masoor Paruppu
Telugu	:	Masura Pappu, Masooralu

Description

Seed lens-shaped, smooth, about 4 mm thick, greyish-brown and faintly mottled, cotyledons pink; taste, characteristic.

Identity, purity and strength

Foreign matter	:	Not more than 1 per cent.
Total Ash	:	Not more than 3 per cent.
Acid-insoluble ash	:	Not more than 0.5 per cent.
Alcohol-soluble extractive	:	Not less than 6 per cent.
Water-soluble extractive	:	Not less than 10 per cent.
Constituents	:	Flavonoids and Vitamins.

Properties and actions[68]

Rasa	:	Madhura, Kashaya
Guna	:	Laghu, Ruksha
Virya	:	Sita
Vipaka	:	Madhura
Karma	:	Sangrahi, Kaphapittasamaka, Vatamayakara, Varnya, Balya
Therapeutic uses	:	Atisara, Mutrakrcchra, Jvara, Raktapitta
Dose	:	10-20 g

Properties of the drugs in Trayantyadi qwadha

Properties	In percentage
Madhura rasa	50
Tikta rasa	70
Kashaya rasa	50
Katu rasa	50
Amla rasa	20

Ushna virya	60
Sita virya	40
Lakhu	80
Ruksha	60
Snigdha	20
Guru	10
Tikshna	20
Katu vipaka	50
Madhura vipaka	50
Kaphapitta hara	60
Vatapitta hara	10
Tridosha hara	30

Quality analysis result

Parameters	Result
pH	4.93
Total solids	16.18
Specific gravity	1.069
Total phenol	14.95%
Heavy metal analysis	
Cadmium	BDL (Below Detectable Level)
Lead	BDL
Mercury	BDL
Arsenic	BDL

Microbial contamination

Total plate count	Nil
Total fungal count	Nil

Test for specific pathogen

E. coli	Absent
Salmonella spp	Absent
S.aureus	Absent
Pseudomonas aeruginosa	Absent

2.3.3 Vyaghrivarunadi qwadha[19,20]

This qwadha is explained in Chikitsamanjari vidradhi chikitsa.

व्याध्रीवरुणतर्कारीविश्वशिग्रुपुनर्नवैः।

क्वथयित्वापिबेत्तोयंविद्रधावन्तराश्रये ?

1. Vyaghri[69]

Vyaghri consists of mature, dried whole plant of Solanum xanthocarpum Schrad & Wendl, perennial, very prickly diffused herb of waste land, found throughout India.

Botanical name	:	Solanum xanthocarpum Schrad
Family	:	Solanaceae

Synonyms

Sanskrit	:	Vyaghri, Nidigdhika, Kshudra, Kantakarika, Dhavani, Nidigdha, Dusparsa

English	:	Febrifuge plant
Hindi	:	Katai, Katali, Ringani, Chhotikateri
Kannada	:	Nelagulla, Kiragulla
Malayalam	:	Kantakari chunda
Marathi	:	Bhauringani, Kataringani
Tamil	:	Kandangatri, Kandankatri, Kandanghathiri
Telugu	:	Nelamulaka, Pinnamulaka, Mulaka, Chinnamulaka, Vakudu

Description

Root-10-45 cm long, few mm to two cm in diameter, almost cylindrical and tapering, bearing a number of fine longitudinal and few transverse wrinkles with occasional scars or a few lenticels and small rootlets, transversely smoothened surface shows a thin bark and wide compact cylinder of wood, fracture, short, taste, bitter.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total Ash	:	Not more than 9 per cent.
Acid-insoluble ash	:	Not more than 3 per cent.

Alcohol-soluble extractive	:	Not less than 6 per cent.
Water-soluble extractive	:	Not less than 16 per cent
Constituents	:	Glucoalkaloids and sterols

Properties and action[70]

Rasa	:	Katu, Tikta
Guna	:	Laghu, Ruksha
Virya	:	Ushna
Vipaka	:	Katu
Karma	:	Dipana, Pacana, Amadoshanasaka, Kanthya, Sothahara Kaphavata samana
Important formulations	:	Kantakaryavaleha, Pancatiktaka Ghrta, Vyaghriharitaki
Therapeutic uses	:	Svasa, Kasa, Jvara, Aruci, Pinasa, Parsvasula, Svarabheda
Dose	:	20-30 g of the drug for decoction

2. Varuna [42, 43, 44]

3. Tarkari [71]

Agnimantha consists of dried mature roots of Premna integrefolia; a large shrub or small tree reaching upto 9 m in height, with more or less pubescent branches, found in dry parts throughout the country.

Botanical name	:	Premna integrefolia.
Family	:	Verbenaceae

Synonyms

Sanskrit	:	Ganikarika, Jayanti, Jaya, Agnimandha
Hindi	:	Urni
Kannada	:	Taggi, Taggi Beru
Malayalam	:	Munja
Marathi	:	Takalimula
Tamil	:	Tazhutazhai
Telugu	:	Taluki

Description

Drug pieces 7-15 cm long, 0.2 -3.0 cm thick, occasionally branched, cylindrical, tough, yellowish-brown externally, bark thin, occasionally easily peeled, outer surface rough due to exfoliation, wood light yellow, fracture hard; taste, slightly astringent.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent.
Total Ash	:	Not more than 6 per cent
Acid-insoluble ash	:	Not more than 1 per cent

Alcohol-soluble extractive	:	Not less than 2 per cent.
Water-soluble extractive	:	Not less than 5 per cent.
Constituents	:	Sterols

Properties and action[72]

Rasa	:	Katu, Tikta, Kashaya
Guna	:	Laghu, Ruksha
Virya	:	Ushna
Vipaka	:	Katu
Karma	:	Vata kaphahara, Svayathuhara, Vatakara
Important formulations	:	Dasamularishta, Dasamula Kvatha Curna, Indukanta Ghrta, Dhanvantara Ghrta, Gorocanadi Vati, Narayana Taila
Therapeutic uses	:	Sotha, Pandu, Arsa, Vatavikara, Vibandha, Agnimandya, Adhmana, Gulma, Mutrakrcchra, Mutraghata
Dose	:	12-24 g of the drug in powder form for decoction.

4. Sigru[73]

Sigru consists of dried root bark of Moringa oleifera Lam. Syn. Moringa pterygosperma Gaertna small or medium sized tree, found wild in sub-Himalayan tract, and also commonly cultivated throughout the country for its leaves and fruits used as vegetable.

Botanical name	:	Moringa oleifera Lam
Family	:	Moringaceae

Synonyms

Sanskrit	:	Sobhanjana, Bahala, Tikshnagandha, Mocaka
English	:	Horse Radish Tree, Drum-stick Tree
Hindi	:	Sahajan
Kannada	:	Neegge, Nugge Kand Chakke
Malayalam	:	Muringa
Marathi	:	Sevaga, Segat Sala
Tamil	:	Murungai
Telugu	:	Munaga, Mulaga

Description

Drug occurs in pieces of variable sizes, external surface, light greyish-brown, rough, reticulated, marked with transverse row of lenticels; outer bark, thin, peeling off in small bits, internal surface, white.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent
Total Ash	:	Not more than 18 per cent
Acid-insoluble ash	:	Not more than 10 per cent
Alcohol-soluble extractive	:	Not less than 3 per cent
Water-soluble extractive	:	Not less than 11 per cent
Constituents	:	Alkaloids and Essential Oil

Properties and action[74]

Rasa	:	Katu, Tikta, Madhura
Guna	:	Laghu, Rukshna, Tikshna, Sara
Virya	:	Usha
Vipaka	:	Katu
Karma	:	Vatakaphahara, Pittakara, Medohara, Sukrala, Dipana, Pacana, Sophaghna, Cakshusya, Sangrahi, Hridya, Rocana, Vishaghna
Important formulations	:	Prabhanjana Vimardana Taila, Sarasvata Ghrta

Vastyamayataka Ghrta

Therapeutic uses	:	Sopha, Krmiroga, Medoroga, Pliha roga, Vidradhi, Gulma, Galaganda, Granthi, Visarpa, Asmari, Vrana Vikara, Mutra sarkar, Kushta, Kshata, Karnasula, Antarvidradhi
Dose	:	25-50 gm of the drug in powder form.

5. Shundi[33, 34, 35]

6. Punarnava[75]

Punarnava consists of dried, matured whole plant of Boerhaavia diffusa Linn. trailing herb found throughout India and collected after rainy season, herb is diffusely branched with stout root stock and many long slender, prostrate or ascending branches.

Botanical name : Boerhaavia diffusa Linn.

Family : Nyctaginaceae

Synonyms

Sanskrit : Sophaghni, Sothaghni, Varshabhu

English : Horse Purslene, Hog Weed

Hindi : Gadapurna, Lalpunarnava

Kannada : Sanadika, Kommeberu, Komma

Malayalam	:	Chuvanna Tazhutawa
Marathi	:	Ghetuli, Vasuchimuli, Satodimula, Punarnava
Tamil	:	Mukurattai (Shihappu)
Telugu	:	Atikamamidi, Erra galijeru

Description

Stem-greenishpurple, stiff, slender, cylindrical, swollen at nodes, minutely pubescent or n early glabrous, prostrate divericately branched, branches from common stalk, often more than a metre long. Root- wel developed, fairly long, somewhat tortuous, cylindrical, 0.2-1.5 cm in diameter, yellowish brown to brown coloured, surface soft to touch but rough due to minute longitudinal striations and root scars, fracture, short, no distinct odour, taste, slightly bitter. Leaves-opposite in unequal pairs, larger ones 25-37 mm long and smaller ones 12-18 mm long ovate-oblong or suborbicular, apex rounded or slightly pointed, base subcordate or rounded, green and glabrous above, whitish below, margin entire or sub-undulate, dorsal side pinkish in certain cases, thick in texture, petioles nearly as long as the blade, slender. Flowers-very small, pink coloured, nearly sessile or shortly stalked, 10-25 cm, in small umbells, arranged on slender long stalks, 4-10 corymb, axillary and in terminal panicles, bracteoles, small, acute, perianth tube constricted above the ovary, lower part greenish, ovoid, ribbed, upper part pink, funnel-shaped, 3 mm long, tube 5 lobed, stamen 2-3. Fruit-one seeded nut, 6 mm long clavate, rounded, broadly and bluntly 5 ribbed, viscidly glandular.

Identity, purity and strength

Foreign matter	:	Not more than 2 per cent
Total Ash	:	Not more than 15 per cent
Acid-insoluble ash	:	Not more than 6 per cent.
Alcohol-soluble extractive	:	Not less than 1 per cent.
Water-soluble extractive	:	Not less than 4 per cent.
Constituents	:	Alkaloid (Punarnavine).

Properties and action[76]

Rasa	:	Madhura, Tikta, Kashaya
Guna	:	Ruksha
Virya	:	Ushna
Vipka	:	Madhura
Karma	:	Vatasleshmahara, Mutrala, Sothahara, Anulomana
Important formulations	:	Punarnavashtaka Kvatha Curna, Punarnavasava, Punarnavadi Mandura, Sukumara Ghrta, Sothaghna Lepa
Therapeutic uses	:	Pandu, Sotha
Dose	:	20-30 g of the drug for decoction.

Properties of the drugs in Trayantyadi qwadha

Properties	In percentage
Madhura rasa	33
Tikta rasa	67

Katu rasa	67
Kashaya rasa	33
Ushna virya	100
Lakhu	83
Ruksha	83
Tikshna	17
Snigdha	17
Sara	17
Madhura vipaka	33
Katu vipaka	67
Vatakapha hara	100

Quality analysis result

Parameters	Result
pH	5.28
Total solids	9.03
Specific gravity	1.034
Total phenol	4.35%
Heavy metal analysis	
Cadmium	BDL (Below Detectable Level)
Lead	BDL
Mercury	BDL
Arsenic	BDL

Microbial contamination	
Total plate count	25*102cfu/ml
Total fungal count	2cfu/ml
Test for specific pathogen	
E. coli	Absent
Salmonella spp	Absent
S.aureus	Absent
Pseudomonas aeruginosa	Absent

Studies of the individual drugs of Kanchanraguggulu, Trayantyadi qwadha, Vyaghrivaranadi qwadha.

"B. Rajkapur et al conducted a study to evaluate the chemopreventive and cytotoxic effect of ethanol extract of Bauhinia variegata (EBV) in N-nitrosodiethylamine (DEN, 200 mg/kg) induced experimental liver tumor in rats and human cancer cell lines. The results show a significant chemopreventive and cytotoxic effect of ethanol extract of Bauhinia variegata against DEN induced liver tumor and human cancer cell lines"[77].

"Ethanolic extract of Terminalia Chebula fruit significantly inhibited tumor in EAC (Ehrlich Ascites Carcinoma) induced cancer in swiss albino mice. This activity involves restoration of hematopoetic parameters, reduction in tumor volume and increased lifespan of the animals"[78].

"T. belerica fruit extracts possess immunomodulatory activity which is proved by phagocytic and lymphocyte proliferation activity of fruit methanolic

extract on the mouse. Methanolic extract has been reported to stimulate the production of superoxide anions and acid phosphatase and hence promotes macrophage phagocytosis. In lymphocyte proliferation assay, the extract with phytohemagglutinin exhibited maximal activation"[79].

A vast study was done on Terminalia Chebula proved that the plant has many important phytochemical compounds like gallic acid, chebulinic acid, chebulagic acid and other related compounds. These compounds were found to be responsible for many of the pharmacological activities such as anti-bacterial, anti-microbial, anti-fungal, anti-viral, anti-oxidant, anti-hypoglycemic, ant- ulcer, cardioprotective, etc[80].

"Oral administration of the amla fruit extract (50 mg/kg body .weight) significantly decreased the concentrations of pro-inflammatory cytokines, TNF-a and IL-6 in serum. These results suggest that amla fruit extract may be an effective anticoagulant and anti-inflammatory agent.[81]

"A riskless and feasible high-performance liquid chromatography (HPLC) procedure with diode array defection has been developed for the determination of ascorbic acid (Fig. 9). Embilica officianalis fruit is processed with the ayurvedic method. The antioxidant results have additionally been evaluated in assessment to the true stages of nutrition C by way of special antioxidant exams the information bought exhibit that the Emblica fruit involves ascorbic acid (0.4%, w/w) and that the ayurvedic procedure of processing raises the healthy characteristics of the fruit due to a higher antioxidant endeavor

and a better content material of ascorbic acid (1.28%, w/w). It has additionally been observed that vitamin C debts for approximately 45-70% of the antioxidant pastime"[82].

Immunomodulatory properties of fruit extracts of EO (amla) were evaluated utilizing chromium (VI) as an immunosuppressive agent. It additionally inhibited apoptosis and DNA fragmentation and relieved the immunosuppressive effects of (chromium) Cr on lymphocyte proliferation.[83]

"A study was conducted to evaluate the cytotoxicty and antitumor activity of ginger essential oil (GEO). It showed potent in vitro cytotoxic activity against Dalton's Lymphoma Ascites (DLA) and Ehrlich Ascites Carcinoma (EAC) cell lines. IC50 value for DLA cell line was 11 µg/ml and for EAC cell lines 18 µg/ml.

Conclusion: This indicates the significant in vitro cytotoxic and antitumor properties of GEO suggesting its potential use as an anticancer agent. of GEO was found to be 41 µg/ml against the L929 cell lines and to Vero cells was found to be 100 ug/ml. The treatment with GEO (500 mg/kg and 1000 mg/kg body weight) significantly reduced the volume of solid tumor development by 54.4% and 62.4% respectively. The life span was increased up to 50% in 1000 mg/kg b. wt GEO treated ascites tumor induced animals"[84].

This study was set out to investigate the effect of ginger (Zingiber officinale) on heavy menstrual bleeding (HMB) in high school girls. Ninety-two young women who experienced HMB and met the inclusion criteria were

recruited in this study. Participants were evaluated for six consecutive menstrual cycles. During 3 assessment cycles, their HMB was confirmed by Pictorial Blood Assessment Chart. They were then randomly allocated to two study groups to receive either ginger or placebo capsules. The participants filled in the same chart during three intervention cycles. The level of menstrual blood loss dramatically declined during the three intervention cycles in ginger-receiving group. The decrease of blood loss in ginger-receiving group was significantly more remarkable than that of participants receiving placebo ($p<0.001$). Minimum number of participants reported adverse effects[85].

Investigation had been conducted to evaluate the effects of piperine, a major pungent alkaloid present in Piper nigrum and Piper longum, on the tumor growth and metastasis of mouse 4T1 mammary carcinoma in vitro and in vivo, and elucidate the underlying mechanisms. Piperine can inhibit tumor growth by inducing cell apoptosis and cell cycle blockage. Also it can suppress 4T1 tumor growth and metastasis in vivo.[86]

A study was conducted to evaluate In vitro antioxidant and free radical scavenging potential of methanolic extracts of Bauhinia variegata Linn. Methanolic extracts of Bauhinia variegata species possess significant free radical scavenging, hydroxyl radical scavenging and antioxidant activity in vitro, which offer the possibility of using these extracts as natural antioxidants. In conclusion the results of this study demonstrated that using in vitro model Bauhinia variegata was found to have antioxidant activity. This activity was found due to presence of polar phenolic compounds flavonoid, tannin etc.

Overall Bauhinia variegata can be considered as a model herbal drug for experimental studies including free radical induced disorders like cancer, diabetes, atherosclerosis etc[87].

Studies on Kanchanaraguggulu

According to a case series study for uterine fibroids using kanchanara guggulu, sigruguggulu and hardrakhanda, the symptoms as well as the size of the fibroid reduced significantly[88].

A study was conducted to investigate the cytotoxic and anti proliferative activities of Kanchanara guggulu. It was exhibited a cytotoxic effect by inhibiting cell division (antimitotic) and reducing cell proliferation. These results substantiate its potential for the treatment of cancer and support its traditional use in the treatment of cancer.[89]

Oral administration of Jalakumbhi churna for two months helped nearly 20% patients of female in uterine fibroid to get cured compared with the oral administration of nagakesara curna. No adverse side effects were observed during and after treatment. The results are encouraging but rate of cured patients is low[90].

A case series study conducted to assess the result of uterine fibroid by administering Kanchanara guggulu and punarnavadi qwadha for three months. There is significant result which was observed in this study. On USG after the intervention, the size of the fibroid reduced.

Clinically patients got improvement in all the gynecological complaints. During follow-up of the patients after 6 weeks; no recurrence was reported clinically as well as on USG[91].

Chapter - III

METHODOLOGY

Now a days, uterine fibroids have assumed an increased importance in health care systems as they are becoming a common clinical occurrence among gynaecologists. Though benign, they cause significant morbidity including prolonged or heavy menstrual bleeding, pelvic pressure or pain and in some cases it will effect the reproductive function. In Ayurveda no specific disease has been mentioned for uterine fibroid. Grandhi or antharvidradhi can be almost similar pathology with that of fibroid. The current approach is surgical management for treating these neoplasms and their growth depends upon the oesrogen hormone. The failure of modern medicine to find a cure for this disease has necessitated the application of new thought on Ayurvedic modalities. The internal use of many Ayurvedic formulations are said to be effective in reducing size of tumors thereby relieving their symptoms like menorrhagia, dysmenorrhoea, lower abdominal pain, dyspareunia etc. Here, single formulations and a combination of two formulations is undertaken for the study to analyse its efficacy in reducing size and associated symptoms of fibroids.

3.1 Materials and methods

3.1.1 Aim

To evaluate the efficacy of Vyaghrivarunadiqwadha and Kanchanaragulgulu in Uterine fibroid.

3.1.2 Objectives

1. To evaluate the efficacy of Vyaghrivarunadi qwadha and Kanchanaragulgulu on symptoms and size of Uterine fibroid
2. To compare the efficacies of Vyaghrivarunadi qwadha and Kanchanaragulgulu, Trayantyadi qwadha and Kanchanaragulgulu, Vyaghrivarunadi qwadha, Trayantyadi qwadha, Kanchanaragulgulu on symptoms and size of uterine fibroid

3.1.3 Research Question

Is there any significant difference in the efficacy of vyaghrivaranadi qwadha, trayantyadi qwadha or kanchanaraguggulu in reducing the uterine fibroid when administered continuously for 3months.

3.1.4 Hypothesis

Null Hypothesis

There is no significant difference in the role of Vyaghrivaranadi qwadha, Trayantyadi qwadha, or Kanchanara guggulu either in single drug or in combination in uterine fibroid.

Alternate Hypothesis

There is significant difference in the efficacy of Vyaghrivaranadi qwadha, Trayantyadi qwadha, or Kanchanara guggulu either in single drug or in combination in uterine fibroid.

3.2 Materials

Patients/ Drugs/ Case Record Form / Written consent form

3.2.1 Drugs

Vyaghrivarunadiqwadha, Trayantyadiqwatha & Kanchanaragulugulu was prepared and purchased from Vaidyamadham vaidyasala, Mezhathur.

3.2.2 Study design: Randomized control trial

Randomization was done by the Block Randomization Technique, 170 subjects were selected randomly.

The protocol was submitted for clearance and approved by the research committee of the Tilak Maharashtra Vidyapeeth, Pune.

3.2.3 Sample size

Sample size was calculated in relation to prevalence rate of the disease being studied. Total number of patients is 170, 33 in each group Considering the prevalence of 25%, sample size (n) is calculated at a precision of 15% using the formula, $n= 4pq / d^2$. Thereby sample size of 33 participants per group has to be studied. Adjusting for drop-outs, a total sample size of 170 participants will be studied.

Selection of Patients: 170 patients will be selected randomly from the OPD and IPD of Prasutitantra & Streeroga department, Vaidyaratnam Ayurveda College Ollur, Thrissur, Kerala, irrespective of occupation and religion and as per inclusion criteria given in the proforma and recruited after obtaining their voluntary consent and randomly selected by Block randomization and allocated into five groups

Group	A	Vyaghrivarunadiqwadha & Kanchanaragulugulu
	B	Trayantyadiqwatha & Kanchanaraguggulu
	C	Vyaghrivarunadi qwadha
	D	Thrayanthyadi qwadha
	E	Kanchanara guggulu

Methods: Specific format (CRF) was prepared for recording the study by detailed history of complaints, menstrual history, obstetrical history, P/V examinations & investigations.The selected patients was diagnosed as fibroid as per criteria & included as per inclusion criteria.

3.2.4 Preparation & dosage of medicines

Identity of Thrayanthy and Varuna was confirmed before preparation of the drug by concerned authorities as BIS and received confirmation letter.

3.2.5 Method of preparation of Kanchanara guggulu pills

Kanchanara Guggulu tablet was prepared as per reference in Sarngadharasamhitha madhyamaghanda, 7th ch. The raw drugs of Kanchanaragulgulu should be taken in the composition mentioned below.

Sanskrit name	Botanical name	Parts used	Quantity
Kanchanara	Bauhinia variegate Blume	Stem bark	6500gm
Haritaki	Terminalia chebula Retz	Fruit	1300gm
Amalaki	Emblica officinalis Gaertn	Fruit	1300gm
Bibitaki	Terminalia belerica Roxb	Fruit	1300gm
Nagara	Zingiber officinale Roxb	Rhizome	650gm
Marica	Piper nigrum Linn	Fruit	650gm
Pippali	Piper longum Linn	Fruit	650gm
Varuna	Crataeva religiosa	Stem bark	650gm
Ela	Elettaria cardamomum Linn	Fruit	162.5gm
Twak	Cinnamomum zeylanicum Blume	Dried inner bark of stem	162.5gm
Patra	Cinnamomum tamala (Buch. Ham.)	Dried mature leaves	162.5gm
Sodhitha Guggulu	Commiphora mukul Engl	Exudate	13487.5gm

All drugs of kanchanaragulgulu will be purchased from the market.

Guggulu sodhana

Physical impurities like sand, stone, leaf etc are first removed from raw drug, crushed into small pieces. Guggulu purified in dolayanthra with cows urine as drava dravya. It is boiled with cows urine till all pass into the fluid through the cloth. The residue left was discarded. The fluid was then filtered and boiled till it form a mass. This mass was dried under sun and pounded with a pestle in a stone mortar, adding a little quantity of ghee till it becomes waxy. After purification 3250 gms suddha guggulu was obtained.

Method of preparation

Take all the ingredients, wash, dry and powder separately and sieve it. To the weighed quantity of Suddha Guggulu, add fine powder of other ingredients and pound well. Expel the mass through vati machine and cut the vaties to 1.5 gm. Roll the vatis on flat surface to round them by circular motion of palm covered with a glove and smeared with ghrita and made into pills of 3gms each and dried by keeping in shade. Standardisation of the tablet was done at Vaidyaratnam oushadhasala laboratory. These pills after proper standardisation well packed in a tightly closed container 28 pills in packet and given to the patients with proper instruction.

3.2.6 Method of preparation of Trayantyadi qwadha

Trayantyadi qwatha was prepared as per reference in Ashtanga Hridaya Chikitsa Sthana' – 'Vidradhi vridhi adhyaya' the raw drugs of Trayantiadi qwathawas taken in the composition mentioned below.

Sanskrit name	Botanical name	Parts used	Quantity
Trayanti	Gentiana kurroa	Whole plant	2.08 gm
Haritaki	Terminalia chebula Retz	Fruit	2.08 gm
Amalaki	Emblica officinalis Gaertn	Fruit	2.08 gm
Bibhitaki	Terminalia belerica Roxb	Fruit	2.08 gm
Nimba	Azadirachta indica A. Juss	Stem bark	2.08 gm
Katuka	Picrorhiza kurroa Royle ex Benth.	Rhyzomess	2.08 gm
Madhuka	Glycyrrhiza glabra Linn	Root	2.08 gm
Trivrit	Operculina turpethum (Linn.)	Root	8.34gm
Patolamula	TrichosanthesdioicaRoxb	Root	8.34gm
Masura	Lens culinaris Medic	Seed	16.64 gm

Trayanthi, thriphala, nimba, kaduka, madhuka – equal parts

Thrivrith & Padola mula – 4 parts each.

Dehusked masura – 8 parts

These drugs washed, crushed and added 16 times of water. Qwatha is prepared by reducing it to 1/8. Then this should be filter and allow to cool. This prepared qwatha should be given to the patients after proper instruction of usage.

3.2.7 Method of preparation of Vyaghri varanadi qwadha

Vyaghri varanadi qwatha was prepared as per reference in Cikitsa manjari– 'Vidradhi chikitsa'The raw drugs of Vyaghrivaranadi qwatha was taken in the composition mentioned below.

Sanskrit name	Botanical name	Parts used	Quantity
Vyaghri	Solanum xanthocarpum Schrad	Whole plant	8gm
Varuna	Crataeva religiosa	Stem bark	8gm
Tharkari	Premna integrefolia	Roots	8gm
Sigru	Moringa oleifera Lam	Root bark	8gm
Viswa	Zingiber officinale Roxb	Rhyzome	8gm
Punarnava	Boerhaavia diffusa Linn	Whole plant	8gm

These drugs were washed, crushed and added 16 times of water. Qwatha is prepared by reducing it to 1/8. Then this should be filtered and allowed to cool. This prepared qwatha was given to the patients after proper instruction of usage

Dosage

Vyaghrivarunadi qwadha 20ml along with two tab Kanchanara gulgulu will be given before food morning and evening in Group A.

Trayantyadi qwadha 20ml along with two tab Kanchanara gulgulu will be given before food morning and evening in Group B.

Vyaghrivarunadi qwadha 20ml will be given before food in morning and evening in Group C.

Trayantyadi qwadha 20ml will be given before food morning and evening in Group D.

Kanchanara guggulu 2tab will be given before food morning and evening in Group E.

The medications will be continued for 3months in all the five groups.

3.2.8 Selection Criteria

Inclusion criteria

- Diagnosed cases of fibroids by USG size of fibroid upto 4cm & number also upto 4 with or without symptoms
- Age group between 25 & 50

Exclusion criteria

- Below the age of 25 & above 50 years of age
- Patients with diseases such as adenomyosis, endometriosis, DUB
- Pregnant women and lactating mother
- Malignancy

3.2.9 Discontinuation criteria

- Patients having heavy bleeding & no response to medicine
- Non-compliance to medication and evaluation schedule during the course of study

3.2.10 Data collection

Primary data was collected through interview, observations and relevant investigations. Case was recorded in case sheet proforma which includes Personal data, Socioeconomic status, Chief complaints and associated

symptoms with duration and history, History of past illness, Treatment history, Personal history and Family history to know genetic potential. Detailed Menstrual and Obstetric history were taken to assess nature of cycles, parity, abortion and any failure in conception. Examinations including General examination, Physical examination, Systemic examination and Gynecological examinations were done. Investigations included blood test such as BT, CT and Hb% UltraSonography of abdomen and pelvis was also done for the diagnosis of Uterine fibroid.

3.2.11 Study tool

Assessment will be done using the following

- Case proforma
- Ultrasonography of abdomen & pelvis
- Blood tests

Laboratory investigations:

- USG of pelvis, Hb %, CT, BT.

3.2.12 Follow up of study

The cases will come to the OPD every month for follow-up upto 3 months. Assessment except USG will be done every month. USG will be done after 3months of medication.

3.2.12 Criteria of Assessment

1. Subjective parameters

Parameter

1. Amount of bleeding

Normal .....2 pads /day

Mild .....3 pads/day

Moderate .....4 pads/day

Severe ..... >5 pads/day

2. Duration of bleeding

Normal 4-5days

Mild 5-6days

Moderate 7-8days

Severe .....>9days

3. Dysmenorrhea

Parameter .....Grading

Absent..... 0

Mild (bearable pain without medicine) 1

Moderate (able to bear with difficulty and is

get relieved by medicine) 2

Severe (unbearable pain only get relief by injections) 3

2. Objective parameters

Parameter .....Grading

Size of the fibroid as evident by USG .....

No fibroid 0

Mild (size <2cm) 1

Moderate (size 3cm)..... 2

Severe (>4cm) 3

Hb%

Anemia ..... <11gm%

Normal ..... =/>11gm%

3.2.13 Ethical consideration

Certificate of consent from the Institution Ethical Committee was obtained prior to the study.

3.2.14 Statistical analysis

Data was entered in microsoft excel spread sheets and analysed using SPSS software version 20. All data are expressed as mean ± SE, and categorical data are expressed as counts. Symptoms were assessed in each group were tested using repeated mean of ANOVA with multiple comparison after applying Bonferroni corrections. Between groups were performed after computing the mean differences with one way ANOVA. Tukey – Kramer multiple comparison test was applied in those symptoms showed a significance in ANOVA test. All parameters where normality assumptions were violated, corresponding non parametric test for Friedman test and Kruskal Wallis tests were used. Multiple comparisons were performed using Mann-Whitney- U test and Wilcoxon Signed Rank test were used. 5% was fixed as the level of significance for each test.

Chapter - IV

OBSERVATION & ANALYSIS

4.1 Descriptive Statistics

4.2 Inferential Statistics

4.1 DESCRIPTIVE STATISTICS

As per the statistical calculation, sample size was 165 and for adjusting dropouts 170 subjects were recruited for the study as per inclusion criteria after getting their written consent. They were randomly selected as per block randomization and allocated into five groups, 33 in each group.

This chapter contains observations regarding demographic data, symptoms related to Artava, Obstetric History, Dasavidha pareekaha, Ashtasthana pareeksha, follow up during the study and analysis. Repeated mean of ANOVA with multiple comparison was used to test the symptoms in each group after applying Bonferroni corrections. Between groups were performed after computing the mean differences with one way ANOVA. The symptoms that showed a significance in ANOVA test was tested by Tukey – Kramer multiple comparison test. All parameters, where normality assumptions were violated, corresponding non parametric test for Friedman test and Kruskal Wallis tests were used. Multiple comparisons were performed using Mann– Whitney– U test and Wilcoxon Signed Rank test were used. 5% was fixed as the level of significance for each test.

Table – 4.1.1 Domicile and Socio economic status

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Domicile										
Rural	27	81.8	26	78.8	23	69.7	26	78.8	26	78.8
Urban	6	18.2	7	21.2	10	30.3	7	21.2	7	21.2
Total	**33**	**100**	**33**	**100**	**33**	**100**	**33**	**100**	**33**	**100**
Socio economic status										
Upper	1	3	1	3	––	––	––	––	––	––
Upper middle	4	12.1	3	9.1	7	21.2	7	21.2	7	21.2
Lower middle	5	15.2	11	33.3	11	33.3	8	24.3	11	33.3
Upper lower	21	63.6	17	51.5	15	45.5	18	54.5	15	45.5
Lower class	2	6.1	1	3	––	––	––	––	––	––
Total	**33**	**100**	**33**	**100**	**33**	**100**	**33**	**100**	**33**	**100**

The table shows distribution of patients according to domicile and socioeconomic status in all the groups. In group A, 81.8% belong to rural area and 18.2% from urban area. In group B, D and E, 78.8% belong to rural area and 21.2% from urban area. In group C, 69.7% belong to rural

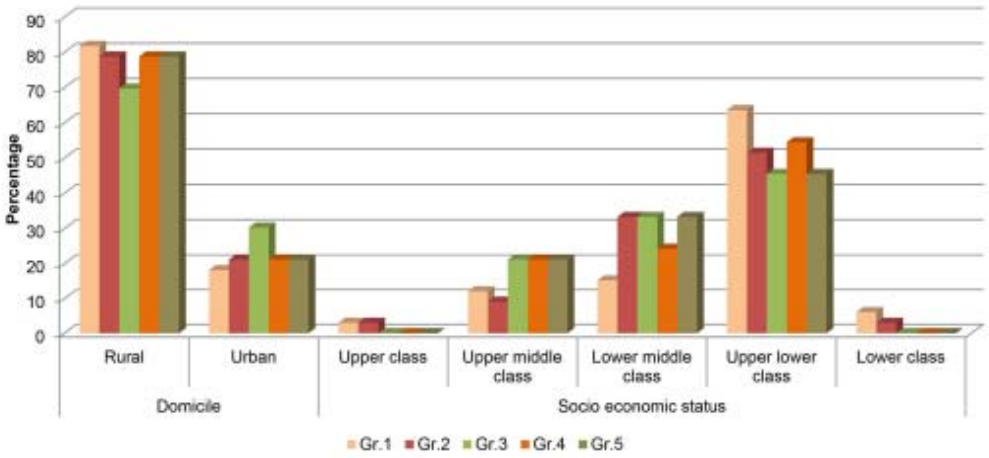

Fig. – 4.1.1 Domicile and Socio economic status

area and 30.3% from urban area. Regarding the socioeconomic status, in group A, 3% comes under upper class, 12.1% from upper middle class. 15.2% from lower middle class, 63.6% from upper lower class and 6.1% from lower class. In group B, 51.5% belonged to upper lower class 33.3% belonged to lower middle class, 9.1% comes under upper middle class and 1 patient (3%) each from upper & lower class respectively. In group C and E, 45.5% were found to be in upper lower class, 33.3% belonged from lower middle class and 21.2% comes under upper middle class respectively. In group D, most of them were found to be in upper lower class (54.5%), 24.3% belonged to lower middle class, 21.2% comes under upper middle class and 1 patient each from upper & lower class respectively. In group E, 45.5% were from upper lower class, 33.3% from lower middle class and 21.2% from upper middle class.

Table – 4.1.2 Marital status and Religion

	Group A		Group B		Group C		Group D		Group E	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Marital status										
Married	32	96.7	33	100	33	100	29	87.9	31	93.9
Unmarried	1	3	––	––	––	––	3	9.1	2	6.1
Widow	––	––	––	––	––	––	1	3	––	––
Divorced	––	––	––	––	––	––	––	––	––	––
Religion										
Hindu	15	45.5	24	72.7	24	72.7	25	75.8	24	72.7
Muslim	6	18.2	5	15.2	3	9.1	2	6.1	2	6.1
Christian	12	36.4	4	12.1	6	18.2	6	18.2	7	21.2

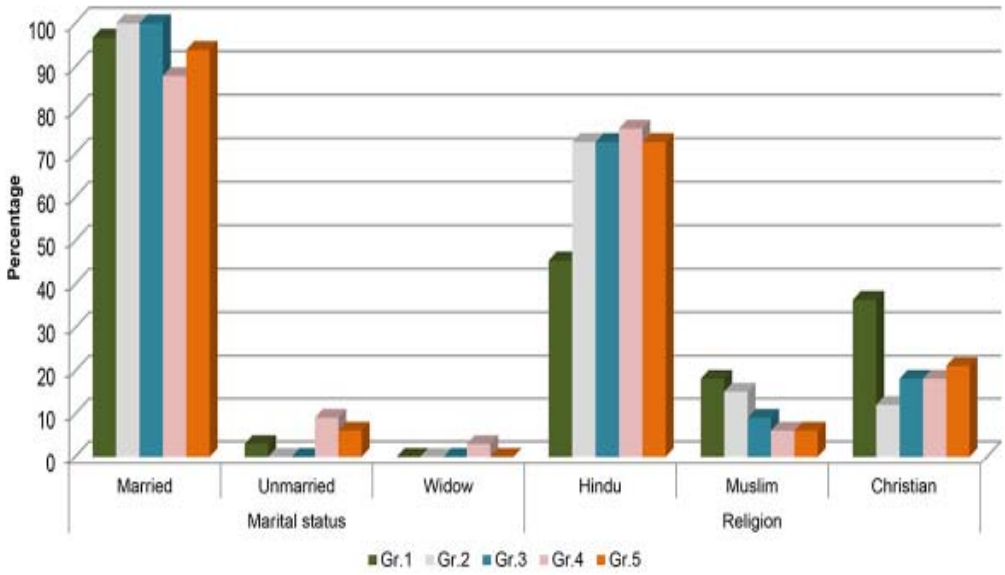

Fig. – 4.1.2 Marital status and Religion

Marital Status – Out of 33 patients, 96.7% were married and one patient (3%) was unmarried in A group. According to marital status all the patients were married in group B & C. In group D, 87.9% were married. One patient (3%) was a widow. Remaining 9.1% were unmarried. In group E, 93.9% were married and remaining 6.1% had unmarried women.

Religion – In group A, among 33 patients, 48.5% belongs to Hindu community, 18.2% from Muslim community and 36.4% from Christian community, In group B, 72.7% were belongs to Hindu community, 15.2% from Muslim community and 12.1% from Christian community. In group C, 72.7% were belongs to Hindu community, 9.1% from Muslim community and 18.2% from Christian community. In group D, 75.8% were belongs to Hindu community, 6.1% from Muslim community and 18.2% from Christian community and in group E, 72.7% were belongs to Hindu community, 6.1% from Muslim community and 21.2% from Christian community.

Table – 4.1.3 Treatment history, Chief complaints and Bleeding

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Treatment history										
No	16	48.5	14	42.4	19	57.6	18	54.5	20	60.1
Yes	17	51.5	19	57.6	14	42.4	15	45.5	13	39.4
Chief complaints										
Asymptomatic	9	27.3	8	24.2	7	21.2	9	27.3	5	15.2
Symptomatic	24	72.7	25	75.8	26	78.8	24	72.7	28	88.8
Artava Raktasrava										
Excessive	12	36.4	11	33.3	9	27.3	8	24.2	8	24.2
Prolonged	3	9.1	2	6.1	2	6.1	––	––	––	––
Frequent menstrual bleeding	––	––	1	3	––	––	––	––	––	––
Scanty	1	3	1	3	2	6.1	––	––	2	6.1
Normal	15	45.5	14	42.4	12	36.4	18	54.5	12	36.4
Mixed	––	––	4	12.1	8	24.2	7	21.2	11	33.3
Rajonivartti	2	6.1	––	––	––	––	––	––	––	––

Treatment history – In group A, among 33 patients, 48.5% had no previous treatment history and 51.5% had undergone treatment previously. In group B, 42.4% had no previous treatment history and 57.6% had undergone treatment previously, In group C, 57.6% had no previous treatment history and 42.4% had undergone treatment previously. In group D, 54.5% had no previous treatment history and 45.5% had undergone treatment previously and 60.1% had no previous treatment history and 39.4% had undergone treatment previously in group E.

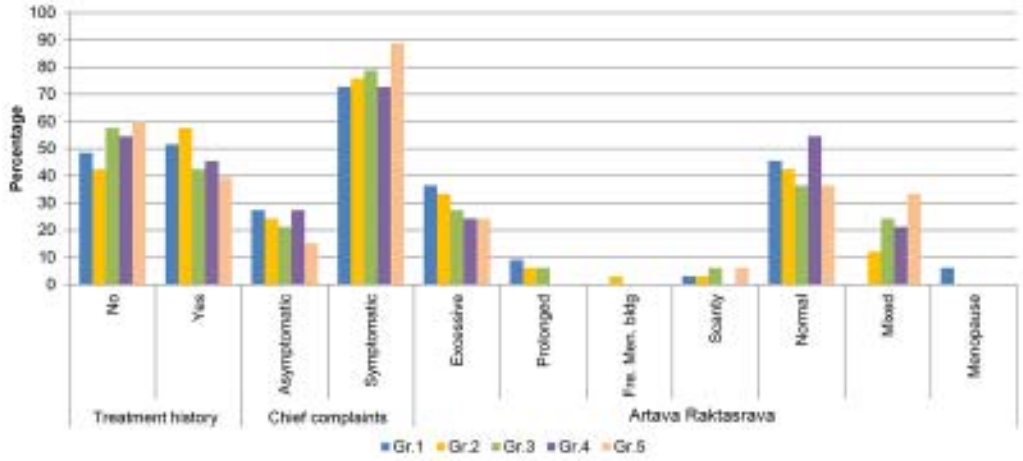

Fig. – 4.1.3 Treatment history, Chief complaints and Artava Raktasrava

Chief complaints – Out of 33 patients, 72.7% were symptomatic and 27.3% had no symptoms in group A and in group D. In group B, 75.8% were symptomatic and 24.2% had no symptoms. In group C, 78.8% were symptomatic and 21.2% had no symptoms and in group E, 88.8% were symptomatic and 15.2% had no symptoms.

Artava Raktasrava – In group A, out of 33 patients, 45.5% had normal artava raktasrava. Excessive artava raktasrava present in 36.4%, prolonged artava raktasrava in 9.1%, scanty artava raktasrava in 3% and remaining 6.1% had attained rajonivartti. In group B, according to nature of artava raktasrava, out of 33 patients, 42.4% had normal artava raktasrava, 33.3% were had excessive artava raktasrava, prolonged artava raktasrava seen in 6.1% patients, frequent and scanty artava raktasrava 3% each and remaining 12.1% had mixed type of artava raktasrava. In group C, 36.4% had normal artava raktasrava, 27.3% were had excessive artava raktasrava, prolonged and scanty artava raktasrava seen in 6.1% patients, mixed type of artava raktasrava present in 24.2%. in group D, 54.5% had normal artava raktasrava, 24.2% were had excessive artava raktasrava and remaining mixed variety were 21.2%. In group

E, 36.4% had normal artava raktasrava, 24.2% were had excessive artava raktasrava, 6.1% had scanty artava raktasrava and mixed artava raktasrava seen in 33.3% patients.

Table – 4.1.4 Artavasula - Nature, Site and Time

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Kricharartava										
Absent	7	21.21	14	42.4	11	33.3	12	36.4	8	24.2
Present	24	72.7	19	57.6	22	66.7	21	63.6	25	75.8
Rajonivartti	2	6.1	––	––	––	––	––	––	––	––
Nature of pain										
Mild	4	12.1	3	9.1	3	9.1	2	6.1	7	21.2
Moderate	9	27.3	7	21.2	8	24.2	7	21.2	6	18.2
Severe	11	33.3	9	27.3	11	33.3	12	36.4	12	36.4
NA	7	21.2	14	42.4	11	33.3	12	36.4	8	24.2
Rajonivartti	2	6.1	––	––	––	––	––	––	––	––
Site of pain										
Vastipradesa	12	36.4	8	24.2	8	24.2	12	36.4	7	21.2
Kadipradesa	1	3	2	6.1	1	3	1	3	1	3
Uru	––	––	––	––	––	––	––	––	––	––
Sroni	–	––	––	––	––	––	1	3	––	––
Mix	11	33.3	9	27.3	13	39.4	7	21.2	17	51.5
NA	7	21.2	14	42.4	11	33.3	12	36.4	8	24.2
Rajonivartti	2	6.1	––	––	––	––	––	––	––	––
Time of pain										
Before Artava	5	15.2	4	12.1	4	12.1	7	21.2	7	21.2
During Artava	11	33.3	7	21.2	13	39.4	9	27.3	5	15.2
After Artava	––	––	1	3	––	––	––	––	1	3
Mix	8	24.2	7	21.2	5	15.2	5	15.2	12	36.4
NA	7	21.2	14	42.4	11	33.3	12	36.4	8	24.2
Rajonivartti	2	6.1	––	––	––	––	––	––	––	––

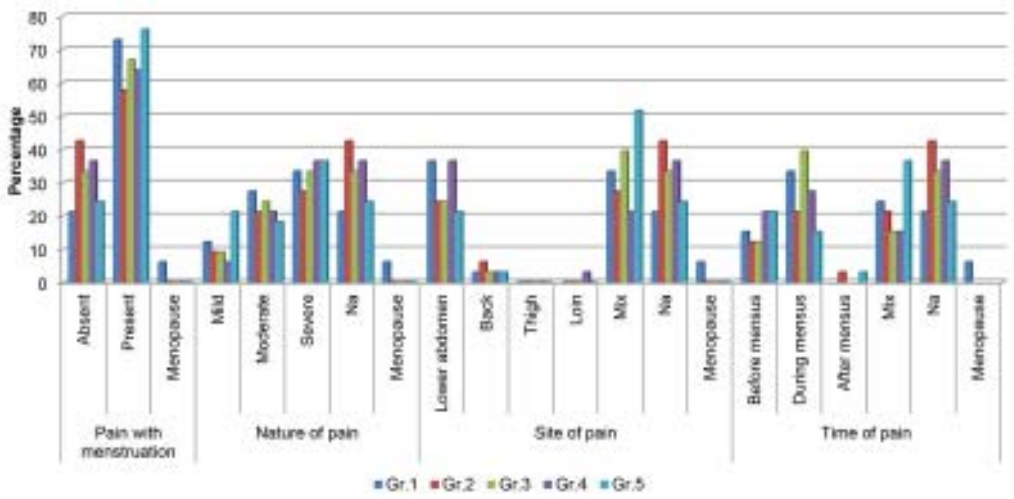

Fig. – 4.1.4 Artavasula - Nature, Site and Time

Kricharartava – the table shows distribution of kricharartava. Among 33 patients, 72.7% had kricharartava. 21.2% had no kricharartava and 6.1% attained rajonivartti. In group B, 57.6% were noted kricharartava and 42.4% had no kricharartava. In group C, 66.7% were noted kricharartava and 33.3% had no kricharartava. In group D, 63.6% were noted kricharartava and 36.4% had no kricharartava and in group E, 75.8% were noted kricharartava and 24.2% had no such pain.

Nature of Artavasula – The table shows distribution of nature of pain during artava. In group A, 33.3% had severe pain among 33 patients. 27.3% experiences moderate pain, 12.1% had mild pain. Pain during artava was absent for 7 patients i.e. 21.2% and rajonivartti was attained for 6.1%. In group B, 27.3% had severe pain, 21.2% experiences moderate pain, 9.1% had mild pain and, majority of the patients (42.4%) reported that no sula during artava. In group C, 33.3% had severe pain, 24.2% experiences moderate pain, 9.1% had mild pain and, remaining patients reported no sula during artava

(33.3%). In group D, 21.2% experiences moderate pain, 6.1% had mild pain and, majority of the patients reported no sula during artava and severe pain respectively (36.4%) and in group E, 18.2% experiences moderate pain, 21.2% had mild pain and, 24.2% of the patients reported sula during artava and 36.4% were having severe pain during artava.

Site of pain – The table shows distribution of site of pain. In group A, among 33 patients, 36.4% had sula in vasti pradesha at the time of artava pravritti, 3% had sula in kati pradesha at the time of artava pravritti, 33.3% had both sula in kati pradesha and vasti pradesha. 21.2% had sula absent during artava and rajonivartti had attained for 6.1%. In group B, 24.2% had sula in vasti pradesha at the time of artava pravritti, 6.1% had sula in kati pradesha and vasti pradesha, 27.3% had sula in both kati pradesha and vasti pradesh. In artavasula was absent in 42.4%. In group C, 24.2% had sula in vasti pradesha at the time of artava pravritti, 3% had sula in kati pradesha at the time of artava pravritti,, 39.4% had sula in both kati pradesha and vasti pradesha and sula absent for 33.3%. In group D, 36.4% had sula in vasti pradesha at the time of artava pravritti, 3% had sula in kati pradesha and sroni pradesha respectively, 21.2% had sula in both kati pradesha and vasti pradesha and sula absent for 36.4% and in group E, 21.2% had sula in vasti pradesha at the time of artava pravritti, 3% had sula in kati pradesha at the time of artava pravritti, 51.5% had sula in both kati pradesha and vasti pradesha and 24.2% had no sula during artava.

Time of pain – The table shows distribution of time of pain in

relation to artava. In group A, 33.3% experiences pain during artava and 15.2% had pain before artava. 24.2% had pain before and during artava. 21.2% had pain absent during artava and 6.1% had attained rajonivartti. In group B, 21.2% experiences pain during artava, 12.1% had pain before artava, 21.2% had before, after and during artava and 42.4% had no pain during artava. One patient (3%) had pain after artava. In group C, 39.4% had pain during artava, 12.1% had pain before artava, 15.2% had before, after and during artava and pain absent in remaining 33.3%. In group D, the table reveals the time of pain in relation to artava, 27.3% had pain during artava, 21.2% had pain before artava, 15.2% had before, after and during artava and 36.4% had no pain during artava. In group E, 15.2% had pain during artava, 21.2% had pain before artava, 3% had pain after periods, 36.4% had before, after and during artava and 24.2% had no pain during artava.

Failure to conceive, Vastisula (Lower abdominal pain), Udara gurutvam (Heaviness of abdomen), Udaragrandhi (Feeling of lump) and Maidhunasula (Dyspareunia)

Failure to conceive – the table shows distribution of patients who had failed to conceive. Among 33 patients in group A, 84.8% had no difficulty to conceive. 12.1% had difficulty to conceive. One patient (3%) remained unmarried. In group B, majority of the patients (87.9%) conceived normally without difficulty but 12.1% had difficulty to conceive. In group C, 84.8% conceived normally without difficulty but 15.2% had difficulty to conceive. In group D, 81.8% conceived normally without difficulty but 9.1% had difficulty to conceive. Remaining 9.1% were unmarried women and in group E, 87.9%

conceived normally without difficulty but 6.1% had difficulty to conceive. Remaining 6.1% were unmarried (Table – 4.1.5).

Table – 4.1.5 Failure to conceive, Vastisula, Udara gurutvam, Udara grandhi and Maidhunasula

	Group A		Group B		Group C		Group D		Group E	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Failure to conceive										
Absent	28	84.8	29	87.9	28	84.8	27	81.8	29	87.9
Present	4	12.1	4	12.1	5	15.2	3	9.1	2	6.1
NA	1	3	––	––	––	––	3	9.1	2	6.1
Vasti sula										
Absent	15	45.5	18	54.5	11	33.3	13	39.4	9	27.3
Present	18	54.5	15	45.5	22	66.7	20	60.6	24	72.7
Udara gurutvam										
Absent	19	57.6	17	51.5	19	57.6	13	39.4	13	39.4
Present	14	42.4	16	48.5	14	42.4	20	60.6	20	60.6
Udaragrandhi										
Absent	26	78.8	25	75.8	29	87.9	29	87.9	30	90.9
Present	7	21.2	8	24.2	4	12.1	4	12.1	3	9.1
Maidhunasula										
Absent	26	78.8	26	78.8	29	87.9	24	72.7	22	66.7
Present	6	18.2	7	21.2	4	12.1	5	15.2	9	27.3
NA	1	3	––	––	––	––	4	12.1	2	6.1

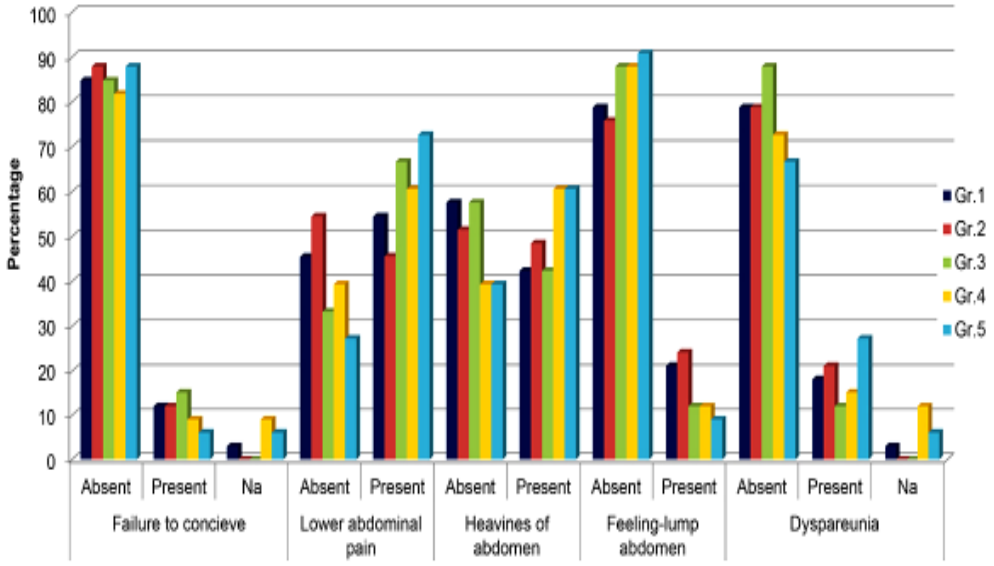

Fig. – 4.1.5
Failure to conceive, Vastisula, Udara gurutvam, Udaragrandhi, and Maidhunasula

Vastisula – The table shows distribution of vastisula. Among 33 patients in group A, 54.5% had vastisula while the remaining 45.5% had no such difficulty. In group B, 45.5% had vastisula while the remaining 54.5% had no such difficulty. In group C, 66.7% had vastisula while the remaining 33.3% had no such difficulty. In group D, 60.6% had vastisula while the remaining 39.4% had no such difficulty and in group E, 72.7% had vastisula while the remaining 27.3% had no such pain.

Udara gurutvam – The table shows distribution of udara gurutvam. Out of 33 patients in group A and C 42.4% had udara gurutvam and 57.6% the symptom was absent. In group B, 48.5% had udara gurutvam while the remaining 51.5% had no such difficulty. In group D and E, 60.6% had udara gurutvam and 39.4% had the symptom absent.

Udaragrandhi – The table shows distribution of udara grandhi. Out of 33 patients in group A, 21.2% had the feeling of udara grandhi and remaining 78.8% had no such feeling. In group B, majority (75.8%) had no udara grandhi, and 24.2% had the feeling of udara grandhi. In group C and D, 87.9% had no udara grandhi and 12.1% had the udara grandhi. In group E, 90.9% had no udara grandhi, and 9.1% had udara grandhi.

Maidhunasula – The table shows distribution of maidhunasula. In group A, among 33 patients, 18.2% had maidhunasula and majority (78.8%) had no such sula and remaining 3% were unmarried. In group B, 21.2% had maidhunasula and majority of the patients (78.8%) had no such sula. In group C, most of the patients (87.9%) had no maidhunasula and remaining 12.1% had maidhunasula. In group D, most of the patients (72.7%) had no maidhunasula and 15.2% had such sula. Maidhunasula is not applicable for 12.1% patients because they were either unmarried or widow. In group E, 27.3% had maidhunasula and 66.7% had no such sula. Remaining 6.1% were unmarried.

Mutrajavikara

Mutrajavikara – The table shows distribution of Mutrajavikara in all the five groups. In group A, 54.5% patients among 33 had no difficulty in mutrapravritti while 45.5% had difficulty in mutrapravritti. In group B, 63.6% patients had no difficulty in mutrapravritti while 36.4% had difficulty in mutrapravritti. In group C and D 69.7% patients had no difficulty in

mutrapravritti while 30.3% had difficulty in mutrapravritti. In group E, 57.6% patients had no difficulty in mutrapravritti while 42.4% had difficulty in mutrapravritti (Table – 4.1.6).

Table – 4.1.6 Mutrajavikara

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Mutrajavikara										
Absent	18	54.5	21	63.6	23	69.7	23	69.7	19	57.6
Present	15	45.5	12	36.4	10	30.3	10	30.3	14	42.4
Mutrajavikara if present										
Increased	1	3	2	6.1	––	––	1	3	––	––
Scanty	1	3	1	3	––	––	1	3	1	3
Burning	6	18.2	1	3	2	6.1	3	9.1	6	18.2
Pain ful	––	––	––	––	1	3	––	––	1	3
Incontinence	3	9.1	4	12.1	3	9.1	3	9.1	1	3
Retention	––	––	1	3	2	6.1	2	6.1	––	––
Mix	4	12.1	3	9.1	2	6.1	––	––	5	15.2
NA	18	54.5	21	63.6	23	69.7	23	69.7	19	57.6

Mutrajavikara, if present – The table shows distribution of mutrajavikara among 33 patients. In group A, 18.2% had burning micturition, 9.1% had incontinence, 3% had increased mutrapravritti and scanty micturition each, and 12.1% had mixed complaints. Remaining 54.5% had no complaints

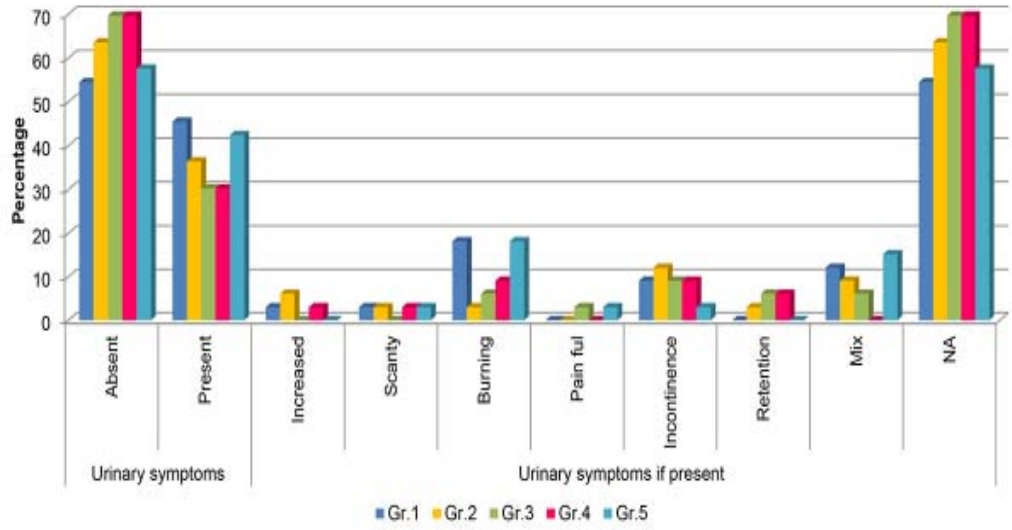

Fig. – 4.1.6 Mutrajavikara

related to micturition. In group B, 3% had burning micturition, scanty micturition & retention of urine respectively, 12.1% had incontinence, 6.1% had increased mutrapravritti and, and 9.1% had all the mutrajavikara described in the table. Remaining 63.6% had no complaints related to micturition. In group C, 6.1% had burning micturition and retention of urine respectively, 3% had painful urination, 9.1% had incontinence of urine, and 6.1% had all the mutrajavikara described in the table. Remaining 69.7% had no complaints related to micturition. In group D, 9.1% had burning micturition and incontinence respectively, 3% had increased urination and scanty micturition, and 6.1% had retention of urine. Remaining 69.7% had no complaints related to micturition. In group E, 18.2% had burning micturition 3% had painful, scanty and incontinence of urine. 15.2% had all the mutrajavikara described in the table. Remaining 57.6% had no complaints related to micturition.

Table – 4.1.7 Purishapravritti – Recent changes in weight

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Purishapravritti										
Loose stools	1	3	6	18.2	1	3	6	18.2	—	—
Constipation	6	18.2	3	9.1	10	30.3	9	27.3	13	39.4
Frequent	2	6.1	1	3	1	3	—	—	3	9.1
Inadequate – defecation	1	3	1	3	2	6.1	3	9.1	1	3
Satisfactory	23	69.7	22	66.7	19	57.6	15	45.5	16	48.5
Changes in weight										
No change	21	63.6	20	60.6	21	63.6	20	60.6	21	63.6
Increased	9	27.3	8	24.2	9	27.3	9	27.3	7	21.2
Decreased	3	9.1	5	15.2	3	9.1	4	12.1	5	15.6

Purishapravritti – The table shows distribution of complaints related to Purishapravritti. In group A, out of 33 patients 69.7% had satisfactory bowel

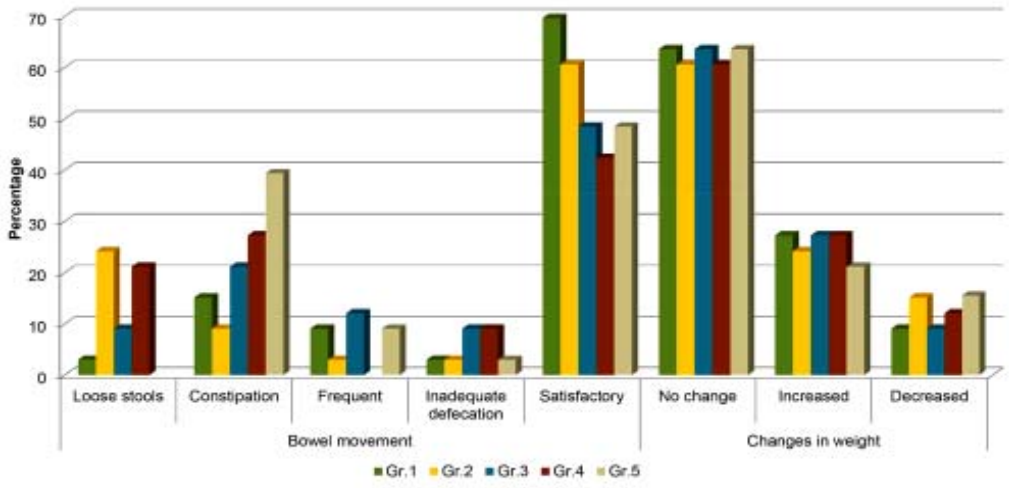

Fig. – 4.1.7 Purishapravritti & changes in weight

movement, 18.2% had malabandha, 6.1% had frequent purishapravritti and 3% had both loose stools and inadequate purishapravritti. In group B, majority (66.7%) had satisfactory bowel movement, 18.2% had loose stools, 9.1% had malabandha. Frequent purishapravritti and inadequate purishapravritti present for one patient (3%). In group C, 57.6% had satisfactory bowel movement, 3% had loose stools, 30.3% had malabandha. Frequent purishapravritti seen in 3% and in 6.1% inadequate purishapravritti present. In group D, 45.5% had satisfactory bowel movement, 18.2% had loose stools, 27.3% had malabandha. 9.1% had inadequate purishapravritti and in group E, 48.5% had satisfactory bowel movement, 39.4% had malabandha. Frequent purishapravritti present for 9.1% and inadequate purishapravritti present for one patient(3%).

Recent changes in weight – the table shows distribution of change in weight recently. In group A and C, 63.6% among 33 patients had no change in weight, 27.3% had weight gain, and 9.1% had loss of weight. In group B, most of the patient (60.6%) among 33 patients had no change in their weight, 24.2% had weight gain and remaining 15.2% had loss of weight recently. In group D, 60.6% among 33 patients had no change in their weight, 12.1% had lsost their weight recently and remaining 27.3% had weight gain. In group E, 63.6% among 33 patients had no change in their weight, 21.2% had increased their weight, and remaining 15.6% had lost their weight recently.

Table – 4.1.8 Katisula – Sronisula– Yonisrava – varna, gandha & Nature and Yonikandu

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Katisula										
Absent	3	9.1	14	42.4	9	27.3	3	9.1	18	54.5
Present	30	90.9	19	57.6	24	72.7	30	90.9	15	45.5
Sronisula										
Absent	18	54.5	28	84.8	27	81.8	24	72.7	24	72.7
Present	15	45.5	5	15.2	6	18.2	9	27.3	9	27.3
Yonisrava										
Absent	15	45.5	15	45.5	21	63.6	15	45.5	20	60.6
Present	18	54.5	18	54.5	12	36.4	18	54.5	13	39.4
Varna - yonisrava										
White	14	42.4	16	48.5	10	30.3	15	45.5	9	27.3
Yellow	1	3	2	6.1	1	3	1	3	3	9.1
Pale yellow	3	9.1	––	––	1	3	2	6.1	1	3
NA	15	45.6	15	45.5	21	63.6	15	45.5	20	60.6
Gandha - yonisrava										
Offensive	3	9.1	3	9.1	3	9.1	1	3	3	9.1
Non–offensive	15	45.5	15	45.5	9	27.3	17	51.5	10	30.3
NA	15	45.5	15	45.5	21	63.6	15	45.5	20	60.6
Nature - yonisrava										
Curdy white	4	12.1	4	12.1	––	––	8	24.2	3	9.1
Mucoid	7	21.2	6	18.2	8	24.2	5	15.2	6	18.1
Watery	7	21.2	8	24.2	4	12.1	4	12.1	4	12.1
Blood Stained	––	––	––	––	––	––	1	3	––	––
NA	15	45.5	15	45.5	21	63.6	15	45.5	20	60.6
Yonikandu										
Absent	23	69.7	24	72.7	24	72.7	22	66.7	22	66.7
Present	10	30.3	9	27.3	9	27.3	11	33.3	11	33.3

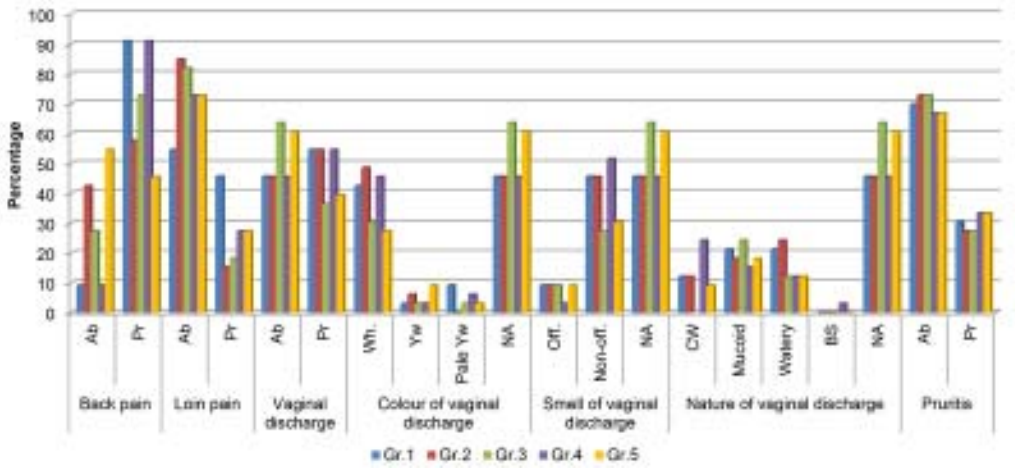

Fig. – 4.1.8
Katisula – Sronisula– Yonisrava – varna, gandha & Nature and Yonikandu

Katisula – The table shows distribution of katisula. As per the distribution in the table of group A and D 90.9% had katisula while remaining 9.1% had no katisula. In group B, 57.6% had katisula while remaining 42.4% had no such sula. In group C, 72.7% had katisula while remaining 27.3% had no such pain. In group E, 45.5% had katisula while remaining 54.5% had no such sula.

Sronisula – The table shows distribution of sronisula among 33 patients. In group A, 45.5% had sronisula and 54.5% had no complaints of sronisula. In group B, 15.2% had sronisula and 84.8% had no complaints of sronisula. In group C, 18.2% had sronisula and remaining 81.8% had no complaints of sronisula and in group D and E, 27.3% had sronisula and 72.7% had no complaints of sronisula.

Yonisrava – The table shows distribution of yonisrava in all the five groups. As per the distribution in the table described above, in group A, B and D, 54.5% had yonisrava while remaining 45.5% had no yonisrava. In group C, 36.4% had yonisrava while majority of patients 63.6% had no yonisrava and in group E 39.4% had yonisrava while remaining 60.6% had no yonisrava.

Colour of yonisrava – The table shows distribution of colour of yonisrava in all the five groups. Among 33 patients in group A, 45.5% had no yonisrava. Out of the remaining 51.5%, 42.4% had white coloured yonisrava, 9.1% had pale yellow coloured yonisrava and 3% had yellowish yonisrava. In group B, 45.5% had no yonisrava, 48.5% had white coloured yonisrava and 6.1% had yellowish yonisrava. In group C, 63.6% had no yonisrava, 30.3% had white coloured yonisrava, 3% had each had yellowish and pale yellow yonisrava. In group D, 45.5% had no yonisrava, 45.5% had white coloured yonisrava, 6.1% had pale yellow yonisrava and 3% had yellowish yonisrava. In group E, 60.6% had no yonisrava, 27.3% had white coloured yonisrava and 3% had pale yellow yonisrava. remaining 9.1% had yellowish yonisrava.

Smell of yonisrava – The above table shows distribution of smell of yonisrava in all the groups. In group A and B among 51.5%, 45.5% had non–offensive yonisrava and 9.1% had offensive yonisrava. Remaining 45.5% had no yonisrava. In group C 27.3% had non–offensive yonisrava and only 3 patients (9.1%) had offensive yonisrava, remaining 63.6% had no yonisrava. In group D, majority (51.5%) had non–offensive yonisrava and only 3% had

offensive yonisrava, remaining 45.5% had no yonisrava and in group E, 30.3% had non–offensive yonisrava and only 9.1% had offensive yonisrava, remaining 60.6% had no yonisrava.

Nature of yonisrava – The table shows distribution of nature of yonisrava in all the groups. In group A, 21.2% had watery yonisrava and mucoid yonisrava each, 12.1% had curdy white yonisrava and 45.5% had no yonisrava. In group B, 24.2% had watery yonisrava, 18.2% had mucoid yonisrava and 12.1% had curdy white yonisrava and 45.5% had no yonisrava. In group C, 12.1% had watery yonisrava, 24.2% had mucoid yonisrava and 63.6% had no yonisrava. In group D, 12.1% had watery yonisrava, 15.2% had mucoid yonisrava and 24.2% had curdy white yonisrava 3% had blood stained yonisrava and 45.5% had no yonisrava. In group E, 12.1% had watery yonisrava, 18.1% had mucoid yonisrava and 9.1% had curdy white yonisrava and 60.6% had no yonisrava.

Yonikandu – The table shows distribution of yonikandu. In group A, 30.3% had yonikandu while remaining 69.5% had no yonikandu. In group B and C, 27.3% had yonikandu while remaining 72.7% had no yonikandu. In group D and E 33.3% had yonikandu while remaining 66.7% had no yonikandu.

Table – 4.1.9 History of onset – History of onset – nature

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
History of onset										
Sudden	3	9.1	2	6.1	7	21.2	5	15.2	3	9.1
Incidental	3	9.1	1	3	––	––	1	3	––	––
Gradual	18	54.5	22	66.7	19	57.6	18	54.5	25	75.7
NA	9	27.3	8	24.2	7	21.2	9	27.3	5	15.2
Nature										
Stationary	15	45.5	9	27.3	15	45.5	17	51.5	14	42.4
Progressive	9	27.3	16	48.5	11	33.3	7	21.2	15	45.5
NA	9	27.3	8	24.2	7	21.2	9	27.3	5	15.2

History of onset :– the table shows distribution of history of onset of disease. Among 33 patients, 54.5% had gradual onset of disease, 9.1% had incidental as well as sudden onset. Remaining 27.3% had asymptomatic.

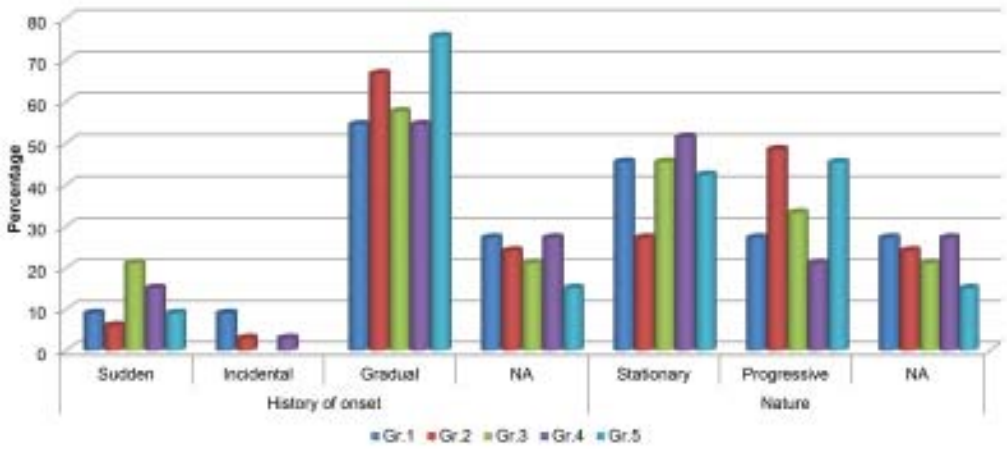

Fig. – 4.1.9 History of onset – History of onset – nature

In group B, 66.7% had gradual onset of disease, 6.1% had sudden onset and 1 patient (3%) had incidentally diagnosed and remaining 24.2% had asymptomatic. In group C, 57.6% had gradual onset of disease, 21.2% had sudden onset and 21.2% had no symptoms at all. In group D, 54.5% had gradual onset of disease, 15.2% had sudden onset and 3% had incidentally diagnosed and remaining 27.3% had asymptomatic. In group E, 75.7% had gradual onset of disease, 9.1% had sudden onset and remaining 15.2% had asymptomatic.

Nature – The table shows distribution of nature onset of disease. In group A, out of 72.8% of symptomatic cases, 45.5% had no change in their complaints and 27.3% had progressive changes. 27.3% had asymptomatic. In group B, 27.3% had no change in their complaints and 48.5% had progressive changes and 24.2% had asymptomatic. In group C, 45.5% had no change in their complaints and 33.3% had progressive changes and 21.2% had asymptomatic. In group D, 51.5% had no change in their complaints and 21.2% had progressive changes and remaining 27.3% had asymptomatic. In group E, 42.4% had no change in their complaints and 45.5% had progressive changes and 15.2% were asymptomatic.

Table – 4.1.10 History of Striroga – Disease still continuing or not –Treatment history of general disease – History of general disease

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
History - Striroga										
Absent	20	60.6	15	45.5	11	33.3	14	42.4	17	51.5
Present	13	39.4	18	54.5	22	66.7	19	57.6	16	48.5
History-gen.illness										
Nil	12	36.4	6	18.2	8	24.2	9	27.3	10	30.3
Mutrakrichara	5	15.2	5	15.2	6	18.2	10	30.3	9	27.3
Rajayakshma	––	––	––	––	––	––	1	3	––	––
Prameham	3	9.1	3	9.1	2	6.1	1	3	2	6.1
Raktasammardham	5	15.2	7	21.2	4	12.1	4	12.1	4	12.1
Others	4	12.1	8	24.2	5	15.2	6	18.2	6	18.2
Mix	4	12.1	4	12.1	8	24.2	2	6.1	2	6.1
Tmt-His-gen.illness										
Nil	2	6.1	1	3	1	3	––	––	1	3
Ayurveda	3	9.1	8	24.2	5	15.2	7	21.2	6	18.2
Allopathy	8	24.2	14	42.4	11	33.3	11	33.3	9	27.3
Homeopathy	––	––	––	––	1	3	––	––	2	6.1
Mix	8	24.2	4	12.1	7	21.2	6	18.2	5	15.1
NA	12	36.4	6	18.2	8	24.2	9	27.3	10	30.3
Dis.continuing or not										
No	8	24.2	7	21.2	6	18.2	13	39.4	10	30.3
Yes	13	39.4	20	60.6	19	57.6	11	33.3	13	39.4
NA	12	36.4	6	18.2	8	24.2	9	27.3	10	30.3

History of Striroga – The table shows distribution of striroga. In group A, out 33 patients, 60.6% had no history of striroga, while 39.4% had

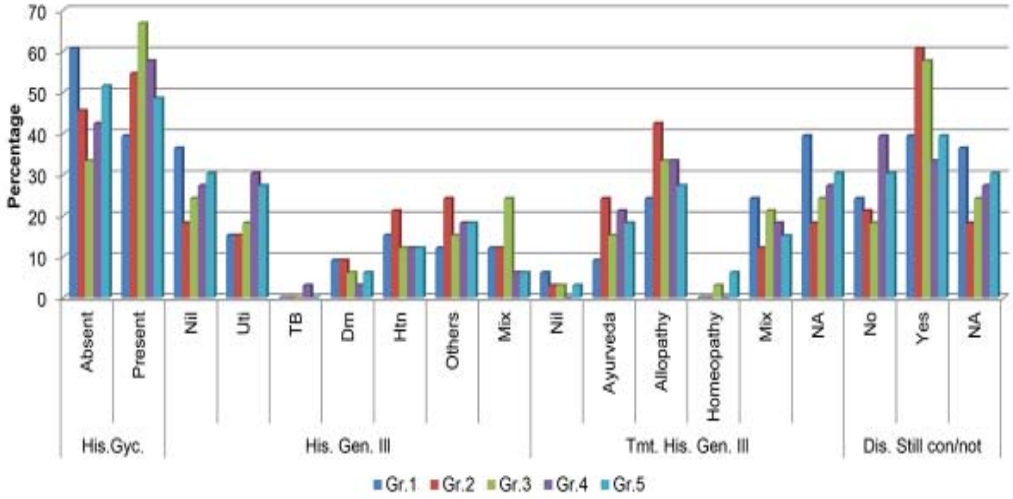

Fig. – 4.1.10 History of striroga – Disease still continuing or not – Treatment history of general disease – History of general disease

history of any of the striroga. In group B, 45.5% had no history of striroga, while 54.5% were a history of any of the striroga. In group C, 33.3% had no history of striroga, while 66.7% had history of any of the striroga present. In group D, 42.4% had no history of striroga, while 57.6% had history of any of the striroga. In group E, 51.5% had no history of striroga, while 48, 5% were a history of any of the striroga.

History of general disease – The table shows distribution of general diseases. In group A, 36.4% had no history of general disease, 15.2% had history of mutrakrichara and raktadimardham, 9.1% had prameha, and 12.1% had other diseases except the diseases mentioned above. The remaining 12.1% had combination of the diseases such as mutrakrichara, prameha, or raktadimardham. In group B, 18.2% had no history of general disease, 15.2% had history of mutrakrichara, 9.1% had prameha, 21.2% had raktadimardham, and 24.2% had other diseases except the diseases mentioned above. The

remaining 12.1% had combination of the diseases mentioned in the table. In group C, 24.2% had no history of general disease, 18.2% had history of mutrakrichara, 6.1% had prameha, 12.1% had raktadimardham, and 15.2% had other diseases except the diseases mentioned above. The remaining 24.2% had combination of the diseases mentioned in the table.

In group D, 27.3% had no history of general disease, 30.3% had history of mutrakrichara, 3% had prameha and TB each, 12.1% had raktasammardham, and 18.2% had other diseases except the diseases mentioned above. The remaining 6.1% had combination of the diseases mentioned in the table.

In group E, 30.3% had no history of general disease, 27.3% had history of mutrakrichara, 6.1% had prameha, 12.1% had raktasammardham, and 18.2% had other diseases except the diseases mentioned above. The remaining 6.1% had combination of the diseases mentioned in the table.

Treatment history of general disease – While going through the distribution of treatment history of general disease of 33 patients in group A, 24.2% had adopted allopathic treatment, 9.1% had adopted Ayurvedic treatment, 24.2% had done both Ayurvedic and allopathic treatment. Remaining 36.4% do any of the treatments. In group B, 42.4% adopted allopathic treatment, 24.2% adopted Ayurvedic treatment, 12.1% done both Ayurvedic and allopathic treatment and 18.2% had no history of disease mentioned in the table above. One patient do any treatment. In group C, 33.3% adopted

allopathic treatment, 15.2% adopted Ayurvedic treatment, 21.2% done both Ayurvedic and allopathic treatment, 3% were done homeopathy treatment and 3% do any of the treatments. Remaining 24.2% had no history of disease mentioned in the table above.

In group D, 33.3% adopted allopathic treatment, 21.2% adopted Ayurvedic treatment, 18.2% done both Ayurvedic and allopathic treatment. Remaining 27.3% had no history of general disease.

In group E, 27.3% adopted allopathic treatment, 18.2% adopted Ayurvedic treatment, 15.1% done both Ayurvedic and allopathic treatment. 6.1% adopted homeopathy treatment and 3% do any of the treatments. Remaining 30.3% had no history of general disease.

Disease still continuing or not – This shows distribution of present condition of previous disease. In group A, 39.4% had continuing the previous disease, 24.2% didn't have the diseases and remaining 36.4% had no history. In group B, 60.6% had continuing the previous disease, 21.2% were not having the disease and remaining 18.2% had no history. In group C, 57.6% had continuing the previous disease, 18.2% were not continuing the disease and remaining 24.2% had no history. In group D, 33.3% had continuing the previous disease, 39.4% were not continuing the diesease and remaining 27.3% had no history. In group E, 39.4% had continuing the previous disease, 30.3% were not continuing and remaining 30.3% had no history of disease.

Table – 4.1.11 Surgical history – Family history – Family history of fibroids

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
H/o sur. in'vention										
No	23	69.7	16	48.5	12	36.4	9	27.3	9	27.3
Yes	10	30.3	17	51.5	21	63.6	24	72.7	24	72.7
Family history										
Nil	14	42.4	11	33.3	13	39.4	16	48.5	16	48.5
Prameham	5	15.2	8	24.2	7	21.2	3	9.1	3	9.1
Raktadimardham	3	9.1	5	15.2	3	9.1	7	21.2	7	21.2
Arbuda	––	––	––	––	1	3	––	––	––	––
Raktasrava	3	9.1	4	12.1	––	––	––	––	––	––
Mix	8	24.2	5	15.2	9	27.3	7	21.2	7	21.2
Fam. His - fibroids										
Nil	17	51.5	5	15.2	5	15.2	10	30.3	10	30.3
Mother	15	45.5	14	42.4	10	30.3	12	36.4	11	33.3
Siblings	1	3	4	12.1	9	27.3	9	27.3	9	27.3
Grand mother	––	––	––	––	1	3	––	––	––	––
Mix	––	––	10	30.3	8	24.2	2	6.1	3	9.1

Surgical history – The table shows distribution of any surgery underwent previously. Among 33 patients in group A, 69.7% had no surgical history while 30.3% had history of surgery. In group B, among 33 patients, 48.5% had no surgical history while 51.5% had history of surgery. In group C, 36.4% had no surgical history while 63.6% had history of surgery. In group D and E, 27.3% had no surgical history while 72.7% had history of surgery.

Family history – The table shows distribution of family history of

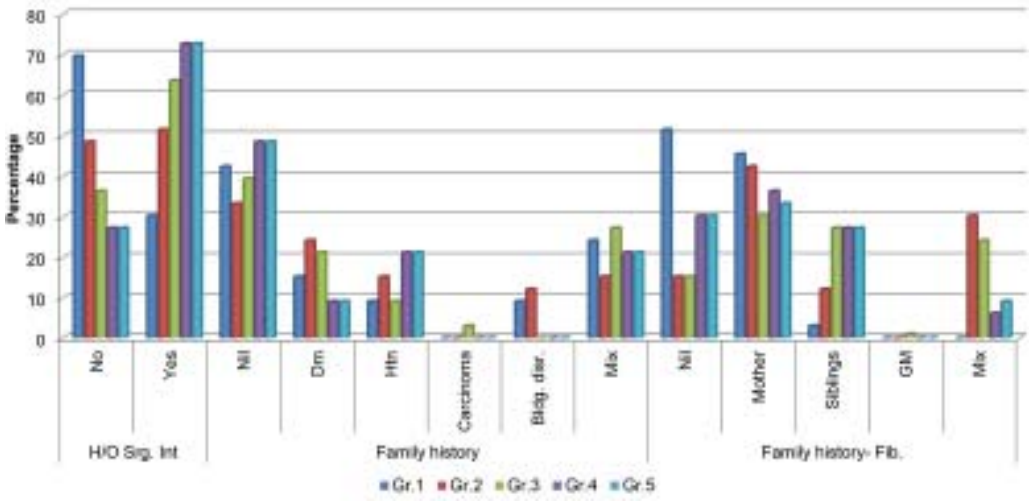

Fig. – 4.1.11 Surgical history – Family history – Family history of fibroids

different diseases. In group A, 42.4% had no history of disease mentioned in the table above. While 15.2% had family history of Prameha, 9.1% had both raktadimardham and bleeding disorders. The remaining 24.2% had combination of above mentioned diseases. In group B, 33.3% had no history of disease mentioned in the table above. While 24.2% had family history of Prameha, 15.2% had raktadimardham and 12.1% had bleeding disorders. The remaining 15.2% had combination of above mentioned diseases.

In group C, 39.4% had no history of disease mentioned in the table above. While 21.2% had family history of prameha, 9.1% had raktadimardham and 3% had bleeding disorders. The remaining 27.3% had combination of above mentioned diseases. In group D and E, 48.5% had no history of disease mentioned in the table above. While 9.1% had family history of prameha, and 21.2% had raktadimardham. The remaining 21.2% had combination of above mentioned diseases.

Family history of fibroids – The table shows distribution of history of fibroids in their family. In group A, 45.5% had history of fibroids in their mother, 3% had in their siblings. Remaining 51.5% had no family history of fibroids. In group B, 42.4% had history of fibroids in their mother, 12.1% had in their siblings, 15.2% had no family history of fibroids and mixed category were 30.3%. In group C, 30.3% had history of fibroids in their mother, 27.3% had in their siblings, 15.2% had no family history of fibroids and mixed category were 24.2%. 3% had history of fibroids for their grandmother. In group D, 36.4% had history of fibroids in their mother, 27.3% had in their siblings, 30.3% had no family history of fibroids and mixed category were 6.1%. In group E, 33.3% had history of fibroids in their mother, 27.3% had in their siblings, 30.3% had no family history of fibroids and mixed category were 9.1%.

Personal history – Kshudhapravriti (Appetite) – Malapravriti (Bowel) – Ahara (diet)

Kshudhapravriti – Regarding kshudhapravriti out of 33 patients of group A, 66.7% had normal kshudhapravritti, 24.2% had reduced kshudhapravritti and 9.1% had more kshudhapravritti . In group B, 66.7% were having normal kshudhapravritti, 18.2% were reduced kshudhapravritti and 15.2% had more kshudhapravritti . In group C, 69.7% were having normal kshudhapravritti , 15.2% were both reduced kshudhapravritti and more kshudhapravritti and in group D and E, 63.6% were having normal kshudhapravritti , 15.2% were reduced kshudhapravritti and 21.2% had more kshudhapravritti.

Table – 4.1.12 Personal history – Kshudhapravriti – Malapravriti – Ahara – Nidra

	Group A		Group B		Group C		Group D		Group E	
Personal history	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Kshudhapravriti										
More	3	9.1	5	15.2	5	15.2	7	21.2	7	21.2
Reduced	8	24.2	6	18.2	5	15.2	5	15.2	5	15.2
Normal	22	66.7	22	66.7	23	69.7	21	63.6	21	63.6
Malapravriti										
Satisfactory	23	79.7	22	66.7	19	57.6	15	45.5	16	48.5
Constipated	6	18.2	3	9.1	10	30.3	9	27.3	13	39.4
Irregular	4	12.1	8	24.2	4	12.1	9	27.3	4	12.1
Ahara										
Vegetarian	7	21.2	5	15.2	8	24.2	5	15.2	9	27.3
Mixed	26	78.8	28	84.8	25	75.8	28	84.8	24	72.7
Nidra										
More	3	9.1	1	3	1	3	1	3	2	6.1
Less	6	18.2	10	30.3	9	27.3	13	39.4	6	18.2
Sound	24	72.7	22	66.7	23	69.7	19	57.6	25	75.7

Malapravriti – In group A, 69.7% had satisfactory bowel movement, 18.2% had malabandha, and 12.1% had irregular passage of stool. In group B, 66.7% had satisfactory bowel movement, 9.1% had malabandha, and 24.2% had irregular passage of stool. In group C, 57.6% had satisfactory bowel movement, 30.3% had malabandha, and 12.1% had irregular passage of stool. In group D, 45.5% had satisfactory bowel movement, 27.3% had malabandha and 27.3% had irregular passage of stool. In group E, 48.5%

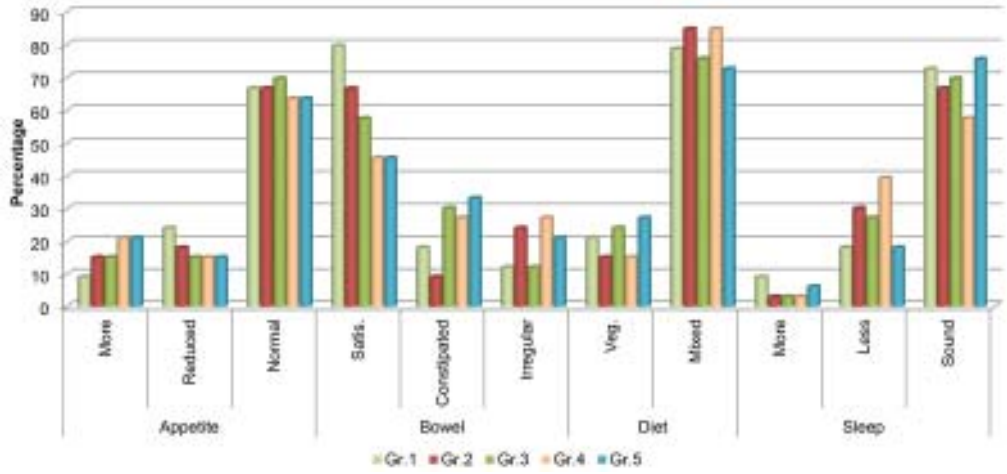

Fig. – 4.1.12 Personal history – Kshudhapravriti – Malapravriti – Ahara – Nidra

had satisfactory bowel movement, 39.4% had malabandha, and 12.1% had irregular passage of stool.

Ahara – According to history of ahara, out of 33 patients in group A, most of the patients were (78.8%) non–vegetarians and 21.2% were vegetarians. In group B and D 84.8% were non–vegetarians and only 15.2% were vegetarians. In group C, most of the patients were (75.8%) non–vegetarians and only 24.2% were vegetarians. and in group E, 72.7% non–vegetarians and only 27.3% were vegetarians.

Nidra – Regarding the type of nidra, in group A, 72.7% had sound nidra, 18.2% had less nidra and 9.1% had more nidra. In group B, 66.7% had sound nidra, 30.3% had less nidra and one patient had more nidra. In group C, 69.7% had sound nidra, 27.3% had less nidra and one patient had more nidra.

In group D, 57.6% had sound nidra, 39.4% had less nidra and 3% had more nidra and in group E, 75.7% had sound nidra, 18.2% had less nidra and 6.1% had more nidra.

Table – 4.1.13 Artava - History – Duration – Interval

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Artava–Duration										
<3 days	6	18.2	5	15.2	4	12.1	3	9.1	4	12.1
4–5 dyas	15	45.5	18	54.5	13	39.4	17	51.5	14	42.4
5–6 days	5	15.2	1	3	9	27.3	6	18.2	6	18.2
7–8 days	––	––	2	6.1	––	––	2	6.1	6	18.2
>9 days	5	15.2	7	21.2	7	21.2	5	15.2	3	9.1
NA	2	6.1	––	––	––	––	––	––	––	––
Artava–Interval										
< 20 days	4	12.1	5	15.2	––	––	2	6.1	2	6.1
20–25 days	5	15.2	4	12.1	––	––	5	15.2	3	9.1
25–30 days	18	54.5	20	60.6	28	84.8	21	63.6	25	75.7
30–35 days	2	6.1	3	9.1	4	12.1	4	12.1	––	––
> 35 days	2	6.1	1	3	1	3	1	3	3	9.1
NA	2	6.1	––	––	––	––	––	––	––	––

Duration – Regarding the duration of artava, out of 33 patients in group A, 45.5% were having 4–5days artava raktasrava, 15.2% were having 5–6 days artava raktasrava, 18.2% were having <3days artava raktasrava, 15.2% were having deerghakala anubandha artava raktasrava for >9 days and 6.1% attained rajonivartti.

In group B, 54.5% were having 4–5days artava raktasrava duration, 3% were having 5–6 days artava raktasrava, 15.2% were having <3days artava raktasrava, 21.2% were having deeghakala anubandha artava raktasrava for >9 days and 6.1% had the artava raktasrava of 7–8days. In

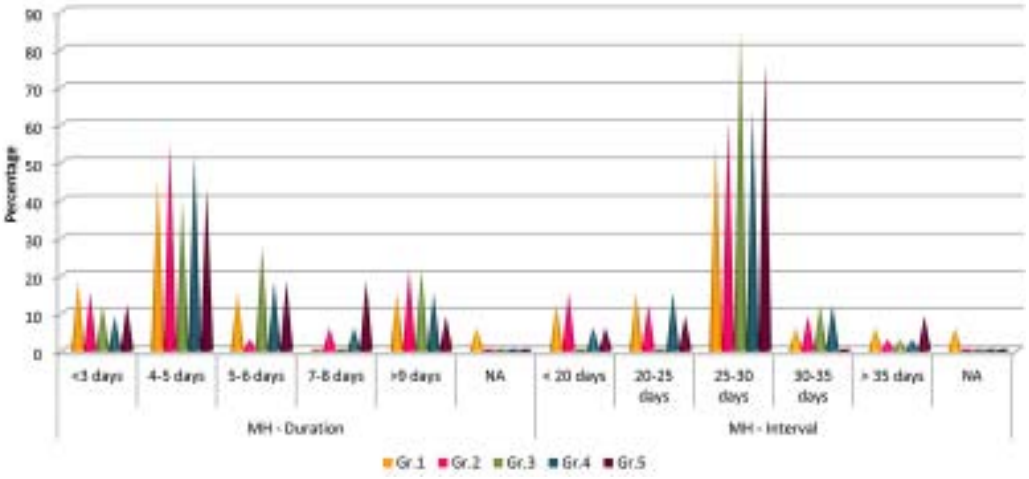

Fig. – 4.1.13 Artava - History – Duration – Interval

group C, 39.4% were having 4–5days artava raktasrava, 27.3% were having 5–6 days artava raktasrava, 12.1% were having <3days artava raktasrava, 21.2% were having deerghakala anubandha artava raktasrava for >9 days. In group D, 51.5% were having 4–5days artava raktasrava, 18.2% were having 5–6 days artava raktasrava, 9.1% were having <3days artava raktasrava, 6.1% were having artava raktasrava 7–8days, and 15.2% were having deerghakala anubandha artava raktasrava for >9 days. In group E, 42.4% were having 4–5days artava raktasrava, 18.2% were having 5–6 days artava raktasrava, 12.1% were having <3days artava raktasrava, 18.2% were having 7–8days artava raktasrava and 9.1% were having deerghakala anubandha artava raktasrava for >9 days.

Artava - – Interval – According to interval of artava, in group A, 54.5% were having 25–30 days interval, 15.2% were having 20–25 days artava raktasrava and 12.1% had <20days artava raktasrava were reported. 6.1% each had 30–35day cycle and >35day cycle each and 6.1% of patients attained

rajonivartti. In group B, 60.6% were having 25–30 days interval, 12.1% were having 20–25days artava raktasrava 3 patients (9.1%) had 30–35days artava raktasrava and 15.2% had <20days artava raktasrava were reported. One patient(3%) had >35days raktasrava. In group C, 84.8% were having 25–30 days interval and 12.1% were having 30–35days artava raktasrava One patient (3%) had >35days raktasrava. In group D, 63.6% were having 25–30 days interval, 15.2% were having 20–25 days artava raktasrava 12.1% had 30–35days raktasrava, 6.1% had <20days artava raktasrava were reported and 3% had >35days menstrual interval. In group E, 75.7% were having 25–30 days interval, 9.1% were having each 20 – 25days and >35 days artava raktasrava and 6.1% had <20days artava raktasrava were reported.

Table – 4.1.14 Artava - Amount - No. of pads used/day

	Group A		Group B		Group C		Group D		Group E	
Menstrual history	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Amount										
Scanty	1	3	1	3	1	3	2	6.1	3	9.1
Spotting	3	9.1	5	15.2	––	––	––	––	––	––
Moderate	12	36.4	14	42.4	15	45.5	20	60.6	13	39.4
Excessive	15	45.5	13	39.4	17	51.5	11	33.3	17	51.5
NA	2	6.1	––	––	––	––	––	––	––	––
No of pads changed per day										
2/day	4	12.1	7	21.2	4	12.1	10	30.3	6	18.2
3/ day	8	24.2	11	33.3	9	27.3	12	36.4	10	30.3
4/day	11	33.3	7	21.2	6	18.2	6	18.2	5	15.2
> 5/day	8	24.2	8	24.2	14	42.4	5	15.2	12	36.4
NA	2	6.1	––	––	––	––	––	––	––	––

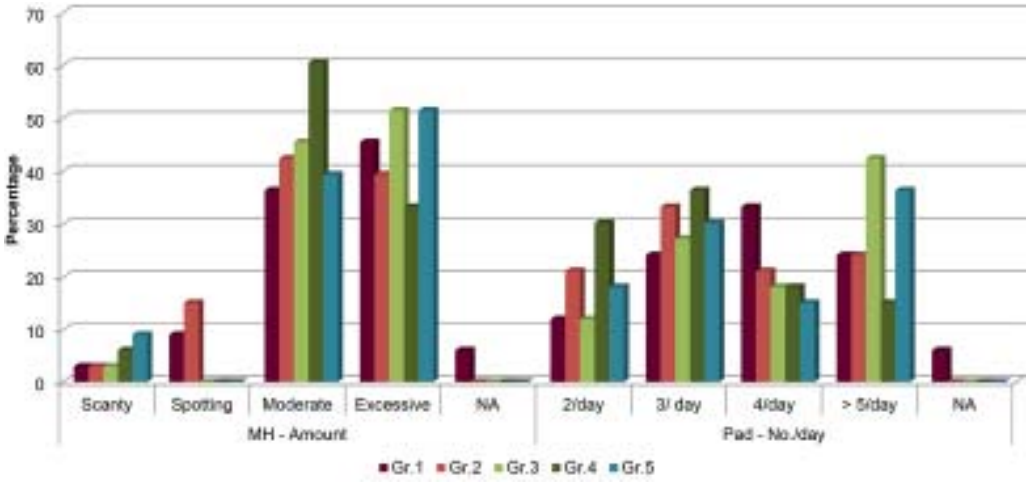

Fig. – 4.1.14 Artava - Amount - No. of pads used/day

Artava - Amount of raktasrava:– The table given above described the distribution of amount artava raktarava regarding artava in all the groups. In group A, 6.1% out of 33 patients attained rajonivartti, 45.5% had excessive raktasrava, 36.4% had moderate flow, 9.1% had spotting only at the time of artava, 3% had scanty raktasrava. In group B, 39.4% had excessive raktasrava, 42.4% had moderate flow, 15.2% had spotting only at the time of artava. One patient (3%) reported of having scanty raktasrava. In group C, 51.5% out of 33 had excessive raktasrava, 45.5% had moderate flow and only one patient (3%) reported of having scanty raktasrava. In group D, 33.3% had excessive raktasrava, 60.6% had moderate flow, 6.1% were reported of having scanty raktasrava. In group E, 51.5% had excessive raktasrava, 39.4% had moderate flow, 9.1% had scanty.

Artava – No. of pads used/day:– Number pads used /day to assess artava raktasrava is described in the table given above. In group A, 33.3%

had used 4pads/day, 24.2% each had used >5pads/day and 3pads/day, 12.1% had used 2pads/day and 6.1% had attained rajonivartti. In group B, 21.2% had used 4pads/day and 21.2% had used 2pads/day each, 24.2% had used >5pads/day and 33.3% had used 3pads/day. In group C, 18.2% had used 4pads/day, 42.4% had used >5pads/day, 27.3% had used 3pads/day and 12.1% had used 2pads/day. In group D, 18.2% had used 4pads/day, 15.2% had used >5pads/day, 36.4% had used 3pads/day and 30.3% had used 2pads/day. In group E, 15.2% had used 4pads/day, 36.4% had used >5pads/day, 30.3% had used 3pads/day and 18.2% had used 2pads/day.

Table – 4.1.15 Artava –Varna (Colour), Gandha (Odour)

Menstrual history	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Varna										
Blackish red	12	36.4	13	39.4	13	39.4	17	51.5	16	48.5
Bright red	18	54.5	19	57.6	16	48.5	14	42.4	17	51.5
Frothy	––	––	1	3	––	––	––	––	––	––
Pale red	1	3	––	––	4	12.1	2	6.1	––	––
NA	2	6.1	––	––	––	––	––	––	––	––
Gandha										
Foul	3	9.1	2	6.1	6	18.2	2	6.1	1	3
Non–specific	28	84.8	31	93.9	27	81.8	31	93.9	32	97
NA	2	6.1	––	––	––	––	––	–––	––	––
Clots										
Absent	8	24.2	14	42.4	10	30.3	12	36.4	13	39.4
Present	23	69.7	19	57.6	23	69.7	21	63.6	20	60.6
NA	2	6.1	––	––	––	––	––	––	––	––

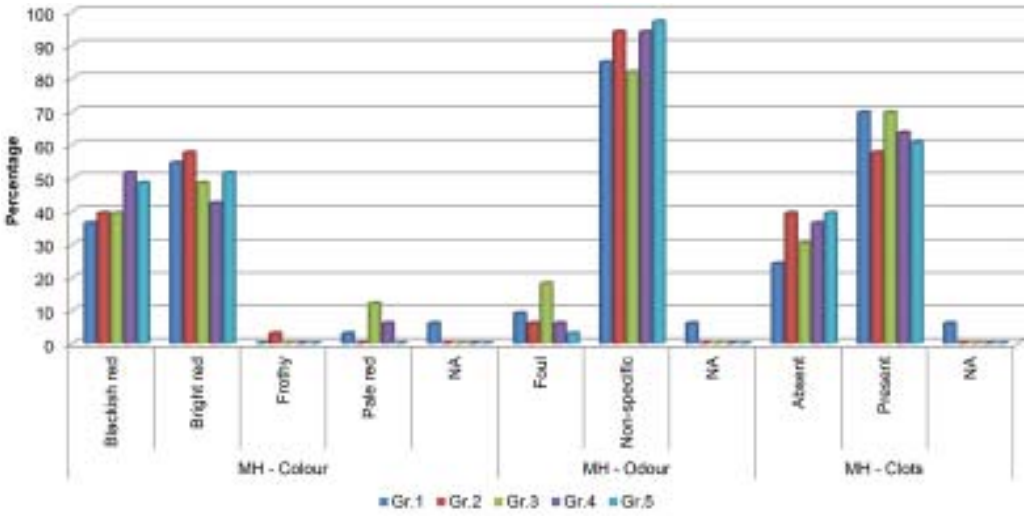

Fig. – 4.1.15 Artava –Varna (Colour), Gandha (Odour)

Varna:– The table given above shows the distribution of varna of artava rakta. In group A, 54.5% had bright red in colour, 36.4% had blackish red in colour, 3% had pale red in colour, and 6.1% had attained rajonivartti. In group B, 57.6% had bright red in colour and 39.4% had blackish red in colour artava rakta. One patient had complaints of frothy menstrual blood. In group C, 48.5% had bright red in colour and 39.4% had blackish red in colour artava rakta. 12.1% had pale red coloured artava rakta. In group D, 42.4% had bright red in colour and 51.5% had blackish red in colour artava rakta. 6.1% had complaints of pale red colour. In group E, 51.5% had bright red in colour and 48.5% had blackish red in colour artava rakta.

Gandha:–The table shows distribution of smell of artava rakta. It described out of 33 patients, in group A, 84.8% had no specific gandha, 9.1% had foul smelling artava rakta and 6.1% had attained rajonivartti. In group B and D 93.9% had no specific gandha and remaining 6.1% had foul smelling

artava rakta. In group C, 81.8% had no specific gandha and remaining 18.2% had foul smelling artava rakta. In group E, 97% had no specific gandha and remaining 3% had foul smelling artava rakta.

Clots:–The table shows distribution of clots in artava rakta. In group A, out of 93.9%, 69.7% had clots in artava rakta and 24.2% had no clots in artava rakta and 6.1% had attained rajonivartti. In group B, 57.6% had clots in artava rakta and 42.4% had no clots in artava rakta. In group C, 69.7% out of 33 had clots in artava rakta and 30.3% had no clots in artava rakta. In group D, 63.6% had clots in artava rakta and 36.4% had no clots in artava rakta. In group E, 60.6% had clots in artava rakta and 39.4% had no clots in artava rakta.

Table – 4.1.16 Artava – Artavasula & Onset of Pain

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Artavasula										
Absent	7	21.2	14	42.4	11	33.3	12	36.4	8	24.2
Present	24	72.7	19	57.6	22	66.7	21	63.6	25	75.8
NA	2	6.1	––	––	––	––	––	––	––	––
MH – Onset of Pain										
Pre	5	15.1	4	12.1	4	12.1	7	21.2	7	21.2
Pan	11	33.3	7	21.2	13	39.4	9	27.3	5	15.2
Post menstrual	––	––	1	3	––	––	–––	––	1	3
Mix	8	24.2	7	21.2	5	15.2	5	15.2	12	36.4
NA	7	21.2	14	42.4	11	33.3	12	36.4	8	24.2
Rajonivritti	2	6.1	––	––	––	––	––	––	––	––

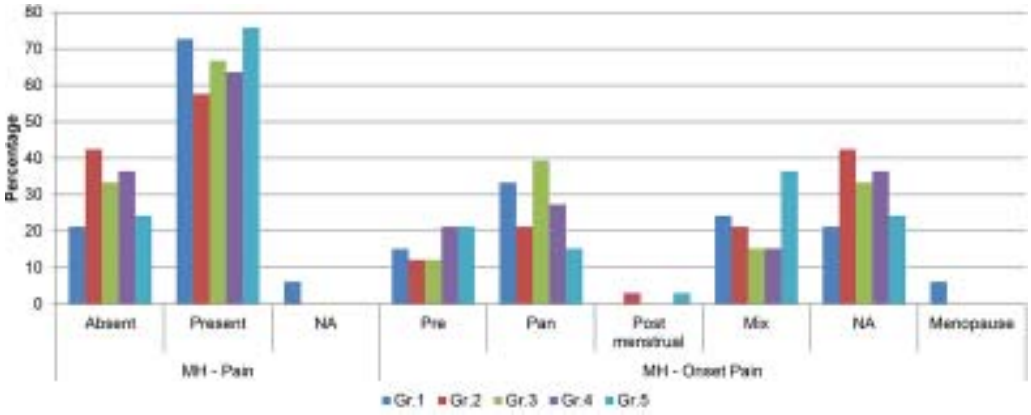

Fig. – 4.1.16 Artava – Artavasula & Onset of Pain

Sula – The table given above shows distribution of artava sula . In group A, among 33 patients, 72.7% had artava sula , 21.2% had no artava sula and 6.1% had attained rajonivartti. In group B, 57.6% had artava sula and 42.4% had no artava sula . In group C, 66.7% had artava sula and 33.3% had no artava sula. In group D, 63.6% had artava sula and 36.4% had no artava sula and in group E, 75.8% had artava sula and 24.2% had no artava sula.

Onset of pain – The table shows distribution of onset of pain during artava in all the five groups. In group A, 6.1% had attained rajonivartti and 21.2% had no pain during artava. Among 75.7% 33.3% had pain at the time of artava, 15.1% had main before artava and remaining 24.2% had pain before and during artava. In group B, 42.4% had no pain during artava. Among remaining 57.6%, 21.2% had pain at the time of artava, 12.1% had pain before artava, 3% had experiences pain after artava and remaining 21.2% had pain before, after and during artava. In group C, 33.3% had no pain during artava.

39.4% had pain at the time of artava, 12.1% had pain before artava and remaining 15.2% had pain before, after and during artava. In group D, 36.4% had no pain during artava. 27.3% had pain at the time of artava, 21.2% had pain before artava, and remaining 15.2% had either pain before, after and during artava. In group E, 24.2% had no pain during artava. Among remaining 15.2% had pain during artava, 21.2% had pain before artava, 3% had pain at the time of artava. and remaining 36.4% had pain before, after and during artava.

Table – 4.1.17 Artavasula

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Degree of Pain										
Mild	4	12.1	3	9.1	3	9.1	2	6.1	7	21.2
Moderate	9	27.3	7	21.2	8	24.2	7	21.2	6	18.2
Severe	11	33.3	9	27.3	11	33.3	12	36.4	12	36.4
NA	7	21.2	14	42.4	11	33.3	12	36.4	8	24.2
Rajonivartti	2	6.1	––	––	––	––	––	––	––	––
Site of Pain										
Vastipradesha	12	36.4	8	24.2	8	24.2	12	36.4	7	21.2
Katipradesha	1	3	2	6.1	1	3	1	3	1	3
Sroni	––	––	––	––	––	––	1	3	––	––
Mix	11	33.3	9	27.3	13	39.4	7	21.2	17	51.5
NA	7	21.2	14	42.4	11	33.3	12	36.4	8	24.2
Rajonivartti	2	6.1	––	––	––	––	––	––	––	––

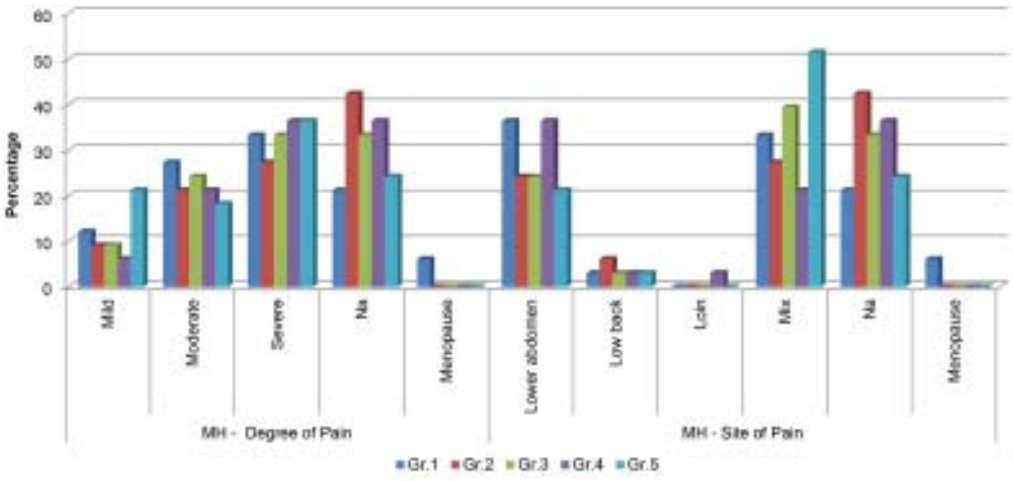

Fig. – 4.1.17 Artavasula

Degree of pain – The table shows distribution of degree of pain during artava. In group A, 27.3% had moderate pain, 33.3% had severe degree of pain and 12.1% had mild pain during artava. In remaining, 21.2% had no pain during artava and 6.1% had attained rajonivartti. In group B, 21.2% had moderate degree of pain, 27.3% had complaints about severe pain during artava, and 9.1% had mild pain during artava. 42.4% had no pain during artava. In group C, 24.2% had moderate degree of pain, 33.3% had complaints about severe pain during artava, and 9.1% had mild pain during artava. 33.3% had no pain during artava. In group D, 21.2% had moderate degree of pain, 36.4% had complaints about severe pain during artava, and 6.1% had mild pain during artava. 36.4% had no pain during artava.

In group E, 18.2% had moderate degree of pain, 36.4% had complaints about severe pain during artava, and 21.2% had mild pain during artava. 24.2% had no pain during artava.

Site of pain – The table given above shows the distribution of site of pain during artava. In group A, 36.4% had sula in vasti pradesha, 3% had sula in katipradesha and 33.3% had sula both in vasti pradesha and kati pradesha present during artava. 21.2% had no pain during artava and 6.1% had attained rajonivartti. In group B, 24.2% had sula in vasti pradesha, 6.1% had sula in kati pradesha. 42.2% had no pain during artava and 27.3% had experienced all types of pain together.

In group C, 24.2% had sula in vasti pradesha, 3% had sula in kati pradesha and 39.4% had sula in both vasti pradesha and kati pradesha during artava. 33.3% had no pain during artava. In group D, 36.4% had sula in vasti pradesha, 3% had sula in kati pradesha and sroni pradesha each, 21.2% had both sula in vasti pradesha and kati pradesha present during artava. 36.4% had no pain during artava. In group E, 21.2% had sula in vasti pradesha, 3% had sula in kati pradesha and 51.5% had sula in vasti pradesha and kati pradesha during artava. Remaining 24.2% had no pain during artava.

Inter menstrual – Bleeding, Duration, Amount & Clots

Inter menstrual bleeding – The table shows distribution of inter menstrual bleeding. Out of 33 patients in group A, 87.9% had no inter menstrual bleeding and 12.1% had complaints of inter menstrual bleeding. In group B, 81.8% had no inter menstrual bleeding and 18.2% had complaints of menstrual bleeding. In group C, 93.9% had no inter menstrual bleeding and 6.1% had complaints of inter menstrual bleeding. In group D and E 90.9% had no menstrual bleeding and 9.1% had complaints of inter menstrual bleeding.

Table – 4.1.18 Inter menstrual – Bleeding, Duration, Amount & Clots

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Bleeding										
Absent	29	87.9	27	81.8	31	93.9	30	90.9	30	90.9
Present	4	12.1	6	18.2	2	6.1	3	9.1	3	9.1
Duration										
<3 days	4	12.1	6	18.2	1	3	2	6.1	3	9.1
3–4 days	––	––	––	––	1	3	1	3	––	––
NA	29	87.9	27	81.8	31	93.9	30	90.9	30	90.9
Amount										
Scanty	2	6.1	3	9.1	1	3	––	––	––	––
Spotting	1	3	3	9.1	1	3	1	3	3	9.1
Average	1	3	––	––	––	––	2	6.1	––	––
NA	29	87.9	27	81.8	31	93.9	30	90.9	30	90.9
Clots										
Absent	3	9.1	6	18.2	1	3	1	3	3	9.1
Present	1	3	––	––	1	3	2	6.1	––	––
NA	29	87.9	27	81.8	31	93.9	30	90.9	30	90.9

Duration – The table shows distribution of duration of inter menstrual bleeding. In group A, 87.9% had no inter menstrual bleeding and12.1% had inter menstrual bleeding less than 3days. In group B, 81.8% had no inter menstrual bleeding and 18.2% had inter menstrual bleeding less than 3days.

In group C, 93.9% had no inter menstrual bleeding and 3% showed in the group of 3–4 days and less than 3days respectively. In group D, 90.9%

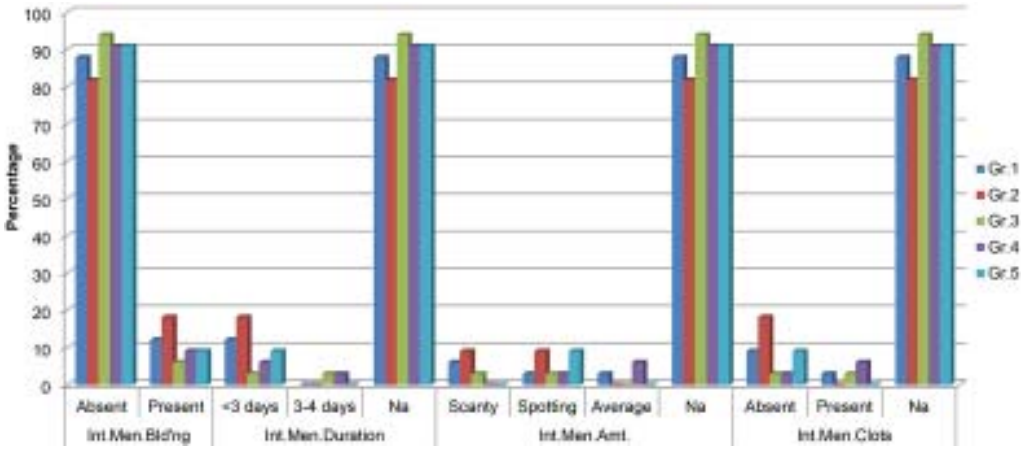

Fig. – 4.1.18 Inter menstrual – Bleeding, Duration, Amount & Clots

had no inter menstrual bleeding and 6.1% had inter menstrual bleeding less than 3days and 3% showed in the group of 3–4 days and in group E, 90.9% had no inter artavasula and 9.1% had complaints of inter artavasula in the group of <3 days.

Amount – The table given above shows distribution of amount of inter menstrual bleeding. In group A, 3% had s spotting or average bleeding and 6.1% had scanty intermenstrual bleeding. Remaining 87.9% had no inter menstrual bleeding. In group B, 9.1% had scanty bleeding, and spotting only during periods respectively. Remaining 81.8% had no inter menstrual bleeding. In group C, 3% had spotting only during periods and scanty bleeding respectively. Remaining 93.9% had no inter menstrual bleeding. In group D, 3% had spotting and 90.9% had no inter menstrual bleeding. Remaining 6.1% had average bleeding and in group E, 90.9% had no inter menstrual bleeding and 9.1% had inter menstrual bleeding of spotting only.

Clots – The table shows distribution of presence of clots in inter menstrual bleeding. In group A, out of 12.1%, 3% had no clots in inter menstrual bleeding and 9.1% had clots in inter menstrual blood. Remaining 87.9% had no inter menstrual bleeding. In group B, all patients having intermenstrual bleeding (18.2%) were reported that no clots in inter menstrual bleeding and remaining 81.8% had no inter menstrual bleeding. In group C, 3% having intermenstrual bleeding were reported that no clots in inter menstrual bleeding 3% had presence of clots in the bleeding respectively. Remaining 93.9% had no inter menstrual bleeding. In group D, 6.1% had present clots in the bleeding, 3%were reported that no clots in inter menstrual bleeding and remaining 90.9% had no inter menstrual bleeding.in group E, 9.1% had no clots in the intermenstrual bleeding. Remaining 90.9% had no inter menstrual bleeding.

Marital history – Consanguineous, Contraceptive methods

Marital history – Consanguineous – The table shows distribution of marital history regarding consanguineous marriage. All the married patients in all the groups were have non consanguineous marriage and in group A, 3%, in group D 9.1% and in group E 6.1% were unmarried.

Table – 4.1.19 Marital history – Consanguineous, Contraceptive methods

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Consanguineous										
Not	32	97	33	100	33	100	30	90.9	31	93.9
NA	1	3	––	––	––	––	3	9.1	2	6.1
Contra've methods										
Permanent	15	45.5	15	45.5	7	21.2	15	45.5	20	60.6
Temporary	7	21.2	4	12.1	15	45.5	8	24.2	5	15.2
Nil	10	30.3	14	42.4	11	33.3	7	21.2	6	18.2
NA	1	3	––	––	––	––	3	9.1	2	6.1

Contraceptive methods – The table shows distribution of usage of contraceptives previously. In group A, 45.5% had adopted permanent methods of contraception, 21.2% had used temporary methods of contraception and remaining 30.3% had not adopted any methods of contraceptives. Remaining 3% had unmarried. In group B, 45.5% had adopted permanent methods of

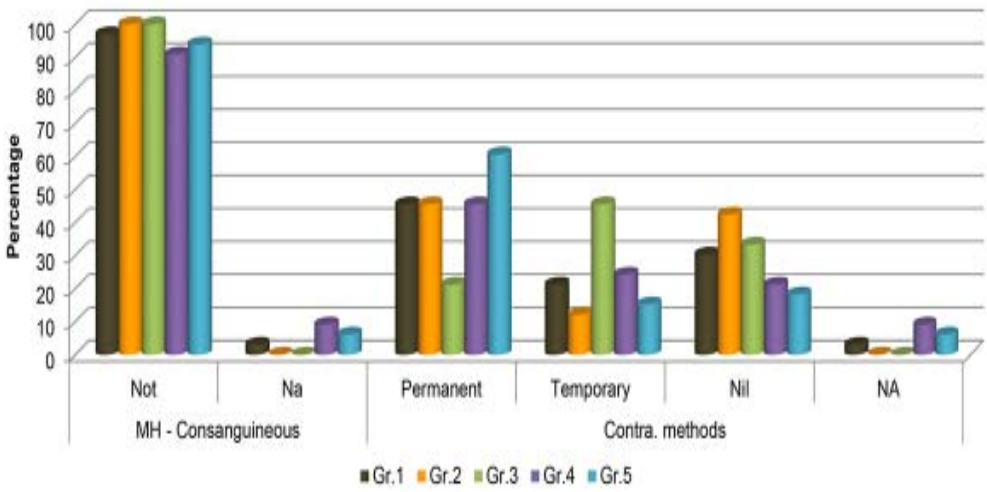

Fig. – 4.1.19 Marital history – Consanguineous, Contraceptive methods

contraception, 12.1% had used temporary methods of contraception and remaining 42.4% had not adopted any methods of contraceptives. In group C, 21.2% had adopted permanent methods of contraception, 45.5% had used temporary methods of contraception and remaining 33.3% had not adopted any methods of contraceptives. In group D, 45.5% had adopted permanent methods of contraception, 24.2% had used temporary methods of contraception and 21.2% had not adopted any methods of contraceptives. Remaining 9.1% were unmarried. In group E, 60.6% had adopted permanent methods of contraception, 15.2% had used temporary methods of contraception and in remaining married women 18.2% had not adopted any methods of contraceptives. 6.1% were unmarried.

Table – 4.1.20 Obstetric history – Duration of pregnancy, Abnormalities in antenatal period

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Duration of pregnancy										
Full term	28	84.8	26	78.8	27	81.8	27	81.8	28	84.8
Pre term	2	6.1	2	6.1	1	3	––	––	––	––
Mix	1	3	3	9.1	3	9.1	––	––	3	9.1
NA	1	3	––	––	––	––	3	9.1	2	6.1
Nd	1	3	2	6.1	2	6.1	3	9.1	––	––
Ab.ant'l period										
No	26	78.8	27	81.8	25	75.8	25	75.8	28	84.8
Yes	5	15.2	4	12.1	6	18.2	2	6.1	3	9.1
NA	1	3	––	––	––	––	3	9.1	2	6.1
Nd	1	3	2	6.1	2	6.1	3	9.1	––	––

Obstetric history

Duration of pregnancy – The table given above shows distribution of duration of pregnancy. In group A, 84.8% had full term deliveries, 6.1% had pre term deliveries and 3% were nulliparous and 3% were unmarried. Remaining 3% had both types of deliveries. In group B, 78.8% had full term deliveries, 6.1% had pre term deliveries and 9.1% had both types mentioned in the table. 6.1% were reported as nulliparous. In group C, 81.8% had full term deliveries, 3% had pre term deliveries and 9.1% had both types mentioned in the table. 6.1% were reported as nulliparous. In group D, 81.8% had full term deliveries, 9.1% had each had unmarried and nulliparous respectively. In group E, 84.8% had full term deliveries, 9.1% had both types mentioned in the table. 6.1% were unmarried.

Abnormalities in antenatal period – The table shows distribution of abnormalities during antenatal period. In group A, 78.8% had reported that

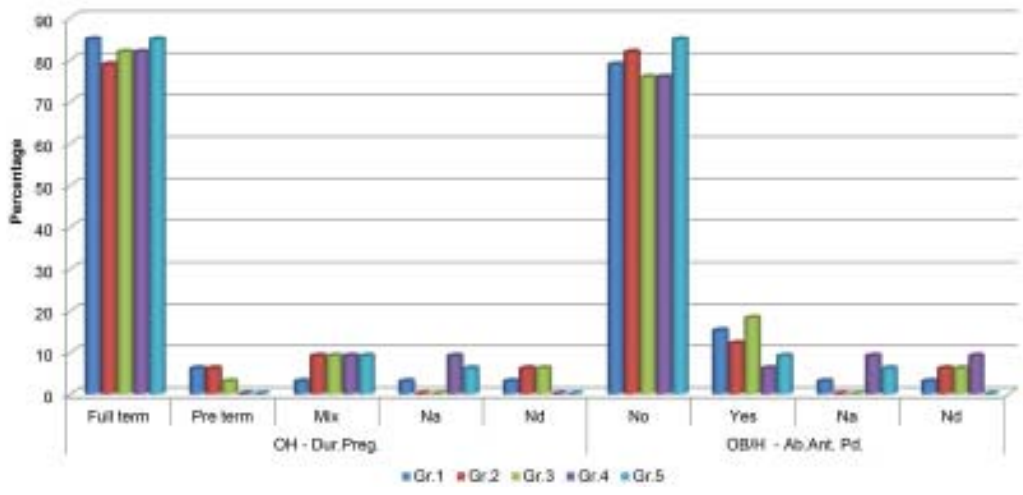

Fig. – 4.1.20 Obstetric history – Duration of pregnancy, Abnormalities in antenatal period

no abnormalities present during antenatal period, 15, 2% had abnormalities before delivery 3% were nulliparous and remaining 3% were unmarried. In group B, 81.8% had no abnormalities during antenatal period, 12.1% had abnormalities before delivery and 6.1% had nulliparous. In group C, 75.8% had no abnormalities during antenatal period, 18.2% had abnormalities before delivery and 6.1% had nulliparous. In group D, 75.8% had no abnormalities during antenatal period, 6.1% had abnormalities before delivery and 9.1% had nulliparous and unmarried respectively. In group E, 84.8% had no abnormalities during antenatal period, 9.1% had abnormalities before delivery and 6.1% had unmarried.

Obstetric history – Nature of labour, Puerperal period

Nature of labour – The table given above shows distribution of nature of labour. In group A, 45.5%, among 33 patients had underwent caesarean section, 45.5% had normal full term deliveries, 3% had both types of deliveries, 3% had nulliparous and remaining 3% had unmarried. In group B, 30.3%, had underwent caesarean section, 60.6% had normal full term deliveries, 1 patient (3%) reported of having both types of deliveries mentioned in the above table, 6.1% had nulliparous. In group C, 42.4% had underwent caesarean section and normal full term deliveries respectively, 9.1% had reported of having both types of deliveries mentioned in the above table, 6.1% had nulliparous. In group D, 24.2% had underwent caesarean section, 57.6% had normal full term deliveries, 9.1% reported of having unmarried and nulliparous respectively. In group E, 27.3% had underwent caesarean section,

63.6% had normal full term deliveries, 3% reported of having both types of deliveries mentioned in the above table, 6.1% were unmarried.

Table – 4.1.21 Obstetric history – Nature of labour, Puerperal period, Condition of baby

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Nature of labour										
Ftnd	15	45.5	20	60.6	14	42.4	19	57.6	21	63.6
Lscs	15	45.5	10	30.3	14	42.4	8	24.2	9	27.3
Mix	1	3	1	3	3	9.1	––	––	1	3
Na	1	3	––	––	––	––	3	9.1	2	6.1
Nd	1	3	2	6.1	2	6.1	3	9.1	––	––
Abnormal puerperium										
Normal	30	90.9	31	93.9	29	87.9	26	78.8	31	93.9
Abnormal	1	3	––	––	2	6.1	1	3	––	––
Na	1	3	––	––	––	––	3	9.1	2	6.1
Nd	1	3	2	6.1	2	6.1	3	9.1	––	––
Condition of baby										
Healthy	30	90.9	29	87.9	27	81.8	27	81.8	31	93.9
Unhealthy	1	3	2	6.1	4	12.1	––	––	––	––
Na	1	3	––	––	––	––	3	9.1	2	6.1
Nd	1	3	2	6.1	2	6.1	3	9.1	––	––

Nature of labour – The table given above shows distribution of nature of labour. In group A, 45.5%, among 33 patients had underwent caesarean section, 45.5% had normal full term deliveries 3% had both types of deliveries, 3% had nulliparous and remaining 3% had unmarried. In group B, 30.3%, had underwent caesarean section, 60.6% had normal full term

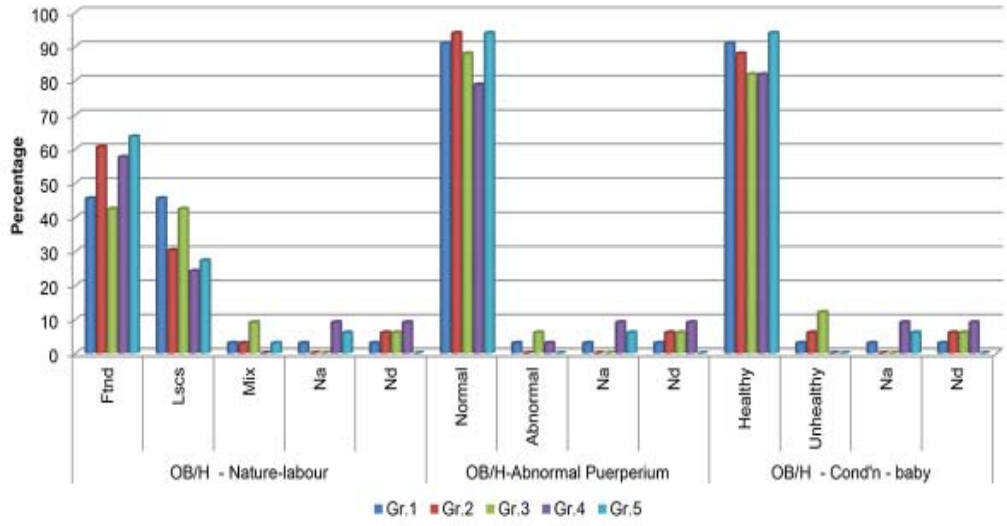

Fig. – 4.1.21 Obstetric history – Nature of labour, Puerperal period, Condition of baby

deliveries, 1 patient (3%) reported having both types of deliveries mentioned in the above table, 6.1% were nulliparous. In group C, 42.4% had underwent caesarean section and normal full term deliveries respectively, 9.1% had reported of having both types of deliveries mentioned in the above table, 6.1% had nulliparous. In group D, 24.2% had underwent caesarean section, 57.6% had normal full term deliveries, 9.1% reported of having unmarried and nulliparous respectively. In group E, 27.3% had underwent caesarean section, 63.6% had normal full term deliveries, 3% reported of having both types of deliveries mentioned in the above table, 6.1% were unmarried.

Puerperal period – The table shows distribution of condition of mother during puerperal period. In group A, 90.9% had normal puerperal period, 3% had abnormal puerperal period, 3% had nulliparous and 3% had unmarried. In group B, 93.9% had normal puerperal period and 6.1% had nulliparous. In group C, 87.9% had normal puerperal period 6.1% had

abnormal puerperium and remaining 6.1% had nulliparous. In group D, 78.8% had normal puerperal period, 3% were had abnormal puerperium and 9.1% had nulliparous and unmarried respectively. In group E, 93.9% had normal puerperal period and 6.1% were unmarried.

Condition of baby – The table shows distribution of health of the baby after immediately after delivery. In group A, 90.9% had healthy babies, 3% had unhealthy babies, 3% were nulliparous and remaining 3% were unmarried. In group B, 87.9% had healthy babies, 6.1% had unhealthy babies and remaining 6.1% had nulliparous women. In group C, 81.8% had healthy babies, 12.1% had unhealthy babies and remaining 6.1% were nulliparous women. In group D, 81.8% had healthy babies, and remaining 9.1% had each unmarried and nulliparous women. In group E, all the delivered babies (93.9)% are healthy, and remaining 6.1% had unmarried women.

Table – 4.1.22 General examination – Built

	Group A		Group B		Group C		Group D		Group E	
Body built	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Lean	6	18.2	6	18.2	2	6.1	3	9.1	3	9.1
Moderate	20	60.6	23	69.7	24	72.7	24	72.7	26	78.8
Obese	7	21.2	4	12.1	7	21.2	6	18.2	4	12.1

The table given above shows general built of the patient. In group A, 60.6% had moderate built, 21.2% had obese, and 18.2% had lean built. In group B, 69.7% had moderate built, 12.1% had obese, and 18.2% had lean built. In group C, 72.7% had moderate built, 21.2% had obese, and 6.1%

had lean built. In group D, 72.7% had moderate built, 18.2% had obese and 9.1% had lean built. In group E, 78.8% had moderate built, 12.1% had obese, and 9.1% had lean built.

Table – 4.1.23 Breast examination – Development

	Group A		Group B		Group C		Group D		Group E	
Breast	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Normal	33	100	29	87.9	31	93.9	32	97	33	100
Abnormal	––	––	4	12.1	2	6.1	1	3	––	––

The table shows distribution of breast development. 100% had normal breast development in group A and E. In group B, 87.9% and 12.1% had abnormal breast development such as inverted nipple. In group C, normal development present in 93.9% and 6.1% had abnormal breast development such as inverted nipple. In group D, 97% had normal breast development and 3% had abnormal breast development such as inverted nipple.

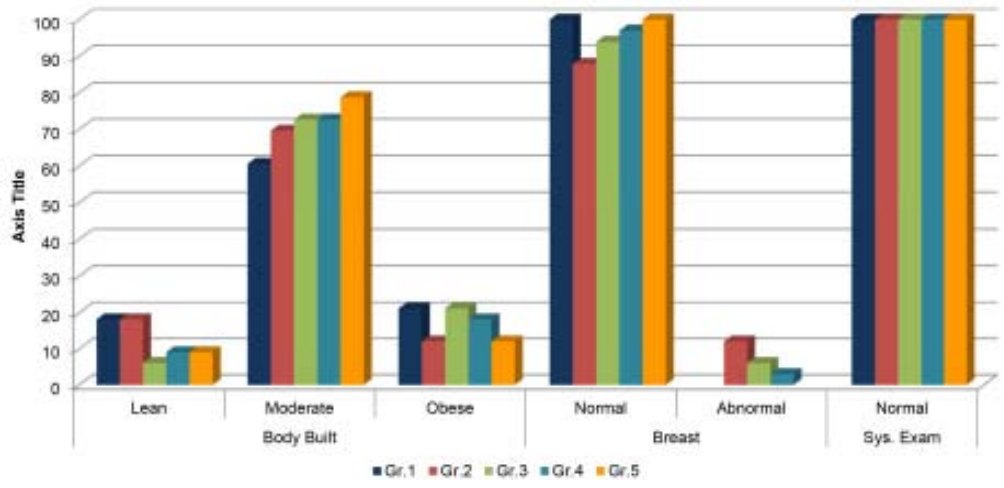

Fig. – 4.1.22 Breast examination – Development &
Fig. – 4.1.23 Systemic examination

Table – 4.1.24 Systemic examination

Systemic examination	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal	33	100	33	100	33	100	33	100	33	100

Regarding the Systemic examination findings, all the patients had normal findings in all systems in all the five groups.

Table – 4.1.25 Ashtasthana pareeksha

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Nadi										
Vata	4	12.1	5	15.2	4	12.1	5	15.2	2	6.1
Pitta	4	12.1	3	9.1	5	15.2	6	18.2	5	15.2
Kapha	3	9.1	8	24.2	3	9.1	6	18.2	9	27.3
Vp	13	39.4	11	33.3	7	21.2	4	12.1	7	21.2
Vk	7	21.2	5	15.2	8	24.2	7	21.2	7	21.2
Pk	2	6.1	1	3	6	18.2	5	15.2	3	9.1
Muthra										
Vata	7	21.2	15	45.5	5	15.2	1	3	2	6.1
Pitta	15	45.5	9	27.3	11	33.3	12	36.4	5	15.2
Kapha	11	33.3	9	27.3	14	42.4	5	15.2	11	33.3
VP	––	––	––	3	9.1	14	42.4	10	30.3	––
VK	––	––	––	––	––	1	3	5	15.2	––
PK										
Mala										
Vata	10	30.3	11	33.3	8	24.2	8	24.2	3	9.1
Pitta	16	48.5	10	30.3	11	33.3	6	18.2	8	24.2
Kapha	7	21.2	12	36.4	11	33.3	10	30.3	11	33.3
VP	––	––	––	2	6.1	4	12.1	6	18.2	––
VK	––	––	––	1	3	5	15.2	3	9.1	––
PK	––	––	––	––	––	––	––	2	6.1	––

Jihwa										
Vata	10	30.3	11	33.3	10	30.3	3	9.1	3	9.1
Pitta	12	36.4	12	36.4	7	21.2	3	9.1	8	24.2
Kapha	11	33.3	10	30.3	8	24.2	9	27.3	6	18.2
VP	––	––	––	6	18.2	11	33.3	9	27.3	––
VK	––	––	––	2	6.1	7	21.2	7	21.2	––
Sabda										
Vata	9	27.3	14	42.4	8	24.2	4	12.1	2	6.1
Pitta	18	54.5	13	39.4	12	36.4	12	36.4	9	27.3
Kapha	5	15.2	6	18.2	4	12.1	5	15.2	6	18.2
VP	––	––	––	5	15.2	4	12.1	10	30.3	––
VK	1	3	––	––	2	6.1	6	18.2	4	12.1
PK	––	––	––	2	6.1	2	6.1	2	6.1	––
Sparsa										
Vata	7	21.2	15	45.5	6	18.2	6	18.2	3	9.1
Pitta	17	51.5	9	27.3	12	36.4	8	24.2	8	24.2
Kapha	8	24.2	8	24.2	10	30.3	6	18.2	7	21.2
VP	1	3	1	3	3	9.1	4	12.1	6	18.2
VK	––	––	––	1	3	5	15.2	6	18.2	––
PK	––	––	––	1	3	4	12.1	3	9.1	––
Drik										
Vata	6	18.2	12	36.4	11	33.3	4	12.1	6	18.2
Pitta	21	63.6	10	30.3	10	30.3	8	24.2	11	33.3
Kapha	5	15.2	11	33.3	7	21.2	9	27.3	6	18.2
VP	1	3	––	––	3	9.1	5	15.2	4	12.1
VK	––	––	––	2	6.1	5	15.2	4	12.1	––
PK	––	––	––	––	––	2	6.1	2	6.1	––
Akrithi										
Vata	3	9.1	11	33.3	11	33.3	11	33.3	4	12.1
Pitta	2	6.1	10	30.3	6	18.2	9	27.3	10	30.3
Kapha	8	24.2	9	27.3	9	27.3	4	12.1	6	18.2
Vp	9	27.3	1	3	6	18.2	3	9.1	8	24.2
Vk	6	18.2	2	6.1	1	3	3	9.1	3	9.1
PK	5	15.2	––	––	––	––	3	9.1	2	6.1

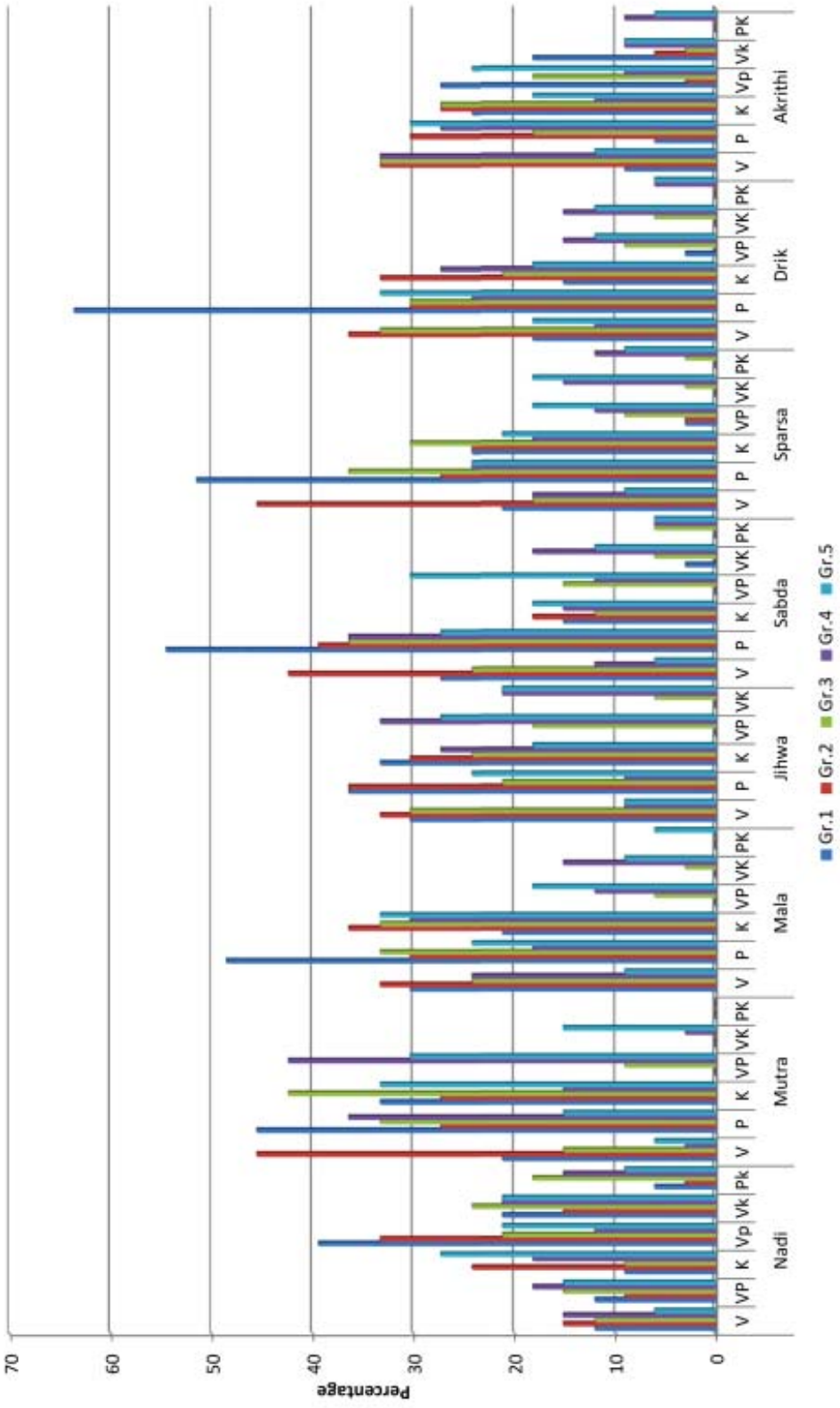

Fig. – 4.1.24 Ashtasthana pareeksha

Nadi – The table shows distribution of nadi pareeksha findings. In group A, 39.4% had Vatapittaja, 21.2% had Vatakaphaja, 12.1% each had Pittaja and Vataja, 9.1% had Kaphaja and 6.1% had Pittakaphaja nadies. In group B, 33.3% had Vatapittaja, 15.2% had Vatakaphaja, 9.1% Pittaja, 15.2% had Vataja, 24.2% had Kaphaja and 3% had Pittakaphaja nadies. In group C, 21.2% had Vatapittaja, 24.2% had Vatakaphaja, 15.2% Pittaja, 12.1% had Vataja, 9.1% had Kaphaja and 18.2% had Pittakaphaja nadies. In group D, 12.1% had Vatapittaja, 21.2% had Vatakaphaja, 18.2% Pittaja and kaphaja, 15.2% had Vataja and Pittakaphaja nadies. In group E, 21.2% had Vatapittaja and Vatakaphaja nadis respectively 15.2% Pittaja, 6.1% had Vataja, 27.3% had Kaphaja and 9.1% had Pittakaphaja nadies.

Mutra – The table given above shows distribution of mutrapareeksha. In group A, 45.5% had Pittaja, 33.3% had Kaphaja, and 21.2% had Vataja mutra. In group B, 27.3% had Pittaja, and Kaphaja moothradushti in each, and 45.5% had Vataja mutra. In group C, 33.3% had Pittaja, 42.4% had Kaphaja, 15.2% had Vataja mutra and remaining 9.1% had vatapittaja mutra. In group D, 36.4% had Pittaja, 15.2% had Kaphaja, and 3% had Vataja mutra. Majority had (42.4%) had Vatapittaja mutra and only one patient had Vatakaphaja mutra. In group E, 15.2% had Pittaja and Vatakaphaja muthra respectively, 33.3% had Kaphaja and 6.1% had Vataja mutra. Remaining 30.3% had Vatapittaja mutra.

Mala – The table shows distribution of mala pareeksha. In group A, 48.5% had Pittaja, 30.3% had Vataja and 21, 2% had Kaphaja malas. In

group B, 30.3% had Pittaja, 33.3% had Vataja and 36.4% had Kaphaja malas. In group C, 33.3% had Pittaja and Kaphaja maladushti each, 24.2% had Vataja, 6.1% had Vatapittaja and 3% had Vatakaphaja malas. In group D, 18.2% had Pittaja, 24.2% had Vataja and 30.3% had Kaphaja malas. 12.1% had Vatapittaja mala and 15.2% had Vatakaphaja mala. In group E, 24.2% had Pittaja, 9.1% had Vataja and Vatakaphaja mala, 33.3% had Kaphaja malas, 18.2% had Vatapittaja and 6.1% had Pittakaphaja mala.

Jihwa – The table given above shows distribution of Jihwa pareeksha, In group A, 36.4% were had Pittaja, 30.3% were had Vataja, and 33.3% were had Kaphaja jihwa. In group B, 36.4% were had Pittaja, 33.3% were had Vataja, and 30.3% were had Kaphaja jihwa. In group C, 21.2% were had Pittaja, 30.3% were had Vataja, 24.2% were had Kaphaja, 18.2% had Vatapittaja and 6.1% had Vatakaphaja jihwa. In group D, 9.1% were had Pittaja and vataja jihwa respectively, 27.3% were had Kaphaja jihwa. Majority had (33.3%) had Vatapittaja mutra and 21.2% had Vatakaphaja jihwa. In group E, 24.2% were had Pittaja, 9.1% were had Vataja, and 18.2% were had Kaphaja jihwa. 27.3% had Vatapittaja and 21.2% had Vatakaphaja jihwa.

Sabda – Regarding Sabda pareeksha in group A, 54.5% had Pittaja, 27.3% had Vataja, 15.2% had Kaphaja and remaining 3% had Vatakaphaja sabda. In group B, 39.4% had Pittaja, 42.4% had Vataja and 18.2% had Kaphaja sabda. In group C, 36.4% had Pittaja, 24.2% had Vataja 12.1% had Kaphaja, 15.2% had Vatapittaja and 6.1% each had Vatakaphaja and Pittakaphaja sabda. In group D, 36.4% had Pittaja, 12.1% had Vataja

and vathapittaja, 15.2% had Kaphaja sabda also. 18.2% had Vatakaphaja sabda and 6.1% had pittakaphaja sabda. In group E, 30.3% had Vatapittaja sabda, 6.1% had Vataja sabda, 27.3% had Pittaja, 18.2% had Kaphaja sabda, 12.1% had Vatakaphaja sabda and 6.1% had Pittakaphaja sabda.

Sparsa – The table shows distribution of Sparsa pareeksha. In group A, 51.5% had Pittaja, 24.2% had Kaphaja, 21.2% had Vataja and 3% had Vatapittaja sparsa. In group B, 27.3% had Pittaja, 24.2% had Kaphaja, 45.5% had Vataja and 3% had Vatapittaja sparsa. In group C, 30.3% had Kaphaja, 18.2% had Vataja, 36.4% had Pittaja, 9.1% had Vatapittaja, 3% each had Vatakaphaja and Pittakaphaja sparsa. In group D, 24.2% had Pittaja, 18.2% had Kaphaja and Vataja respectively, 12.1% had Vatapittaja and Pittakaphaja sparsa respectively and 15.2% had Vatakaphaja sparsa. In group E, 24.2% had Pittaja, 21.2% had Kaphaja, 9.1% had Vataja and Pittakaphaja sparsa respectively, 18.2% had Vatapittaja and Vatakaphaja sabda respectively.

Drik – The table given above shows distribution of Drik pareeksha. In group A, 63.6% had Pittaja, 15.2% had Kaphaja, 18.2% had Vataja and remaining 3% had Vatapittaja drik. In group B, 30.3% had Pittaja, 33.3% had Kaphaja and 36.4% had Vataja. In group C, 30.3% had Pittaja, 33.3% had Vataja and 21.2% had Kaphaja, 9.1% had Vatapittaja and remaining 6.1% had Vatakaphaja drik. In group D, 24.2% had Pittaja, 27.3% had Kaphaja and 12.1% had Vataja. 15.2% had Vatapittaja and Vatakaphaja drik and 6.1% had Pittakaphaja drik. In group E, 33.3% had Pittaja, 18.2% had Kaphaja

and Vataja respectively, 12.1% had Vatapittaja drik and Vatakaphaja drik each and 6.1% had Pittakaphaja drik.

Akrithi – The table shows distribution of Akrithi pareeksha findings in all groups. Out of 33 patients in group A, 27.3% had Vatapittaja, 24.2% had Kaphaja, 18.2% had Vatakaphaja, 15.2% had Pittakaphaja 6.1% Pittaja, and 9.1% had Vataja, akrithi. In group B, 3% had Vatapittaja, 27.3% had Kaphaja, 6.1% had Vatakaphaja, 30.3% had Pittaja and 33.3% had Vataja akrithi. In group C, 18.2% had Vatapittaja, and Pittaja respectively, 27.3% had Kaphaja, 3% had Vatakaphaja, and 33.3% had Vataja akriti. In group D, 9.1% had Vatapittaja, Vatakaphaja and Pittakaphaja respectively, 12.1% had Kaphaja, 27.3% had Pittaja and 33.3% had Vataja nadis. In group E, majority of the patients (30.3%) had Pittaja Akrithi, 12.1% had Vataja, 18.2% had Kaphaja. 24.2% had Vatapittaja, 9.1% had Vatakaphaja and 6.1% had Pittakaphaja akrithi.

Dasa vidha pareeksha

Dushya – The table shows distribution of Dushya pareeksha. In group A, 45.5% had Mamsa dushya dushti occurs and 54.5% had both Mamsa and Raktha dushti occurs. In group B, 36.4% had Mamsa dushya dushti occurs and 63.6% had both Mamsa and Raktha dushti occurs. In group C, 39.4% had Mamsa dushya dushti occurs and 60.6% had both Mamsa and Raktha dushti occurs. In group D, 48.5% had Mamsa dushya dushti occurs and 51.5% had both Mamsa and Raktha dushti occurs.

Table – 4.1.26 Dasa vidha pareeksha

	Group A		Group B		Group C		Group D		Group E	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Dushya										
Mamsa	15	45.5	12	36.4	13	39.4	16	48.5	14	42.4
Mix	18	54.5	21	63.6	20	60.6	17	51.5	19	57.6
Desa										
Jangala	8	24.2	6	18.2	9	27.3	8	24.2	12	36.4
Anupa	6	18.2	12	36.4	15	45.5	14	42.4	11	33.3
Sadharana	19	57.6	15	45.5	9	27.3	11	33.3	10	30.3
Bala										
Madhyama	16	48.5	15	45.5	13	39.4	12	36.4	12	36.4
Avara	4	12.1	4	12.1	11	33.3	11	33.3	11	33.3
Pravara	13	39.4	14	42.4	9	27.3	10	30.3	10	30.3
Kala										
Vasantha	6	18.2	2	6.1	4	12.1	3	9.1	5	15.2
Grishma	8	24.2	8	24.2	10	30.3	11	33.3	7	21.2
Sarat	6	18.2	5	15.2	5	15.2	8	24.2	6	18.2
Hemanta	6	18.2	3	9.1	5	15.2	4	12.1	5	15.2
Varsha	4	12.1	8	24.2	4	12.1	4	12.1	5	15.2
Sisira	3	9.1	7	21.2	5	15.2	3	9.1	5	15.2
Anala										
Manda	7	21.2	10	30.3	7	21.2	8	24.2	9	22.3
Teekshna	4	12.1	2	6.1	3	9.1	2	6.1	3	9.1
Sama	22	66.7	21	63.6	23	69.7	23	69.7	21	63.6
Prakrithi										
Vata	3	9.1	3	9.1	4	12.1	5	15.2	2	6.1
Pitta	1	3	2	6.1	5	15.2	6	18.2	5	15.2
Kapha	2	6.1	7	21.2	3	9.1	6	18.2	10	30.3
Vp	13	39.4	11	33.3	7	21.2	4	12.1	6	18.2
Vk	12	36.4	8	24.2	8	24.2	7	21.2	7	21.2
Pk	2	6.1	2	6.1	6	18.2	5	15.2	3	9.1

Vaya										
Madhya	33	100	33	100	33	100	33	100	33	100
Sathwa										
Madhya	15	45.5	10	30.3	13	39.4	15	45.5	17	51.5
Avara	8	24.2	11	33.3	15	45.5	10	30.3	5	15.2
Pravara	10	30.3	12	36.4	5	15.2	8	24.2	11	33.3
Satmya										
Madhya	16	48.5	21	63.6	17	51.5	11	33.3	16	48.5
Teekshna	1	3	2	6.1	5	15.2	4	12.1	3	9.1
Sadharana	16	48.5	10	30.3	11	33.3	18	54.5	14	42.4
Ahara										
Madhya	33	100	33	100	33	100	33	100	33	100

In group E, 42.4% had Mamsa dushya dushti occurs and 57.6% had both Mamsa and Raktha dushti occurs.

Desa – The table given above shows distribution of desa pareeksha. In group A, 57.6% were from Sadharana desa, 24.2% were from Jangala desa and 18.2% were from Anupa desa. In group B, 45.5% were from Sadharana desa, 18.2% were from Jangala desa and 36.4% were from Anupa desa.

In group C, 45.5% were from Anupa desa, 27.3% were each from Jangala desa and sadharana desa.

In group D, 33.3% were from Sadharana desa, 24.2% were from Jangala desa and 42.4% were from Anupa desa. In group E, 30.3% were from Sadharana desa, 36.4% were from Jangala desa and 33.3% were from Anupa desa.

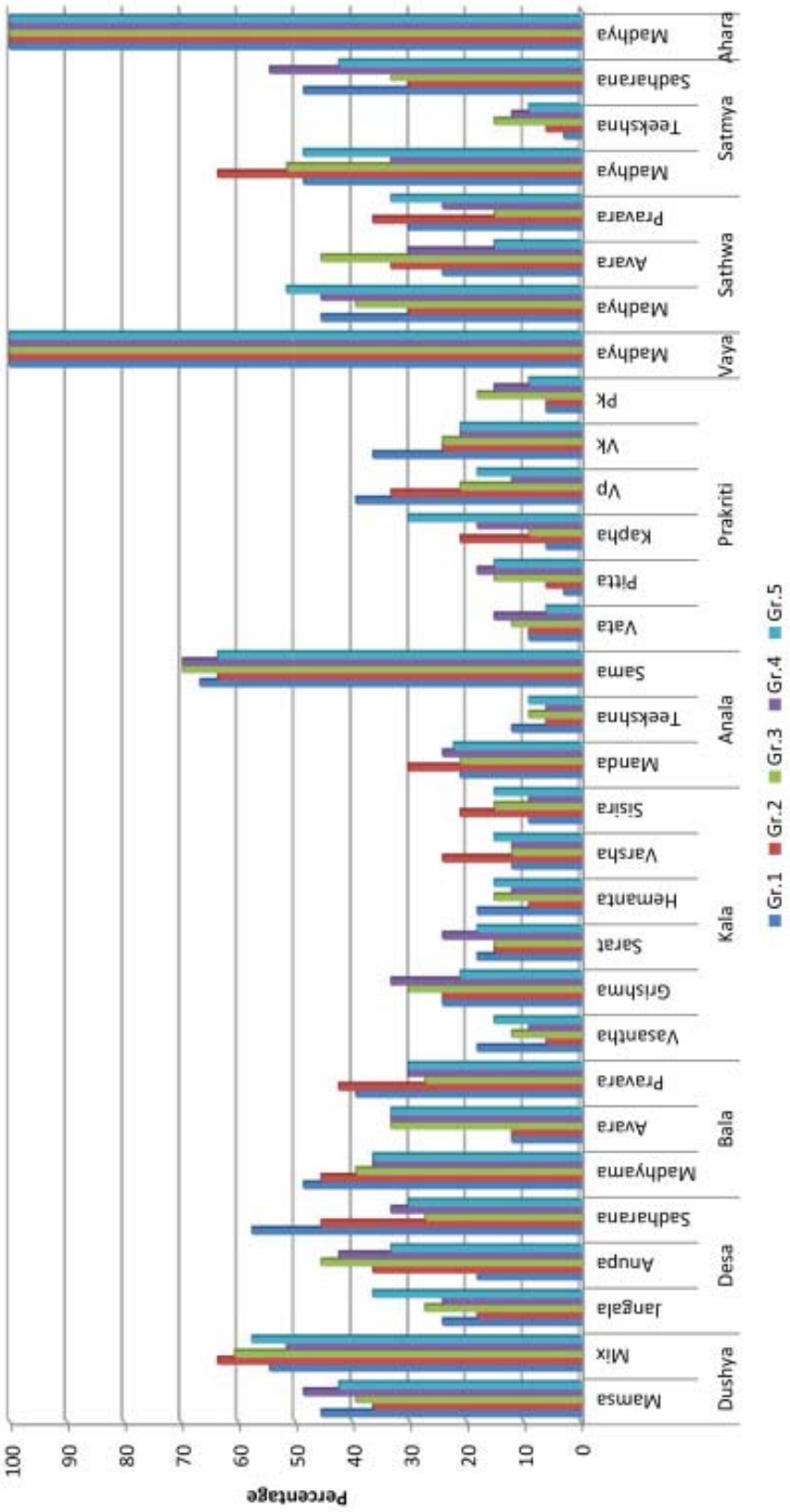

Fig. – 4.1.25 Dasa vidha pareeksha

Bala – The table shows distribution of bala pareeksha. 48.5%, out of 33 patients in group A, had madhyama bala, 39.4% had pravara bala and 12.1% had avara bala. In group B, 45.5%, had madhyama bala, 42.4% had pravara bala and 12.1% had avara bala. In group C, 39.4% had madhyama bala, 27.3% had pravara bala and 33.3% had avara bala. In group D, 36.4% had madhyama bala, 30.3% had pravara bala and 33.3% had avara bala. In group E, 36.4% had madhyama bala, 30.3% had pravara bala and 33.3% had avara bala.

Kala – The table shows distribution of evaluation of kala pareeksha. In group A 24.2% had Grishma ritu, 18.2% had Vasantha, Sarat and Hemantha rithu, 12.1 had Varsha rithu and remaining 9.1% had Sisira rithu. In group B, 24.2% had Grishma and Varsha rithus respectively, 6.1% had Vasantha, Hemantha rithu 9.1%, 15.2% Sarath ritu and remaining 21.1% had Sisira rithu. In group C, 30, 3% had Grishma ritu, 12.1% had Vasantha ritu and Varsha ritu respectively, 15.2% had Sarath, Hemantha and sisira ritu respectively. In group D, 33.3% had Grishma rithus, 9.1% had Vasantha and Sisira ritu respectively, 12.1% Hemantha and Varsha rithus, and remaining 24.2% had Sarath ritu. In group E, 21.2% had Grishma ritu 15.2% had Varsha, Sisira, Vasantha and Hemantha rithus respectively, remaining 18.2% had Sarat rthu.

Anala – The table shows distribution of Anala pareeksha. In group A, 66.7% had Samagni, 21.2% had Agnimandhya and 12.1% had Teekshnagni. In group B, 63.6% had Samagni, 30.3% had Mandagni, and 2 patients (6.1%) had Teekshnagni. In group C, 69.7% had Samagni, 21.2% had Mandagni

and 9.1% had Teekshnagni. In group D, 69.7% had Samagni, 24.2% had Mandagni and 6.1% had Teekshnagni. In group E, 63.6% had Samagni, 22.3% had Mandagni and 9.1% had Teekshnagni.

Prakrithi – According to Prakrithi pareeksha findings, in group A 39.4% had Vatapittaja, 36.4% had Vatakaphaja, 6.1% had Kaphaja and Pittakaphaja respectively, 3% Pittaja, and 9.1% had Vataja Prakrithi. In group B, 33.3% had Vatapittaja, 24.2% had Vatakaphaja, 21.2% had Kaphaja, 6.1% had Pittakaphaja and Pittja respectively, and 9.1% had Vataja Prakrithi. In group C, 21.2% had Vatapittaja, 24.2% had Vatakaphaja, 18.2% had Pittakaphaja, 15.2% had Pittja, 12.1% had Vataja prakrithi and 9.1% had Kaphaja Prakrithi. In group D, 12.1% had Vatapittaja, 21.2% had Vatakaphaja, 18.2% had Kaphaja and pittaja respectively, 15.2% had Pittakaphaja and Vataja Prakrithi. In group E, 18.2% had Vatapittaja, 21.2% had Vatakaphaja, 30.3% had Kaphaja 15.2% had Pittaja, 9.1% had Pittakaphaja and 6.1% had Vataja Prakrithi.

Vaya – According to Dasa vidha pareeksha, in all the groups 100% were had madhyama vaya.

Satwa – The table shows distribution of satwa pareeksha, in group A, 45.5% had madhyama satwa, 30.3% had pravara satwa and 24.2% had avara satwa. In group B, 30.3% had madhyama satwa, 36.4% had pravara satwa and 33.3% had avara satwa. In group C, 39.4% had madhyama satwa, 15.2% had pravara satwa and 45.5% had avara satwa. In group D, 45.5%

had madhyama satwa, 24.2% had pravara satwa and 30.3% had avara satwa. In group E, 51.5% had madhyama satwa, 33.3% had pravara satwa and 15.2% had avara satwa.

Satmya – Regarding to Satmya pareeksha in group A, 48.5% had Madhyama and Sadharana satmya while remaining 3% had Teekshna Satmya. In group B, 63.6% had Madhyama, 30.3% were Sadharana satmya and 6.1% had Teekshna Satmya. In group C, 51.5% had Madhyama, 33.3% were Sadharana satmya and 15.2% had Teekshna Satmya. In group D, 33.3% had Madhyama, 54.5% were Sadharana satmya and 12.1% had Teekshna Satmya. In group E, 48.5% had Madhyama, 42.4% were Sadharana satmya and 9.1% had Teekshna Satmya.

Ahara – Regarding to Ahara pareeksha, the table shows that 100% had madhyamahara seela in all the five groups.

Darsana Pareeksha- Yoni: Urethra, Vulva for vulvitis & Labia

Inspection : Urethra – The table shows distribution of inspection of vulva. In group A, 93.9% had normal vulva, 3% had urethral caruncle and in remaining 3%, examination was not done since they were unmarried. In group B and C, all the 33 patients (100%) had normal vulva. In group D, 90.9% had normal vulva. Darsana Pareeksha was not done in 9.1% as they were unmarried. In group E, 93.9% had normal urethra and 6.1% had unmarried.

Table – 4.1.27 Darsana Pareeksha- Yoni: Urethra, Vulva for vulvitis & Labia

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Inspection Urethra										
Normal	31	93.9	33	100	33	100	30	90.9	31	93.9
Caruncle	1	3	––	––	––	––	––	––	––	––
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Inspection Vulvitis										
Absent	31	93.9	33	100	33	100	30	90.9	31	93.9
Present	1	3	––	––	––	––	––	––	––	––
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Inspection Labia										
Normal	32	97	33	100	33	100	30	90.9	31	93.9
Nd	1	3	––	––	––	––	3	9.1	2	6.1

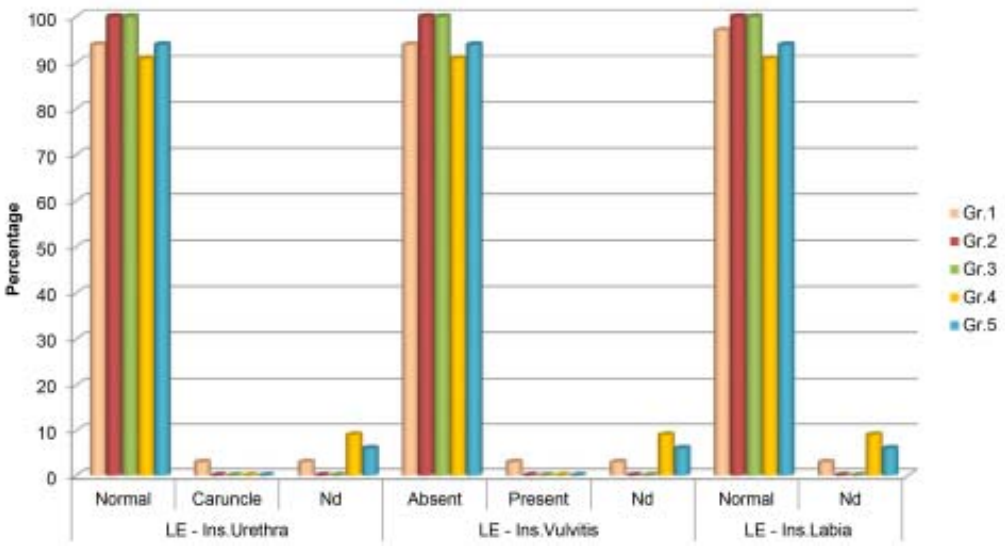

Fig. – 4.1.26 Darsana Pareeksha- Yoni: Urethra, Vulva for vulvitis & Labia

Darsana Pareeksha- Yoni: Vulva for vulvitis – The table shows distribution of inspection of vulva. In group A, 93.9% had normal vulva, 3% had vulvitis and in remaining 3%, examination was not done since they were unmarried. In group B and C, vulvitis absent for all the 33 patients (100%). In group D, 90.9% had no vulvitis. Darsana Pareeksha was not done in 9.1% as they were unmarried. In group E, 93.9% had normal vulva without vulvitis and 6.1% had unmarried.

Darsana Pareeksha- Yoni: Labia – Regarding the distribution of condition of labia, in group A, 97% had normal labia and 3%, examination was not done in 3% since they were unmarried. In group B and C, normal labia detected for all the patients (100%). In group D, 90.9% had normal labia and Darsana Pareeksha was not done in 9.1% as they were unmarried. In group E, 93.9% had normal labia and 6.1% were unmarried.

Darsana Pareeksha- Yoni: Cystocele, Rectocele, Uterine prolapse and Degree of uterine prolapse

Darsana Pareeksha- Yoni: Cystocele – The table shows the distribution of findings regarding Cystocele in all the groups. In group A, 97% had no Cystocele, while in remaining 3%, examination was not done since they were unmarried. In group B, 87.9% had no Cystocele, while in remaining 12.1% had cystocele. In group C, 81.8% had no Cystocele, while in remaining 18.2% had cystocele. In group D, 87.9% had no Cystocele and 3% had cystocele and in remaining 9.1% examination was not performed. In group E, majority of patients (78.8%) had no cystocele. 15.2% had cystocele and 6.1% were unmarried.

Table – 4.1.28 Darsana Pareeksha- Yoni: Cystocele, Rectocele, Uterine prolapse and Degree of uterine prolapse

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Ins'n - Cystocele										
Absent	32	97	29	87.9	27	81.8	29	87.9	26	78.8
Present	––	––	4	12.1	6	18.2	1	3	5	15.2
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Ins'n - Rectocele										
Absent	32	97	32	97	29	87.9	30	90.9	30	90.9
Present	––	––	1	3	4	12.1	––	––	1	3
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Ins'n - Ut.pro.										
Absent	32	97	31	93.9	31	93.9	30	90.9	31	93.9
Present	––	––	2	6.1	2	6.1	––	––	––	––
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Ins'n - Deg. Ut.pro.										
First degree	––	––	2	6.1	2	6.1	––	––	––	––
NA	32	97	31	93.9	31	93.9	30	90.9	31	93.9
Nd	1	3	––	––	––	––	3	9.1	2	6.1

Darsana Pareeksha- Yoni: Rectocele – The table shows the distribution of findings regarding Rectocele. In group A, 97% had no Rectocele, while in remaining 3%, examination was not done since they were unmarried. In group B, 97%, had no Rectocele were reported and 3%, had rectocele. In group C, 87.9%, had no Rectocele and 12.1%, had rectocele. In group D, 90.9% rectocele absent and in 9.1% examination was not done as they were

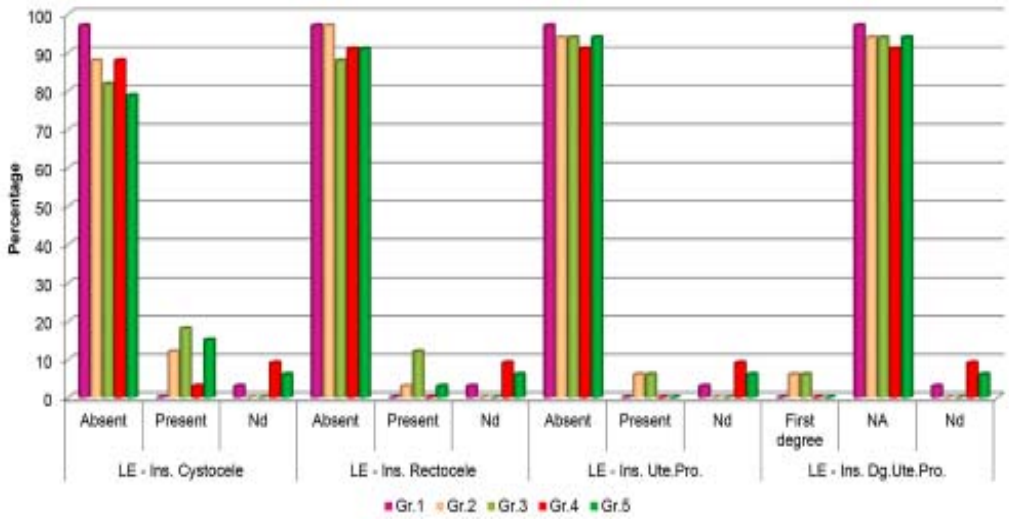

Fig. – 4.1.27 Darsana Pareeksha- Yoni: Cystocele, Rectocele, Uterine prolapse and Degree of uterine prolapse

unmarried. In group E, 90.9% had no rectocele. Only one patient (3%) had detected rectocele on examination and 6.1% were unmarried.

Darsana Pareeksha- Yoni: Uterine prolapse – The table shows the distribution of findings regarding Uterine prolapse. In group A, 97% had no uterine prolapse while in remaining 3%, examination was not done since they were unmarried. In group B and C, 93.9% had no Uterine prolapse and 6.1%, had uterine prolapse. In group D 90.9% had no Uterine prolapsed and in 9.1%, examination was not done. In group E, 93.9% had no uterine prolapse. Remaining 6.1% were unmarried.

Darsana Pareeksha- Yoni: Degree of uterine prolapse – The table shows the distribution of findings regarding degree of Uterine prolapse. In group A, 97% had no uterine prolapse while in remaining 3%, examination was not done since they were unmarried. In group B and C 93.9% had no

uterine prolapse and 6.1% had first degree descent of uterine prolapse. In group D, it is absent in all the patients who underwent examination. In 9.1%, examination was not done. In group E, all the examined patients (93.9%) had no uterine prolapse. So degree of uterine prolapse is not applicable for all the patients. Remaining 6.1% were unmarried.

Table – 4.1.29 Darsana Pareeksha – P/S examination : Yonisrava, Colour & Amount

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
P/S Vag.dis.										
Absent	15	45.5	19	57.6	16	48.5	15	45.5	18	54.5
Present	17	51.5	14	42.4	17	51.5	15	45.5	13	39.4
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Colour										
White	12	36.4	12	36.4	15	45.5	13	39.4	12	42.4
Pale yellow	4	12.1	2	6.1	1	3	2	6.1	1	9.1
Yellow	1	3	––	––	1	3	––	––	––	––
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Na	15	45.5	19	57.6	16	48.5	15	45.5	18	54.5
Amount										
Mild	5	15.2	3	9.1	9	27.3	6	18.2	5	15.2
Moderate	11	33.3	11	33.3	7	21.2	9	27.3	7	21.2
Excessive	1	3	––	––	1	3	––	––	1	3
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Na	15	45.5	19	57.6	16	48.5	15	45.5	18	54.5

P/S examination : yonisrava – The above table shows that the distribution of findings regarding yonisrava, in group A, 51.5% had yonisrava,

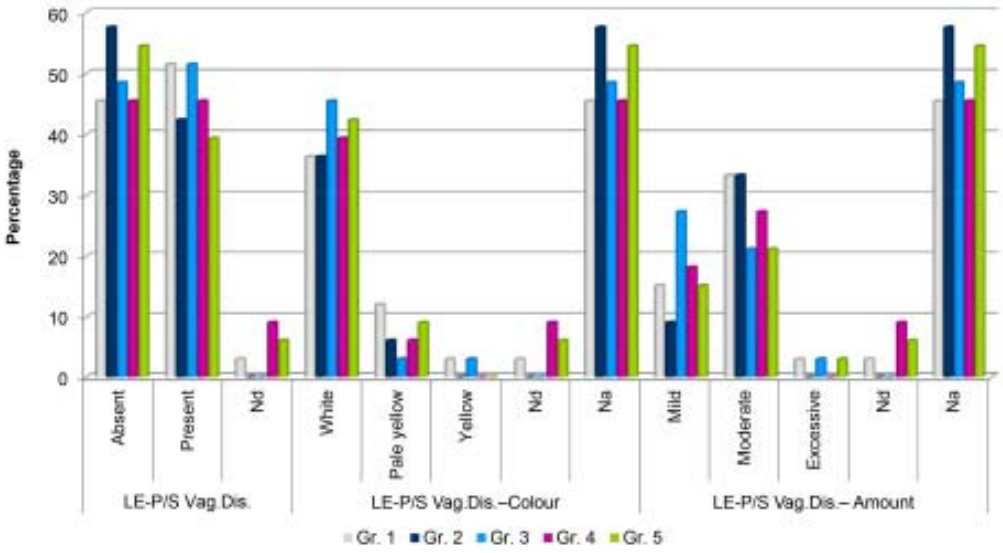

Fig. – 4.1.28 Darsana Pareeksha – P/S examination : Yonisrava, Colour & Amount

45.5% had no yonisrava and in remaining 3%, examination was not done since they were unmarried. In group B, 42.4% had yonisrava and 57.6% had no yonisrava. In group C, 51.5% had yonisrava, 48.5% had no yonisrava. In group D, 45.5% had yonisrava and no yonisrava respectively. Examination was not done for 9.1% ladies as they were unmarried. In group E, 39.4% had yonisrava, 54.5% had no yonisrava and remaining 6.1% were unmarried.

P/S examination : Colour of yonisrava – The table shows the distribution of findings regarding colour of yonisrava. in group A, 36.4% had white yonisrava, 12.1% had pale yellow discharge, 3% had yellow discharge, 45.5% had no yonisrava and in remaining 3%, examination was not done since she was unmarried. In group B, 36.4% had white yonisrava, 6.1% had pale yellow discharge and 57.6% had no yonisrava. In group C, 45.5% had white yonisrava, 3% each had pale yellow, yellow discharge and 48.5% had no

yonisrava. In group D, 39.4% had white yonisrava, 6.1% had pale yellow discharge and 45.5% had no yonisrava. remaining 9.1% were unmarried so examination was not done. In group E, 42.4% had white yonisrava, 9.1% had pale yellow discharge, and in 54.5% no yonisrava. 6.1% were unmarried.

P/S examination : Amount of yonisrava – The examination shows that the distribution of findings regarding amount of yonisrava, In group A, 33.3% had moderate yonisrava, 15.2% had mild yonisrava, 3% had excessive yonisrava, 45.5% had no yonisrava and in remaining 3%, examination was not done since she was unmarried. 33.3% had moderate yonisrava, In group B, 9.1% had mild yonisrava and 57.6% had no yonisrava. In group C, 21.2% had moderate yonisrava, 27.3% had mild yonisrava, 3% had excessive yonisrava and 48.5% had no yonisrava. In group D, 27.3% had moderate yonisrava, 18.2% had mild yonisrava and 45.5% had no yonisrava. in 9.1% examination was not done. In group E, 21.2% had moderate yonisrava, 15.2% had mild yonisrava, 3% had excessive yonisrava and in remaining 54.5% had no yonisrava. Examination was not done in 6.1% cases.

Table – 4.1.30 Darsana Pareeksha – P/S examination : Consistency of yonisrava, Vaginitis and Abnormal growth

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Consistency										
Thin	––	––	––	––	1	3	1	3	1	3
Curdy	5	15.2	3	9.1	1	3	6	18.2	4	12.1
Watery	4	12.1	4	12.1	6	18.2	3	9.1	5	15.2
Mucoid	8	24.2	7	21.2	9	27.3	5	15.2	3	9.1
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Na	15	45.5	19	57.6	16	48.5	15	45.5	18	54.5
Vaginitis										
Absent	26	78.8	27	81.8	23	69.7	21	63.6	26	72.7
Present	6	18.2	6	18.2	10	30.3	9	27.3	5	27.3
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Abnormal growth										
Absent	32	97	33	100	32	97	30	90.9	31	93.9
Nd	1	3	––	––	1	3	3	9.1	2	6.1

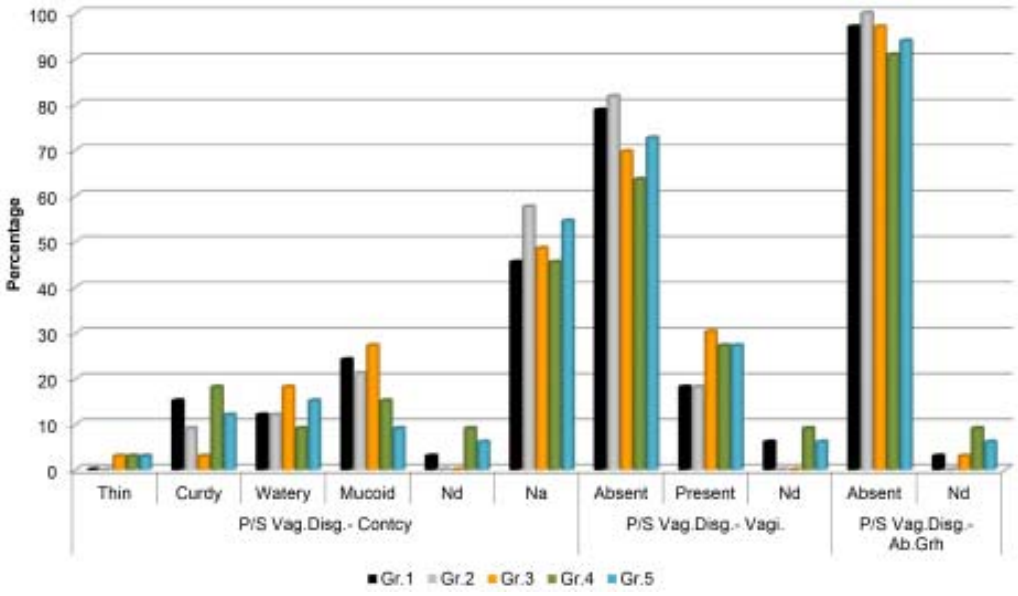

Fig. – 4.1.29 Darsana Pareeksha – P/S examination : Consistency of yonisrava, Vaginitis and Abnormal growth

P/S examination : Consistency of yonisrava – The table shows the distribution of findings regarding the consistency of yonisrava, in group A, 24.2% had mucoid yonisrava, 15.2% had curdy yonisrava, 12.1% had watery yonisrava, 45.5% had no yonisrava and in remaining 3%, examination was not done since they were unmarried. In group B, 21.2% had mucoid yonisrava, 9.1% had curdy yonisrava, 12.1% had watery yonisrava and 57.6% had no yonisrava.

In group C, 27.3% had mucoid yonisrava, 3% each had curdy yonisrava and thin yonisrava, 18.2% had watery yonisrava and 48.5% had no yonisrava. In group D, 15.2% had mucoid yonisrava, 18.2% had curdy yonisrava, 9.1% had watery yonisrava, 3% had thin discharge and 45.5% had no yonisrava. In remaining 9.1% examination was not done. In group E, 9.1% had mucoid yonisrava, 12.1% had curdy yonisrava respectively, 15.2% had watery yonisrava, 3% had thin yonisrava and 54.5% had no yonisrava. remaining 6.1% were unmarried.

P/S examination : Vaginitis – Regarding Vaginitis, in group A, 18.2% had vaginitis, 78.8% had no vaginitis while in remaining 3%, examination was not done since they were unmarried. In group B, 18.2% had vaginitis and 81.8% had no vaginitis. In group C, 30.3% had vaginitis and 69.7% had no vaginitis.

In group D, 27.3% had vaginitis and 63.6% had no vaginitis. In remaining 9.1% examination was not done. In group E, 27.3% had vaginitis and 72.7% had no vaginitis. Examination was not done in 6.1% cases.

P/S examination : Abnormal growth – The table shows that the abnormal growth in the vagina. In group A, 97% had no abnormal growth in the vagina while in remaining 3%, examination was not done since they were unmarried. In group B, all the patients (100%) found out of not having abnormal growth in the vagina. In group C, 97% had reported of not having abnormal growth in the vagina and only 1 patient (3%) had abnormal growth in the vagina. In group D and E, all the patients underwent examination (90.9%) had no abnormal growth in the vagina.

Table – 4.1.31 Darsana Pareeksha – P/S examination : Position of Cervix, Size and Cervical OS

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
P/S Position of cervix										
Middle	3	9.1	1	3	––	––	1	3	2	6.1
Anterior	7	21.2	8	24.2	9	27.3	8	24.2	8	24.2
Posterior	22	66.7	24	72.7	24	72.7	21	63.6	21	63.6
Nd	1	3	––	––	––	––	3	9.1	2	6.1
P/S Size of cervix										
Normal	26	78.8	32	97	31	93.9	29	87.9	31	93.9
Hypoplastic	1	3	––	––	––	––	––	––	––	––
Hyperplastic	5	15.2	1	3	2	6.1	1	3	––	––
Nd	1	3	––	––	––	––	3	9.1	2	6.1
P/S Cervical os										
Nulliparous	16	48.5	12	36.4	16	48.5	11	33.3	9	27.3
Parous	16	48.5	23	69.7	17	51.5	19	57.6	22	66.7
Nd	1	3	––	––	––	––	3	9.1	2	6.1

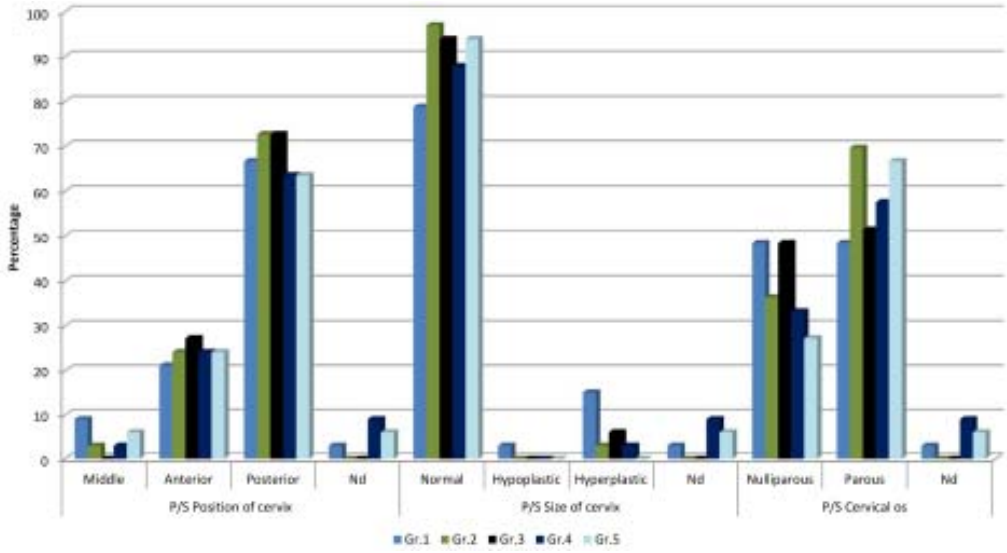

Fig. – 4.1.30 Darsana Pareeksha – P/S examination : Position of Cervix, Size and Cervical OS

P/S examination : Position of cervix – Table shows the distribution of findings regarding the position of cervix. In group A, 66.7% had posteriorly situated cervix, 21.2% had anteriorly situated cervix, 9.1% had mid positioned cervix, and in remaining 3%, examination was not done. In group B, 72.7% had posteriorly situated cervix, 24.2% had anteriorly situated cervix, 3% had mid positioned cervix. In group C, 72.7% had posteriorly situated cervix and 27.3% had anteriorly situated cervix. In group D, 63.6% had posteriorly situated cervix, 24.2% had anteriorly situated cervix, 3% had mid positioned cervix. In 9.1% examination was not done. In group E, 63.6% had posteriorly situated cervix, 24.2% had anteriorly situated cervix and 6.1% had mid positioned cervix. Unmarried ladies were 6.1%.

P/S examination : Size of cervix – Regarding the size of cervix, in group A, 78.8% had normal cervix, 15.2% had hyperplastic cervix, 3% had hypoplastic cervix, and in 3%, examination was not done. In group B, 97%

had normal cervix and 3% had hyperplastic cervix. In group C, 93.9% had normal cervix and 6.1% had hyperplastic cervix. In group D, 87.9% had normal cervix and 3% had hyperplastic cervix. Examination was not done in 9.1%. In group E, 93.9% had normal cervix and 6.1% had unmarried.

P/S examination : Cervical os – According the shape of external os of cervix, in group A, 48.5% were had nulliparous cervix, and parous cervix each, while in 3%, examination was not done. In group B, 36.4% were had nulliparous cervix and 69.7% had parous cervix. In group C, 48.5% were had nulliparous cervix and 51.5% had parous cervix. In group D, 33.3% were had nulliparous cervix and 57.6% had parous cervix. In 9.1% examination was not done. In group E, 27.3% were had nulliparous cervix and 66.7% had parous cervix.6.1% were unmarried.

Table – 4.1.32 Darsana Pareeksha – P/S examination : Cervicitis & Nature

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Cervicitis										
Absent	27	81.8	27	81.8	26	78.8	27	81.8	31	93.9
Present	5	15.2	6	18.2	7	21.2	3	9.1	––	––
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Nature of cervicitis										
Acute	4	12.1	2	6.1	5	15.2	2	6.1	––	––
Chronic	1	3	4	12.1	2	6.1	1	3	––	––
Nd	1	6.1	––	––	––	––	3	9.1	2	6.1
Na	27	81.8	27	81.8	26	78.8	27	81.8	31	93.9

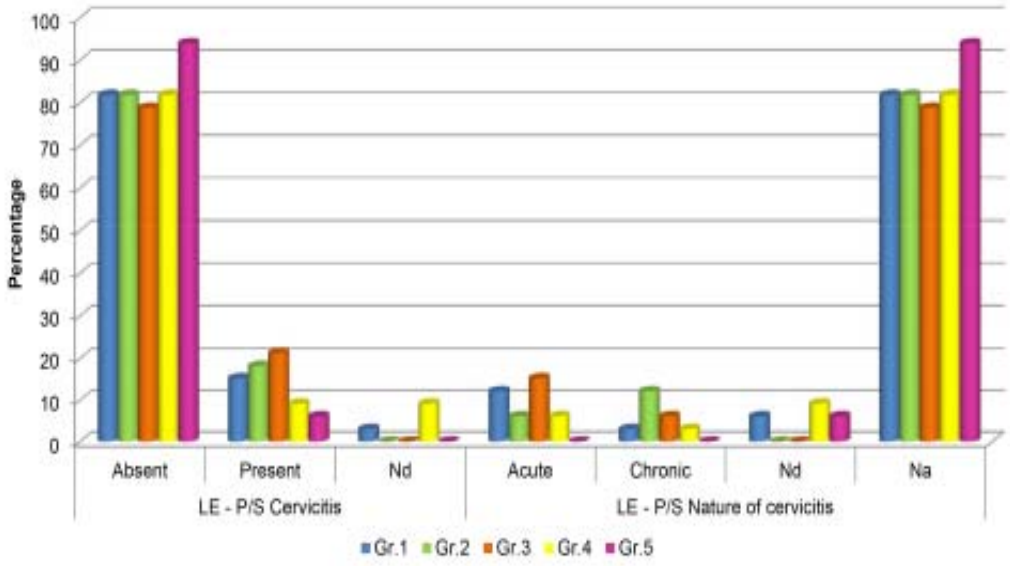

Fig. – 4.1.31 Darsana Pareeksha – P/S examination : Cervicitis & Nature

P/S examination : Cervicitis – Regarding Cervicitis, in group A, the most of the patients (81.8%) had no cervicitis, 15.2% had cervicitis while in remaining 3%, examination was not done since they were unmarried. In group B, 81.8% had no cervicitis and only 18.2% had seen cervicitis on examination. In group C, 78.8% had no cervicitis and 21.2% had seen cervicitis. In group D, cervicitis absent for 81.8% and 9.1% had seen cervicitis on examination. In remaining 9.1% examination was not done. In group E, all the patients (93.9%) who underwent examination were not having cervicitis.. 6.1% were unmarried.

P/S examination : Nature of cervicitis – Regarding the nature of cervicitis, in group A 12.1% had Acute cervicitis, 3% had Chronic cervicitis, 81.8% had no cervicitis and in 3%, examination was not done. In group B, 6.1% had Acute cervicitis, 12.1% had Chronic cervicitis and 81.8% had no

cervicitis. In group C, 15.2% had Acute cervicitis, 6.1% had Chronic cervicitis and 78.8% had no cervicitis. In group D, 6.1% had Acute cervicitis, 3% had Chronic cervicitis and 81.8% had no cervicitis. In 9.1% examination was not done. In group E, cervicitis absent for all the examined patients (93.9%).

Table – 4.1.33 Darsana Pareeksha–P/S examination : Cervical erosion, Site, Degree and Abnormal growth

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Cervical erosion										
Absent	30	90.9	25	75.8	28	84.8	27	81.8	26	78.8
Present	2	6.1	8	24.2	5	15.2	3	9.1	5	15.2
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Cervical erosion site										
Upper	1	3	5	15.2	3	9.1	1	3	4	12.1
Lower	1	3	1	3	1	3	2	6.1	1	3
All around	––	––	2	6.1	1	3	––	––	––	––
Nd	1	3	––	––	––	––	3	9.1	2	6.1
Na	30	90.9	25	75.8	28	84.8	27	81.8	26	78.8
Cervical erosion – degree										
Mild	1	3	4	12.1	3	9.1	2	6.1	2	6.1
Moderate	1	3	4	12.1	2	6.1	1	3	3	9.1
Na	30	90.9	25	78.8	28	84.8	27	81.8	26	78.8
Nd1	3	––	––	––	––	3	9.1	2	6.1	––
Cervical abnormal growth										
Absent	32	97	29	87.9	33	100	30	90.9	31	93.9
Polyp	––	––	4	12.1	––	––	––	––	––	––
Nd1	3	––	––	––	––	3	9.1	2	6.1	––

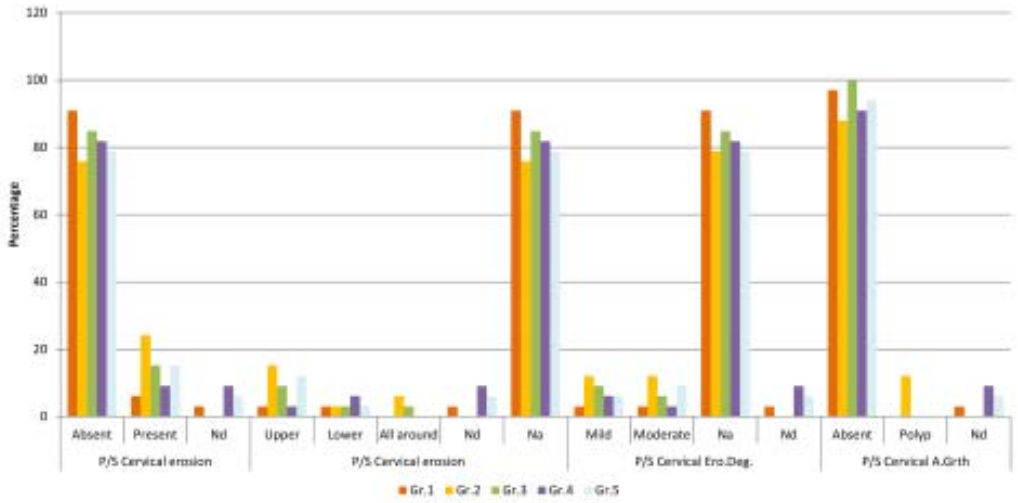

Fig. – 4.1.32 Darsana Pareeksha–P/S examination : Cervical erosion, Site, Degree and Abnormal growth

P/S examination : Cervical erosion – The table shows that the regarding Cervical erosion, in group A, 90.9% had no Cervical erosion, 6.1% had Cervical erosion and in remaining 3%, examination was not done. In group B, 75.8% had no Cervical erosion and 24.2% had Cervical erosion. In group C, 84.8% had no Cervical erosion and 15.2% had Cervical erosion. In group D, 81.8% had no Cervical erosion and 9.1% had Cervical erosion. Examination was not done in remaining 9.1% as they were unmarried. In group E, 78.8% had no Cervical erosion and 15.2% had Cervical erosion. Remaining 6.1% were unmarried.

P/S examination : Cervical erosion site – Regarding the position of Cervical erosion, 3% of patients had cervical erosion in the upper lip and lower lip respectively, 90.9% had no Cervical erosion and 3%, examination was not done. In group B, 15.2% of patients had cervical erosion in the upper lip, 3% had in lower lip, 75.8% had no Cervical erosion and in remaining 6.1%, cervical erosion present all around the external os of the cervix. In

group C, 9.1% of patients had cervical erosion in the upper lip, 3% had in lower lip and all around the cervix respectively, 84.8% had no Cervical erosion. In group D, 3% of patients had cervical erosion in the upper lip, 6.1% had in lower lip, 81.8% had no Cervical erosion and examination was not done in remaining 9.1%. In group E, 12.1% of patients had cervical erosion in the upper lip, 3% had in the lower lip and 78.8% had no Cervical erosion. Remaining 6.1% were unmarried.

P/S examination : Cervical erosion degree – The findings regarding the degree of Cervical erosion, in group A, 3% had mild degree of cervical erosion, 3% had moderate degree of cervical erosion, 90.9% had no Cervical erosion and in 3% examination was not done since she was unmarried. In group B, 12.1% had mild degree of cervical erosion, 12.1% had moderate degree of cervical erosion and 78.8% had no Cervical erosion.

In group C, 9.1% had mild degree of cervical erosion, 6.1% had moderate degree of cervical erosion and 84.8% had no Cervical erosion. In group D, 6.1% had mild degree of cervical erosion, 3% had severe degree of cervical erosion and 81.8% had no Cervical erosion. In 9.1% examination was not done. In group E, 9.1% had moderate degree of cervical erosion, 6.1% had mild degree of cervical erosion and 78..8% had no Cervical erosion. Remaining 6.1% were unmarried.

P/S examination : Abnormal growth – Regarding the Abnormal growth in the cervix, all the patients examined (97%) had no abnormal growth in the cervix. 3% were unmarried so examination was not done. In group B,

87.9% had no abnormal growth in the cervix and 12.1% had cervical polyp. In group C, nobody had any abnormal cervical growth found on examination. In group D, 90.9% had no abnormal growth in the cervix. In 9.1% examination was not done. In group E, all the patients who underwent examination had no abnormal growth in the cervix. Examination was not done in 6.1% patients.

Table – 4.1.34 Sparsa Pareeksha – P/V examination Garbhasaya – Size, Direction, Mobility, Consistency and Abnormal growth

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
P/V Size of Garbhasaya										
Bulky	29	87.9	28	84.8	32	97	30	90.9	31	93.9
Normal	3	9.1	5	24.2	1	3	--	--	--	--
Nd	3	--	--	--	--	3	9.1	2	6.1	
P/V Direction of Garbhasaya										
Anteverted	24	72.7	25	75.8	25	75.8	22	66.7	23	69.7
Retroverted	8	24.2	8	24.2	8	24.2	8	24.2	8	24.2
Nd	3	--	--	--	--	3	9.1	2	6.1	--
P/V Mobility of Garbhasaya										
Freely mobile	32	97	33	100	33	100	30	90.9	31	93.9
Nd	3	--	--	--	--	3	9.1	2	6.1	--
P/V Consistency of Garbhasaya										
Normal	31	93.9	33	100	33	100	30	90.9	31	93.9
Hard	1	3	--	--	--	--	--	--	--	--
Nd	3	--	--	--	--	3	9.1	2	6.1	--
P/V Abnormal growth										
Absent	32	97	33	100	33	100	30	90.9	31	93.9
Nd	3	--	--	--	--	3	9.1	2	6.1	--

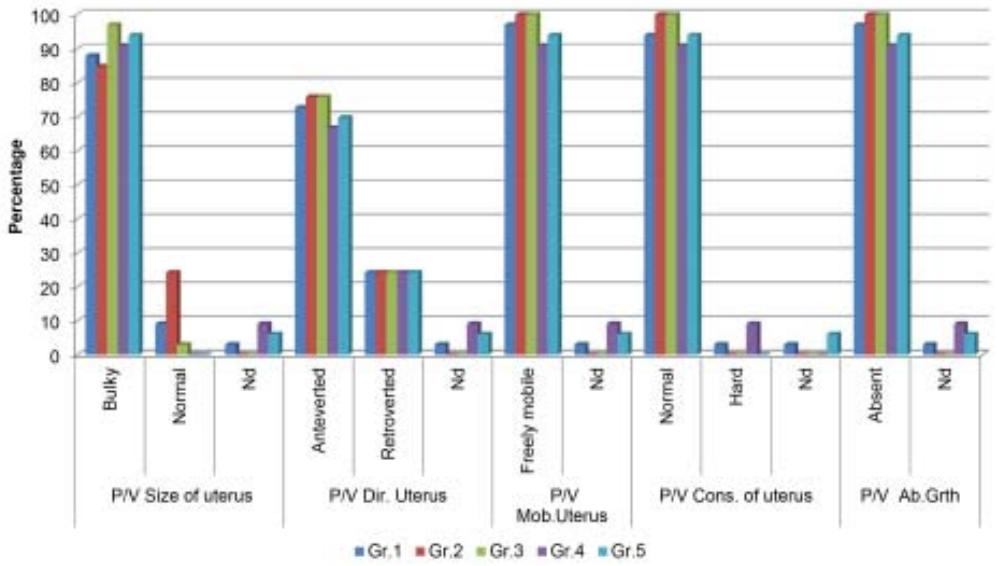

Fig. – 4.1.33 Sparsa Pareeksha – P/V examination Garbhasaya – Size, Direction, Mobility, Consistency and Abnormal growth

P/V examination : Size of Garbhasaya – According to the size of the Garbhasaya, in group A, the most of the patients (87.9%) had bulky Garbhasaya, 9.1% had normal sized Garbhasaya and examination was not done (3%) since they were unmarried. In group B, 84.8% had bulky Garbhasaya and 15.2% had normal sized Garbhasaya. In group C, all the patients who underwent examination (97%) had bulky Garbhasaya and 3% had normal sized garbhasaya. In group D, 90.9% had bulky garbhasaya and in 9.1%, examination was not done. In group E, 93.9% had bulky garbhasaya and 6.1% were unmarried.

P/V examination : Direction of garbhasaya – The table shows that the direction of the Garbhasaya, in group A, 72.7% had anteverted garbhasaya, 24.2% had retroverted garbhasaya and examination was not done in remaining

3%. In group B and C 75.8% had anteverted garbhasaya and 24.2% had retroverted garbhasaya. In group D, 66.7% had anteverted garbhasaya and 24.2% had retroverted garbhasaya. Examination was not done in 9.1% patients. In group E, 69.7% had anteverted garbhasaya and 24.2% had retroverted garbhasaya. In remaining 6.1% examination was not done.

P/V examination : Mobility of garbhasaya – The table given above shows the distribution of findings regarding the mobility of the Garbhasaya. In all the five groups, all the patients underwent P/V examination had freely mobile garbhasaya. In group A, 3%, in group D, 9.1% and in group E, 6.1% were unmarried. So examination was not done.

P/V examination : Consistency of garbhasaya – Regarding the consistency of the Garbhasaya, in group A, majority of patients (93.9%) had normal consistency, 3% had hard on palpation of garbhasaya and remaining 3%, examination was not done. In group B, C, D, & E all the patients who underwent P/V examination had normal consistency to the garbhasaya. In group D, 9.1% and in group E, 6.1% were unmarried.

P/V examination : Abnormal growth – The table shows that regarding abnormal growth in the garbhasaya other than fibroid, in group A, B, C, D & E, all the examined patients had no abnormal growth in the garbhasaya. Examination was not done for 3% in group A, 6.1% in group D, and 9.1% in group E since they were unmarried.

Table – 4.1.35 Follow up – Raktasrava and Amount of Raktasrava

Follow Up	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Raktasrava										
Excessive	3	9.1	6	18.2	8	24.2	5	15.2	6	18.2
Prolonged	3	9.1	2	6.1	3	9.1	4	12.1	4	12.1
Frequent	2	6.1	--	--	--	--	1	3	--	--
Scanty	2	6.1	2	6.1	1	3	3	9.1	--	--
Mix	3	9.1	6	18.2	12	36.4	5	15.2	6	18.2
Normal	17	51.5	17	51.5	9	27.3	15	45.5	17	51.5
Na	3	9.1	--	--	--	--	--	--	--	--
Raktasrava- Amount										
Scanty	2	6.1	2	6.1	1	3	2	6.1	1	3
Moderate	24	72.8	25	75.8	23	69.7	27	81.8	22	66.7
Excessive	4	12.1	6	18.2	9	27.3	4	12.1	10	30.3
Na	3	9.1	--	--	--	--	--	--	--	--

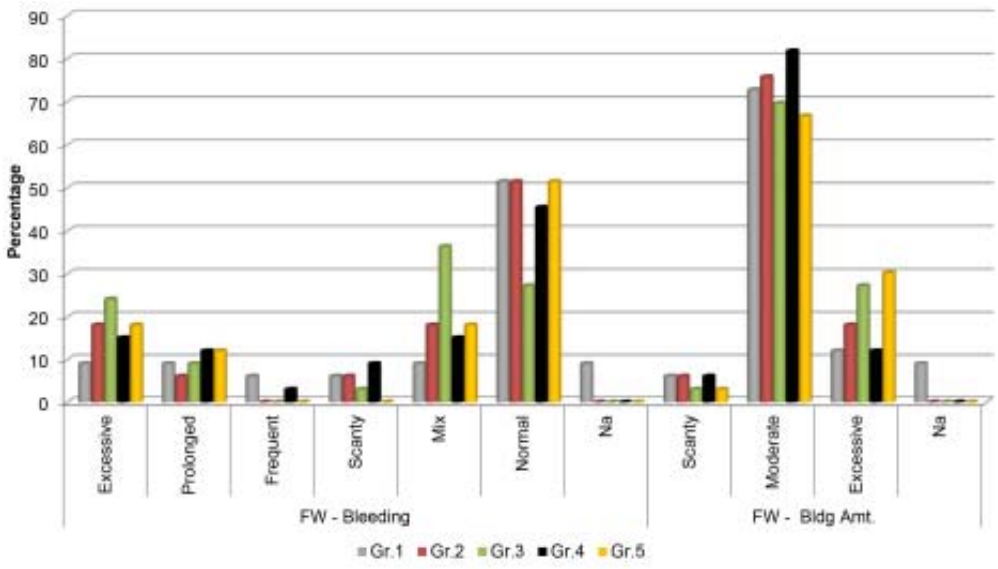

Fig. – 4.1.34 Follow up – Raktasrava and Amount of Raktasrava

Raktasrava – According to the artava raktasrava during follow up period, out of 33 patients 51.5% had normal raktasrava, 9.1% had atya artava and dheerghakala anubandha raktasrava respectively, 6.1% had frequent and scanty raktasrava respectively 9.1% had combination of raktasrava types given in the table and 9.1% had attained rajonivartti or absence of artava during this period. In group B, 51.5% had normal raktasrava, 6.1% had deerghakala anubandha and scanty raktasrava respectively, 18.2% had excessive raktasrava and 18.2% had combination of raktasrava types given in the table. In group C, 27.3% had normal raktasrava, 9.1% had deerghakala anubandha 3% had scanty raktasrava, 24.2% had atya artava and 36.4% had combination of raktasrava types given in the table. In group D, 45.5% had normal raktasrava, 12.1% had deerghakala anubandha, 9.1% had scanty raktasrava, 3% had frequent raktasrava, 15.2% had atya artava and 15.2% had combination of raktasrava types given in the table. In group E, 51.5% had normal raktasrava, 12.1% had deerghakala anubandha, 18.2% had atya artava and in remaining 18.2% had combination of raktasrava types given in the table.

Amount – The above table shows that the amount of artava rakta during follow up period, in group A, the most of the patients (72.8%) were had moderate raktasrava, 12.1% had excessive raktasrava, 6.1% had scanty raktasrava and 9.1% had attained rajonivartti or absence of artava during this period. In group B, most of the patients (75.8%) were had moderate amount of raktasrava, 18.2% had excessive raktasrava and 6.1% had scanty raktasrava. In group C, 69.7% were had moderate amount of raktasrava, 27.3% had excessive raktasrava and 3% had scanty raktasrava. In group D, 81.8% were had moderate amount of raktasrava, 12.1% had excessive raktasrava and 6.1% had scanty raktasrava. In group E, 66.7% were had moderate amount of raktasrava, 30.3% had excessive raktasrava and 3% had scanty raktasrava.

Table – 4.1.36 Follow up – Artava – Duration, Interval & Pain - Vastisula

	Group A		Group B		Group C		Group D		Group E	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Artava - Duration										
<3 days	3	9.1	3	9.1	2	6.1	1	3	2	6.1
4–5 days	18	54.5	14	42.4	1	3	20	60.6	3	9.1
5–6 days	5	15.2	8	24.2	20	60.6	7	21.2	20	60.6
7–8 days	1	3	5	15.2	6	18.2	2	6.1	7	21.2
>9 days	3	9.1	3	9.1	4	12.1	3	9.1	1	3
NA	3	9.1								
Artava - Interval										
< 20 days	2	6.1					4	12.1	2	6.1
20–25 days	6	18.2	3	9.1	5	15.2			1	3
25–30 days	16	48.5	26	78.8	21	63.6	24	72.7	27	81.8
30–35 days	5	15.2	4	12.1	7	21.2	5	15.2	3	9.1
> 35 days	1	3								
NA	3	9.1								
Artavasula										
Absent	10	30.3	18	54.5	18	54.5	18	54.5	17	51.5
Mild	12	36.4	10	30.3	10	30.3	10	30.3	9	27.3
Moderate	5	15.2	3	9.1	3	9.1	5	15.2	6	18.2
Severe	3	9.1	2	6.1	2	6.1			1	3
NA	3	9.1								
Vastisula										
Absent	25	75.8	25	75.8	25	75.8	31	93.9	29	87.9
Present	8	24.2	8	24.2	8	24.2	2	6.1	4	12.1

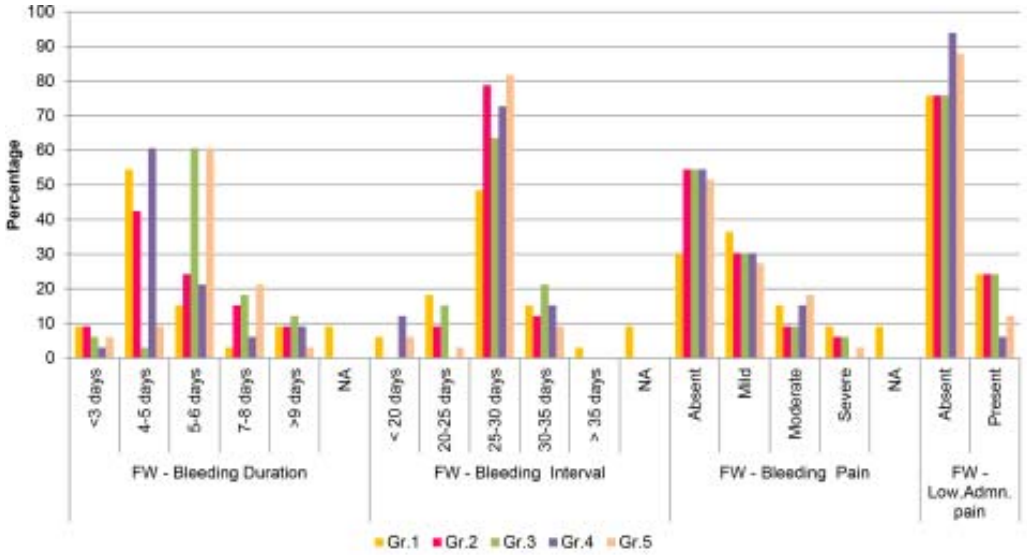

Fig. – 4.1.35 Follow up – Artava – Duration, Interval & Pain - Vastisula

Raktasravakala (Duration) – The given table shows that the duration of artava raktasrava during follow up period, in group A, 54.5% were had 4–5days raktasrava, 15.2% had 5–6days raktasrava, 3% had 7–8days raktasrava, 9.1% had <3days raktasrava 9.1% had >9days raktasrava and 9.1% had attained rajonivartti or absence of artava during this period. In group B, 42.4% were had 4–5days raktasrava, 24.2% had 5–6days raktasrava, 15.2% had 7–8 days raktasrava and 9.1% had >9days raktasrava <3days raktasrava respectively. In group C, 3% were had 4–5days raktasrava, 60.6% had 5–6days raktasrava, 18.2% had 7–8 days raktasrava and 12.1% had >9days raktasrava and 6.1% had <3days raktasrava. In group D, 60.6% were had 4–5days raktasrava, 21.2% had 5–6days, 6.1% had 7–8 days raktasrava, <3 days raktasrava present for 3% and >9days raktasrava reported for 9.1% patients. In group E, 9.1% were had 4–5days raktasrava, 60.6% had 5–6days raktasrava, 21.2% had 7–8 days raktasrava, 3% had >9days raktasrava respectively and 6.1% patient had <3 days raktasrava.

Interval – Regarding the interval of artava artava raktasrava during follow up period, in group A, 48.5% had 25–30days artava raktasrava , 15.2% had 30–35days artava raktasrava , 18.2% had 20–25days artava raktasrava , 6.1% had <20days artava raktasrava and 9.1% had attained rajonivartti or absence of artava during this period. In group B, 78.8% had 25–30days artava raktasrava, 12.1% had 30–35days artava raktasrava and 9.1% had 20–25days artava raktasrava . In group C, 63.6% had 25–30days artava raktasrava, 21.2% had 30–35days artava raktasrava and 15.2% had 20–25days artava raktasrava . In group D, 72.7% had 25–30 days artava raktasrava , 15.2% had 30–35 days artava raktasrava and 12.1% had <20days artava raktasrava. In group E, 81.8% had 25–30days artava raktasrava, 9.1% had 30–35days artava raktasrava, 3% had 20–25days artava raktasrava and 6.1% had <20days artava raktasrava .

Artavasula – The table given above shows the distribution of findings regarding pain during artava raktasrava on follow up period. In group A, 36.4% had mild pain during artava, 30.3% had no pain during artava, 15.2% had moderate pain during artava, 9.1% had severe pain during artava and 9.1% had attained rajonivartti or absence of artava during this period. In group B and C, 30.3% had mild pain during artava, 54.5% had no pain during artava, 9.1% had moderate pain during artava and remaining 6.1% had severe pain during artava. In group D, 30.3% had mild pain during artava, 54.5% had no pain during artava and 15.2% had moderate pain during artava. In group E, 27.3% had mild pain during artava, 51.5% had no pain during artava, 18.2% had moderate pain during artava and remaining 3% had severe pain during artava.

Vastisula – Table shows the distribution of findings regarding the vastisula during follow up period, in group A, B, & C 75.8% had no vastisula and 24.2% had vastisula. In group D, 93.9% had no vastisula and 6.1% still had vastisula. In group E, 87.9% had no vastisula and 12.1% had vastisula.

Table – 4.1.37 Follow up – Udara gurutvam, Udaragrandhi, Maidhunasula, yonisrava, katisula and Associated symptoms

	Group A		Group B		Group C		Group D		Group E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Udara gurutvam										
Absent	28	84.8	30	90.9	30	90.9	30	90.9	31	93.9
Present	5	15.2	3	9.1	3	9.1	3	9.1	2	6.1
Udaragrandhi										
Absent	30	90.9	31	93.9	32	97	31	93.9	31	93.9
Present	3	9.1	2	6.1	1	3	2	6.1	2	6.1
Maidhunasula										
Absent	31	93.9	31	93.9	31	93.9	27	81.8	29	87.9
Present	1	3	2	6.1	2	6.1	2	6.1	2	6.1
NA	1	3	––	––	––	––	4	12.1	2	6.1
Yonisrava										
Absent	31	93.9	33	100	32	97	31	93.9	28	84.8
Present	2	6.1	––	––	1	3	2	6.1	5	15.2
Katisula										
Absent	29	87.9	27	81.8	26	78.8	24	72.7	24	72.7
Present	4	12.1	6	18.2	7	21.2	9	27.3	9	27.3
Asso.symptoms										
Absent	33	100	33	100	33	100	33	100	33	100

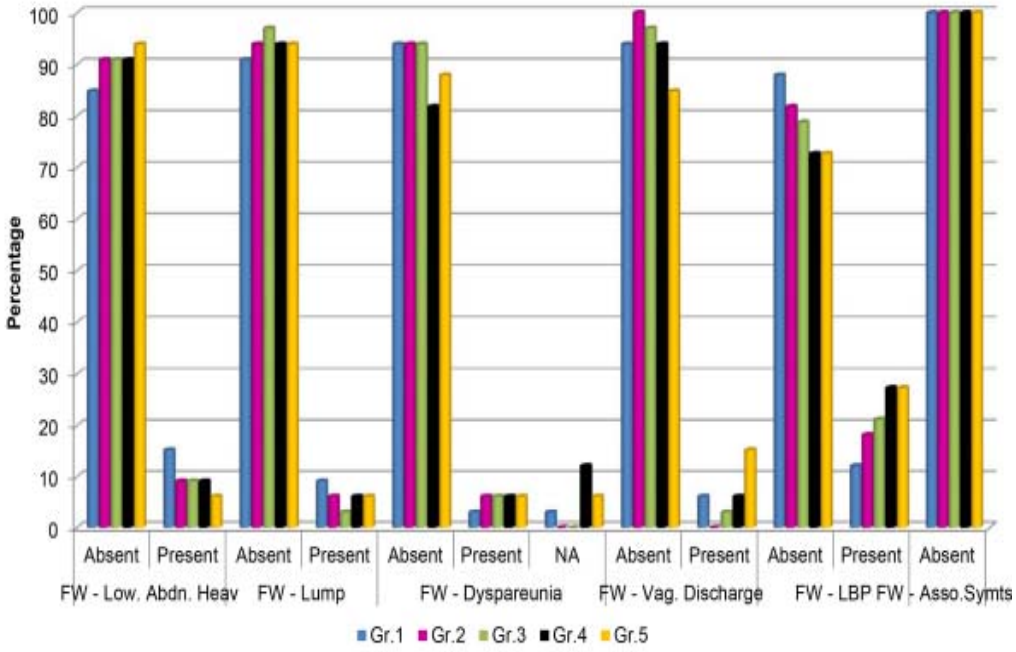

Fig. – 4.1.36 Follow up – Udara gurutvam, Udaragrandhi, Maidhunasula, yonisrava, katisula and Associated symptoms

Udara gurutvam – Regarding the udara gurutvam during follow up period, in group A, most of the patients (84.8%) were had no udara gurutvam and 15.2% had the udara gurutvam. In group B, C &D most of the patients (90.9%) were had no udara gurutvam 9.1% had the udara gurutvam. In group E, 93.9% were had no udara gurutvam and 6.1% had the Udara gurutvam.

Udaragrandhi – This reveals that the udaragrandhi during follow up period, in group A, majority of the patients, 90.9%, were had no udaragrandhi and 9.1% had the udaragrandhi, in group B, D & E 93.9%, were had no udaragrandhi and 6.1% had the udaragrandhi. In group C, 97%, were had no udaragrandhi and 3% had the udaragrandhi.

Maidhunasula – The table given above shows that the distribution of maidhunasula during follow up period, in group A, 93.9% had no maidhunasula, 3% had maidhunasula and remaining 3% were unmarried.

In group B & C 93.9% had no maidhunasula, 6.1% had maidhunasula. In group D, 81.8% had no maidhunasula, 6.1% had maidhunasula. Remaining 12.1% were either unmarried or widow. In group E, 87.9% had no maidhunasula, 6.1% had maidhunasula and 6.1% were unmarried.

Yonisrava – The table shows that the yonisrava during follow up period. In group A & D 93.9% were had no yonisrava and 6.1% had yonisrava. in group B, all the patients had no yonisrava during follow up period. In group C, 97% out of 33 patients had no yonisrava during follow up period. Only 3% had yonisrava persist during follow up period. In group E, 84.8% had no yonisrava during follow up period. Remaining 15.2% had yonisrava present.

Katisula – Regarding the Katisula during follow up period, the majority of patients in group A, (87.9%) had no katisula during follow up period and 12.1% had complaints of katisula during follow up period. In group B, 81.8% had no katisula during follow up period and 18.2% had complaints of katisula during follow up period. In group C, 78.8% had no katisula during follow up period and 21.2% had complaints of katisula during follow up period. In group D & E 72.7% had no katisula during follow up period and 27.3% had complaints of katisula during follow up period.

Associated symptoms – The Associated symptoms if any during follow up period was assessed and found that no body had complaints of any associated symptoms during follow up period in all the groups.

4.2 INFERENTIAL STATISTICS

ANNOVA TEST – BEFORE AND AFTER TREATMENT

Table – 4.1.38 Bleeding Time

Group	MD	SD	SE
A	0.0364	1.04308	0.18158
B	–0.2061	0.63094	0.10983
C	–0.2121	0.73602	0.12812
D	–0.1424	0.6833	0.11895
E	–0.1636	0.83022	0.14452
Total	**–0.1376**	**0.79345**	**0.06177**

Descriptive statistics of bleeding time is given in the above table. The observed mean difference in bleeding time before and after treatment among all 5 groups, standard deviation and standard error are specified. All 5 groups had a sample size of 33.The observed mean difference in bleeding time before and after treatment in group A is 0.0364±1.04. in group B, –0.2061±0.63. in group C, –0.2121±0.73. in group D, –0.1424±0.68 and in group E, the observed mean difference in bleeding time before and after treatment is –0.1636±0.83.

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
1.033	4	160	0.392

ANOVA

	Sum of Sq.	df	MS	F	Sig.
Between Groups	1.36	4	0.34	0.534	0.711
Within Groups	101.887	160	0.637		
Total	**103.247**	**164**			

ANOVA was conducted to analyse the differences in the bleeding time between the 5 groups. The difference between the 5 groups was statistically not significant, with a p value of 0.711.

Group wise comparison

Table – 4.1.39 Paired Samples Statistics

Group	Mean	SD	SEM
A	2.5212	0.75405	0.13126
	2.4848	0.66901	0.11646
B	2.2242	0.58791	0.10234
	2.4303	0.66308	0.11543
C	2.1939	0.81430	0.14175
	2.4061	0.45753	0.07965
D	2.2061	0.46566	0.08106
	2.3485	0.53743	0.09355
E	2.2364	0.65423	0.11389
	2.4000	0.60930	0.10607

The descriptive statistics of Bleeding time in the five groups are shown in Table No:4.1.39. In Group A (n=33) the mean bleeding time reduced

from 2.52±0.13 to 2.48±0.11. In Group B (n=33) it slightly elevated from 2.22±0.10 to 2.43±0.11. Group C (n=33) also showed slight elevation in bleeding time from 2.19±0.14 to 2.40±0.079. Similarly Group D (n=33) and Group E (n=33) also showed marginal elevation in bleeding time from 2.20±0.08 to 2.34±0.09 in the group D and 2.23±0.11 to 2.4±0.106 in Group E respectively.

Table – 4.1.40 Paired Samples Test

Group	MD	SD	SEM – dif	t	df	Sig. (2–tailed)
A	0.03636	1.04308	0.18158	0.2	32	0.843
B	–0.20606	0.63094	0.10983	–1.876	32	0.07
C	–0.21212	0.73602	0.12812	–1.656	32	0.108
D	–0.14242	0.6833	0.11895	–1.197	32	0.24
E	–0.16364	0.83022	0.14452	–1.132	32	0.266

The difference in bleeding time in each group before and after the intervention was tested using Paired sample t–test at 32 degrees of freedom. In Group A a mean difference of 0.03±0.18 was observed with a 't' value of 0.2 and this difference was found to be statistically insignificant (P=0.843). In Group B the mean difference noted was –0.206±0.109 with a 't' value of –1.876. this slight increase in bleeding time observed in group B was statistically insignificant (P=0.07). Group C showed a mean difference of –0.212±0.128 indicating a slight elevation in bleeding time. This difference was however found to be statistically insignificant (P=0.108) as the 't' value obtained was –1.656. Group D also showed a mild elevation in bleeding time with a mean difference

of –0.142±0.118. This effect shown by the treatment was however statistically insignificant (P=0.24) and the 't' value obtained was –1.197. In the GroupE the mean difference obtained was –0.163±0.144. This treatment effect of slight elevation in bleeding time in this group was statistically insignificant (P=0.266) and the 't' value obtained was –1.132.

Table – 4.1.41 Clotting Time

Group	MD	SD	SE
A	–0.2121	1.05023	0.18282
B	0.2848	1.14431	0.19920
C	–0.0909	1.23399	0.21481
D	0.0394	1.12415	0.19569
E	0.1424	1.32076	0.22991
Total	**0.0327**	**1.17692**	**0.09162**

Descriptive statistics of clotting time is given in Table No.4.1.41, all the 5 groups, standard deviation and standard error are specified. All 5 groups had a sample size of 33. The observed mean difference in clotting time before and after treatment in group A is –0.2121±1.05, in group B, it is 0.2848±1.14, in group C, the observed mean difference in clotting time before and after treatment is –0.0909±1.23, in group D, the observed mean difference in clotting time before and after treatment is 0.0394±1.12. and in group E, the observed mean difference in clotting time before and after treatment is 0.1424±1.32.

Table – 4.1.42 Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
0.375	4	160	0.826

Table – 4.1.43 ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.979	4	1.245	0.896	0.468
Within Groups	222.184	160	1.389		
Total	**227.163**	**164**			

ANOVA was conducted to analyse the differences in the clotting time between the 5 groups. The difference between the 5 groups was statistically not significant, with a p value of 0.468.

Table – 4.1.44 Group wise comparison – Paired Samples Statistics

Group	Mean	SD	SEM
A	6.6152	0.74167	0.12911
	6.8273	0.81596	0.14204
B	6.697	0.98377	0.17125
	6.4121	0.71535	0.12453
C	6.5758	0.86712	0.15095
	6.6667	0.8165	0.14213
D	6.5848	0.91177	0.15872
	6.5455	0.8693	0.15133
E	6.7879	0.96039	0.16718
	6.6455	0.95757	0.16669

The descriptive statistics of Clotting time in the five groups are shown in the above table. In Group A (n=33) the mean clotting time elevated from 6.6152± 0.12911 to 6.8273±0.14204. In Group B (n=33) it was slightly reduced from 6.697±0.17125 to 6.4121± 0.12453 . Group C (n=33) also showed slight elevation in clotting time from 6.5758±0.15095 to 6.6667±0.14213 . Group D (n=33) and Group E (n=33) showed minor reduction in clotting time from 6.5848±0.15872 to6.5455±0.15133 in the group D and 6.7879±0.16718 to 6.6455±0.16669 in Group E respectively.

Table – 4.1.45 Paired Samples Test

Group	MD	SD	SEM – dif	t	df	Sig. (2–tailed)
A	–0.21212	1.05023	0.18282	–1.16	32	0.255
B	0.28485	1.14431	0.1992	1.43	32	0.162
C	–0.09091	1.23399	0.21481	–0.423	32	0.675
D	0.03939	1.12415	0.19569	0.201	32	0.842
E	0.14242	1.32076	0.22991	0.619	32	0.54

The difference in bleeding time in each group before and after the intervention was tested using Paired sample t–test at 32 degrees of freedom. In Group A a mean difference of –0.21±0.18 was observed with a 't' value of –1.16 and this difference was found to be statistically insignificant (p=0.255). In Group B the mean difference noted was 0.284±0.199 with a 't' value of 1.43 this difference observed in group B was statistically insignificant (p=0.162) . Group C showed a mean difference of –0.0909± 0.2148. This difference was however found to be statistically insignificant

(p=0.675) as the 't' value obtained was –0.423. Group D showed a mean difference of 0.03939±0.19569. This effect shown by the treatment was however statistically insignificant (P=0.842) and the 't' value obtained was 0.201. In the Group E the mean difference obtained was 0.14242±0.22991. This treatment effect in this group was statistically insignificant (P=0.54) and the 't' value obtained was 0.619.

Table – 4.1.46 Haemoglobin – Group wise comparison

Paired Samples Statistics

Group	Mean	SD	SEM
A	10.74	1.10200	0.19200
	10.6818	1.15986	0.20191
B	10.29	1.44400	0.25100
	10.1485	1.37662	0.23964
C	10.59	1.26800	0.22100
	10.5061	1.19581	0.20816
D	10.53	1.35500	0.23600
	10.6182	1.20350	0.20950
E	9.99	1.26200	0.22000
	10.0273	1.15089	0.20034

The descriptive statistics of Haemoglobin level in the five groups are shown in the above table. In Group A (n=33) the mean Haemoglobin level reduced from 10.74± 1.102 to 10.6818±1.15986. In Group B (n=33) it was slightly reduced from 10.29±1.444 to 10.1485±1.37662. Similarly, Group C (n=33) also showed slight reduction in Haemoglobin level from 10.59±1.268 to 10.5061±1.19581. Group D (n=33) and Group E (n=33)

showed marginal elevation in Haemoglobin level from 10.53±1.355 to10.6182±1.2035 in the group D and 9.99±1.262 to 10.0273± 1.15089 in Group E respectively.

Table – 4.1.47 Paired Samples Test

Group	MD	SD	SEM – dif	t	df	Sig. (2–tailed)
A	0.05455	0.87575	0.15245	0.358	32	0.723
B	0.13939	0.91513	0.1593	0.875	32	0.388
C	0.08485	1.47291	0.2564	0.331	32	0.743
D	0.743	0.87361	0.15208	–0.558	32	0.581
E	–0.03333	1.26705	0.22057	–0.151	32	0.881

The difference in Haemoglobin in each group before and after the intervention was tested using Paired sample t–test at 32 degrees of freedom. In Group A a mean difference of 0.0545±0.1524 was observed with a 't' value of 0.358 and this difference was found to be statistically insignificant (P=0.723). In Group B the mean difference noted was 0.139±0.159 with a 't' value of 0.875. This slight decrease in Haemoglobin level observed in group B was statistically insignificant (P=0.388) . Group C showed a mean difference of 0.0848±0.256 indicating a slight reduction in Haemoglobin level. This difference was however found to be statistically insignificant (P=0.743) and the't' value obtained was 0.331. Group D showed a mild elevation in Haemoglobin level with a mean difference of 0.743±0.15208 . This effect shown by the treatment was however statistically insignificant (P=0.581) and the 't' value obtained was –0.558 . In the Group E the mean difference obtained was –0.03333±0.22057. This treatment effect of slight elevation in Haemoglobin

level in this group was statistically insignificant (p=0.881) and the 't' value obtained was –0.151 .

Garbhasaya grandhi NUM–USG

Table – 4.1.48 Anova – Descriptive Statistics

	N	Mean	SD
No.	165	0.0909	0.32793
GRP	165	3	1.41852

Average number of Garbhasaya grandhi observed was 0.09±0.3279 and in group it was 3±1.418

Table – 4.1.49 Ranks

Group	Mean Rank	Chi–Square	df	Asymp. Sig.
A	82.91	5.658	4	0.226
B	85.61			
C	90.32			
D	75.73			
E	80.44			
Total	**165**			

Out of 33 samples, the mean rank observed in Group A was 82.91, in Group B 85.61, in Group C 90.32, in Group D 75.73, and in Group E 80.44. Chi–Square value of 5,658 with 4 degrees of freedom was found to be statistically insignificant (p=0.226).

Table – 4.1.50 Descriptive Statistics

Group		Mean	SD
A	BT	1.8182	0.95048
	AT	1.73	0.944
B	BT	1.5455	0.8693
	AT	1.42	0.792
C	BT	1.6364	0.89506
	AT	1.5	0.984
D	BT	1.5758	0.75126
	AT	1.58	0.792
E	BT	1.8485	1.00378
	AT	1.79	1.053

The descriptive statistics of number of Garbhasaya grandhi in the five groups are shown in the above table. In Group A (n=33) the mean number of Garbhasaya grandhi exhibited a minor reduction from 1.818±0.95 to 1.73±0.94. Similarly, in Group B (n=33) it slightly reduced from 1.545±0.869 to 1.42±0.79. Group C (n=33) also showed slight reduction in number of Garbhasaya grandhi from 1.636±0.895 to 1.5±0.98. Group D (n=33) showed marginal elevation in number of Garbhasaya grandhi from 1.575±0.75 to 1.58±0.79 and in Group E there is slight reduction (n=33) from 1.848±1.0037 to 1.79± 1.053.

Table – 4.1.51 Wilcoxon Signed Ranks Test

Group			N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2–tailed)
1	AT – BT	Negative Ranks	3	2	6		
		Positive Ranks	0	0	0	–1.732	0.083
		Ties		30			
		Total		**33**			
2	AT – BT	Negative Ranks	5	3.5	17.5		
		Positive Ranks	1	3.5	3.5	–1.633	0.102
		Ties		27			
		Total		**33**			
3	AT – BT	Negative Ranks	5	3	15		
		Positive Ranks	0	0	0	–2.236	0.025
		Ties		27			
		Total		**33**			
4	AT – BT	Negative Ranks	1	1.5	1.5		
		Positive Ranks	1	1.5	1.5	0.000	1
		Ties		31			
		Total		**33**			
5	AT – BT	Negative Ranks	2	1.5	3		
		Positive Ranks	0	0	0	–1.414	0.157
		Ties		31			
		Total		**33**			

In Group A (N=33) among 3 samples, the number of the Garbhasaya grandhi increased and no change was observed in 30 samples with a ‘z’ value of –1.7 and this difference was found to be statistically

insignificant (p=0.083) . In Group B, out of 33 samples, number of the Garbhasaya grandhi increased in 5 samples and decreased in 1 sample and in the remaining 27 samples no change was observed with a 'z' value of –1.633 and this difference was found to be statistically insignificant (p=0.102). In Group C (N=32) among 5 samples, the number of the Garbhasaya grandhi increased and no change was observed in27 samples with a 'z' value of –2.236 and this difference was found to be statistically significant (p=0.025) . In Group D out of 33 samples, number of the Garbhasaya grandhi was increased in 1sample and decreased in 1 sample and in the remaining 31 samples, no change was observed with a 'z' value of 0.00 and this difference was found to be statistically insignificant (p=1). In Group E (N=33) among 2 samples, the number of the Garbhasaya grandhi increased and no change was observed in 31 samples with a 'z' value of –1.414 and this difference was found to be statistically insignificant (p=0.157) .

NUM–KW - Kruskal–Wallis Test

Table – 4.1.52 Ranks

Group	N	Mean Rank
A	33	82.91
B	33	85.61
C	33	90.32
D	33	75.73
E	33	80.44
Total	**165**	

Out 33 samples, the mean rank observed in Group A was 82.91, in Group B 85.61, in Group C 90.32, in Group D 75.73, and in Group E 80.44 .

Test Statistics

Table – 4.1.53 NUMBER

Chi–Square	5.658
df	4
Asymp. Sig.	0.226

Chi–Square value of 5,658 with 4 degrees of freedom was found to be statistically insignificant (P=0.226).

USG SIZE ANOVA

Table – 4.1.54 Descriptives

Group	N	Mean	SD	SE
A	62	0.284	0.64107	0.08142
B	51	0.0235	0.92273	0.12921
C	54	0.2222	0.67479	0.09183
D	55	0.1231	0.98358	0.13263
E	60	0.0747	0.54871	0.07084
Total	**282**	**0.1491**	**0.76482**	**0.04554**

Descriptive statistics of the size of Garbhasaya grandhi through ultrasonography is given in the above table. The mean size of the Garbhasaya grandhi among all 5 groups, standard deviation and standard error are specified.

In group A (N=62) average size of Garbhasaya grandhi observed was 0.28±0.64. In group B (N= 51) average size of Garbhasaya grandhi observed was 0.0235±0.92. In group C (N= 54) average size of Garbhasaya grandhi observed was 0.22±0.67.

In group D (N= 55) average size of Garbhasaya grandhi observed was 0.12±0.98.In group E (N= 60) average size of Garbhasaya grandhi observed was 0.074±0.548.

Table – 4.1.55 Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
1.489	4	277	0.206

Table – 4.1.56 ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.591	4	0.648	1.109	0.352
Within Groups	161.78	277	0.584		
Total	**164.371**	**281**			

ANOVA was conducted to analyse the differences in the size of the Garbhasaya grandhi between the 5 groups. The difference between the 5 groups was statistically insignificant, with a p value of 0.352.

ANNOVA TEST – FOLLOW UP

Table – 4.1.57 Artava raktasrava

GROUP – A - Descriptive Statistics

	Mean	SD
FU_1	3.6667	2.74621
FU_2	5	2.38485
FU_3	5.2727	2.01979

The mean grading for the symptom of Artava raktasrava between three assessments showed an elevation from 3.66±2.7 in the first assessment to 5.0±2.38 in the second assessment. The mean further elevated to 5.27±2.01 by the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Artava	0.987	0.411	2	0.814	0.987	1	0.5

The grading for the symptom of Artava raktasrava on three follow-up assessments were tested using repeated measures ANOVA (RM-ANOVA). The assumption for sphericity was tested using Mauchly's test for sphericity at 5% level of significance. For the symptom Artava raktasrava, the test was statistically insignificant ($p>0.05$) indicating that the assumption of sphericity is satisfied by the data.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Artava raktasrava					
Sphericity Assumed	48.747	2	24.374	9.253	0
Greenhouse-Geisser	48.747	1.974	24.695	9.253	0
Huynh-Feldt	48.747	2	24.374	9.253	0
Lower-bound	48.747	1	48.747	9.253	0.005
Error (Artava raktasrava)					
Sphericity Assumed	168.586	64	2.634		
Greenhouse-Geisser	168.586	63.168	2.669		
Huynh-Feldt	168.586	64	2.634		
Lower-bound	168.586	32	5.268		

The mean reduction in the scores for the symptom Artava raktasrava was tested using repeated measures Analysis of variance and was found to be statistically significant ($p < 0.001$) with an F ratio of 177.5. The result indicates that the mean score for Artava raktasrava significantly changed between three assessments.

Pairwise Comparisons

(I) Artava	(J) Artava	MD (I-J)	Std. Error	Sig.[b]
1	2	-1.333	0.376	0.004
	3	-1.606	0.413	0.001
2	1	1.333	0.376	0.004
	3	-0.273	0.409	1
3	1	1.606	0.413	0.001
	2	0.273	0.409	1

The means were further tested for pair wise comparisons after applying Bonferroni correction and the following results were obtained. The comparison between the first and second follow-up showed a mean difference of -1.33±0.37 which was found to be statistically significant at p=0.004. The second comparison between the second and third assessments showed a mean difference of -0.273±0.4 which was found to statistically insignificant at p=1.000. The comparison between the first and third assessment was also tested, and the mean difference of -1.6±0.41 was found to be statistically significant at p=0.001.

GROUP – B

Descriptive Statistics

	Mean	SD
FU_1	4.7273	2.47832
FU_2	5.5152	1.92226
FU_3	4.9697	2.20064

The mean grading for the symptom of Artava raktasrava between three assessments showed an elevation from 4.727±2.478 in the first assessment to 5.51±1.922 in the second assessment. In the third assessment the mean was reduced to 4.969±2.20.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Artava	0.978	0.684	2	0.71	0.979	1	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with P=0.710. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Artava raktasrava					
Sphericity Assumed	10.747	2	5.374	2.294	0.109
Greenhouse-Geisser	10.747	1.957	5.491	2.294	0.11
Huynh-Feldt	10.747	2	5.374	2.294	0.109
Lower-bound	10.747	1	10.747	2.294	0.14
Error (Artava raktasrava)					
Sphericity Assumed	149.919	64	2.342		
Greenhouse-Geisser	149.919	62.632	2.394		
Huynh-Feldt	149.919	64	2.342		
Lower-bound	149.919	32	4.685		

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores

between three assessments (P=0.109). Hence multiple comparisons were not performed.

GROUP – C

Descriptive Statistics

	Mean	SD
FU_1	4.0606	2.51171
FU_2	4.7576	2.37211
FU_3	4.7576	2.56211

In Group – C, the mean score of the symptom Artava raktasrava was 4.0606±2.511 during the first assessment, which was elevated to 4.7576±2.372 during the second assessment and the mean score was 4.7576±2.562 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Artava	0.81	6.518	2	0.038	0.841	0.882	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.038. Hence the assumption of sphericity is violated by the data and hence

the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new P-valuewas corrected to 0.882.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Artava raktasrava						
Sphericity Assumed	10.687	2	5.343	1.47	0.238	0.044
Greenhouse-Geisser	10.687	1.681	6.357	1.47	0.239	0.044
Huynh-Feldt	10.687	1.764	6.059	1.47	0.239	0.044
Lower-bound	10.687	1	10.687	1.47	0.234	0.044
Error (Artava raktasrava)						
Sphericity Assumed	232.646	64	3.635			
Greenhouse-Geisser	232.646	53.799	4.324			
Huynh-Feldt	232.646	56.445	4.122			
Lower-bound	232.646	32	7.27			

The difference in the mean scores of Artava raktasrava was tested using F-test along with the Huynh-Feldt correction. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.239). Hence multiple comparisons were not performed.

GROUP – D

	Mean	SD
FU_1	3.9091	2.38961
FU_2	5.0000	2.15058
FU_3	4.7576	2.16550

The mean grading for the symptom of Artava raktasrava between three assessments showed an elevation from 3.909±2.389 in the first assessment to 5.0±2.15 in the second assessment. The mean score then reduced to 4.7576±2.165 by the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Artava	0.608	15.44	2	0	0.718	0.743	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=000. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse-Geisser epsilon correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.718.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Artava raktasrava						
Sphericity Assumed	21.657	2	10.828	3.706	0.03	0.104
Greenhouse-Geisser	21.657	1.436	15.076	3.706	0.046	0.104
Huynh-Feldt	21.657	1.486	14.578	3.706	0.044	0.104
Lower-bound	21.657	1	21.657	3.706	0.063	0.104
Error (Artava raktasrava)						
Sphericity Assumed	187.01	64	2.922			
Greenhouse-Geisser	187.01	45.968	4.068			
Huynh-Feldt	187.01	47.538	3.934			
Lower-bound	187.01	32	5.844			

The difference in the mean scores of Artava raktasrava was tested using F-test along with the Greenhouse-Geisser correction. The result was found to be statistically significant at p=0.046. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

(I) Artava	(J) Artava	MD (I-J)	Std. Error	Sig.
1	2	-1.091	0.514	0.125
	3	-0.848	0.44	0.188
2	1	1.091	0.514	0.125
	3	0.242	0.272	1
3	1	0.848	0.44	0.188
	2	-0.242	0.272	1

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of -1.091±0.514 which was insignificant at p=0.125. The comparison between second and third assessment showed a mean difference of 0.242±0.272 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment. The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction of 0.848±0.440 which was also statistically insignificant at p=0.188, indicating that the symptoms was maintained in the same level during the third assessment.

GROUP – E

	Mean	SD
FU_1	3.9091	2.38961
FU_2	5.0000	2.15058
FU_3	4.7576	2.16550

The mean grading for the symptom of Artava raktasrava between three assessments showed an elevation from 3.909±2.389 in the first assessment to 5.0±2.15 in the second assessment. The mean score then reduced to 4.7576±2.165 by the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Artava	0.608	15.44	2	0	0.718	0.743	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=000. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse-Geisser epsilon correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.718.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Artava raktasrava						
Sphericity Assumed	21.657	2	10.828	3.706	0.03	0.104
Greenhouse-Geisser	21.657	1.436	15.076	3.706	0.046	0.104
Huynh-Feldt	21.657	1.486	14.578	3.706	0.044	0.104
Lower-bound	21.657	1	21.657	3.706	0.063	0.104
Error (Artava raktasrava)						
Sphericity Assumed	187.01	64	2.922			
Greenhouse-Geisser	187.01	45.968	4.068			
Huynh-Feldt	187.01	47.538	3.934			
Lower-bound	187.01	32	5.844			

The difference in the mean scores of Artava raktasrava was tested using F-test along with the Greenhouse-Geisser correction. The result was found to be statistically significant at P=0.046. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

(I) Artava	(J) Artava	MD (I-J)	Std. Error	Sig.[b]
1	2	-1.091	0.514	0.125
	3	-0.848	0.44	0.188
2	1	1.091	0.514	0.125
	3	0.242	0.272	1
3	1	0.848	0.44	0.188
	2	-0.242	0.272	1

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of -1.091±0.514 which was insignificant at p=0.125. The comparison between second and third assessment showed a mean difference of 0.242±0.272 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment. The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction of 0.848±0.440 which was also statistically insignificant at p=0.188, indicating that the symptoms was maintained in the same level during the third assessment.

Descriptives - FU1_FU2

	N	Mean	SD	SE
GROUP A	33	-1.3333	2.16025	0.37605
GROUP B	33	-0.7879	2.08803	0.36348
GROUP C	33	-0.697	2.92067	0.50842
GROUP D	33	-1.0909	2.95131	0.51376
GROUP E	33	-0.9091	3.04512	0.53009
Total	**165**	**-0.9636**	**2.64319**	**0.20577**

During first and second assessment the mean score of Artava raktasrava observed in Group A was -1.33±2.16, in Group B -0.78±2.08, in Group C -0.69±2.92, in Group D - A.09±2.95 and in Group E -0.90±3.04.

ANOVA - FU1_FU2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.509	4	2.127	0.299	0.878
Within Groups	1137.273	160	7.108		
Total	**1145.782**	**164**			

Groupwise comparison during first and second assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during second assessment with a p-value 0.878. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding Artava raktasrava.

FU2_FU3

	N	Mean	SD	SE
GROUP A	33	-0.2727	2.34884	0.40888
GROUP B	33	0.5455	2.07802	0.36174
GROUP C	33	0	2.03101	0.35355
GROUP D	33	0.2424	1.56186	0.27188
GROUP E	33	0.697	2.18639	0.3806
Total	**165**	**0.2424**	**2.06348**	**0.16064**

During second and third assessment of mean score of Artava raktasrava observed in Group A was -0.27±2.34, in Group B 0.54±2.07, in Group C 0.00±2.03, in Group D 0.24±1.56 and in Group E 0.69±2.18.

ANOVA - FU2_FU3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20.545	4	5.136	1.213	.308
Within Groups	677.758	160	4.236		
Total	**698.303**	**164**			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.308. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding Artava raktasrava.

Table – 4.1.58 Artava raktasrava (Bleeding) Amount

GROUP – A - Descriptive Statistics

	Mean	SD
FU_1	3.4848	0.79535
FU_2	3.3939	0.78817
FU_3	3.1818	0.84611

The symptom of Amount of raktasrava in group A were recorded as 3.48±0.795 during first follow-up assessment, which was reduced to 3.39±0.788 during the second assessment and later further reduced to 3.18±0.846 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Amount	0.776	7.849	2	0.02	0.817	0.855	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.020. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.855.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Amount					
Sphericity Assumed	1.596	2	0.798	4.351	0.017
Greenhouse-Geisser	1.596	1.634	0.976	4.351	0.024
Huynh-Feldt	1.596	1.71	0.933	4.351	0.022
Lower-bound	1.596	1	1.596	4.351	0.045
Error (Raktasrava Amount)					
Sphericity Assumed	11.737	64	0.183		
Greenhouse-Geisser	11.737	52.301	0.224		
Huynh-Feldt	11.737	54.731	0.214		
Lower-bound	11.737	32	0.367		

The difference in the mean scores of amount of artava raktasrava was tested using F-test along with the Huynh-Feldt correction. The result was found to be statistically significant at p=0.022. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

(I) Amount	(J) Amount	MD (I-J)	Std. Error	Sig.[b]
1	2	0.091	0.101	1
	3	0.303	0.127	0.069
2	1	-0.091	0.101	1
	3	0.212	0.084	0.051
3	1	-0.303	0.127	0.069
	2	-0.212	0.084	0.051

Pairwise comparisons between assessments were performed after

applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.091±0.101 which was statistically not significant at p=1.0. The comparison between second and third assessment showed a mean difference of 0.212±0.084 which was statistically slight significant at p=0.05 (p>0.05). The result shows that the treatment produced significant change in the symptom during the third assessment.

GROUP – B - Descriptive Statistics

	Mean	SD
FU_1	3.1818	0.72692
FU_2	3.1212	0.69631
FU_3	3.0606	0.65857

The symptom of Amount of raktasrava in group B were recorded as 3.18±0.7269 during first follow-up assessment, which was reduced to 3.12±0.696 during the second assessment and later further reduced to 3.06±0.658 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Amount	0.842	5.346	2	0.069	0.863	0.908	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically

insignificant with P=0.069. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Amount					
Sphericity Assumed	0.242	2	0.121	2.51	0.089
Greenhouse-Geisser	0.242	1.727	0.14	2.51	0.098
Huynh-Feldt	0.242	1.816	0.133	2.51	0.095
Lower-bound	0.242	1	0.242	2.51	0.123
Error (Raktasrava Amount)					
Sphericity Assumed	3.091	64	0.048		
Greenhouse-Geisser	3.091	55.249	0.056		
Huynh-Feldt	3.091	58.11	0.053		
Lower-bound	3.091	32	0.097		

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.89). Hence multiple comparisons were not performed.

GROUP – C - Descriptive Statistics

	Mean	SD
FU_1	3.4242	0.56071
FU_2	3.2727	0.6742
FU_3	3.2121	0.59987

In Group C, the mean score of the symptom amount of raktasrava was 3.424±0.560 during the first assessment, which was reduced to 3.272±0.674 during the second assessment and the mean was further reduced to 3.21±0.599 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Amount	0.934	2.101	2	0.35	0.938	0.995	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.350. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Amount						
Sphericity Assumed	0.788	2	0.394	2.391	0.1	0.07
Greenhouse-Geisser	0.788	1.877	0.42	2.391	0.103	0.07
Huynh-Feldt	0.788	1.99	0.396	2.391	0.1	0.07
Lower-bound	0.788	1	0.788	2.391	0.132	0.07
Error (Raktasrava Amount)						
Sphericity Assumed	10.545	64	0.165			
Greenhouse-Geisser	10.545	60.064	0.176			
Huynh-Feldt	10.545	63.676	0.166			
Lower-bound	10.545	32	0.33			

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (P = 0.100). Hence multiple comparisons were not performed.

GROUP – D

	Mean	SD
FU_1	3.3939	0.55562
FU_2	3.2121	0.59987
FU_3	3	0.61237

The mean score in group D, symptom amount of raktasrava was 3.39±0.555 during the first assessment, which was reduced to 3.21±0.599 during the second assessment and in the third assessment the mean was again reduced to 3.00±0.612.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Amount	0.829	5.82	2	0.054	0.854	0.897	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.054. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Amount						
Sphericity Assumed	2.566	2	1.283	6.43	0.003	0.167
Greenhouse-Geisser	2.566	1.708	1.502	6.43	0.005	0.167
Huynh-Feldt	2.566	1.794	1.43	6.43	0.004	0.167
Lower-bound	2.566	1	2.566	6.43	0.016	0.167
Error (Raktasrava Amount)						
Sphericity Assumed	12.768	64	0.199			
Greenhouse-Geisser	12.768	54.646	0.234			
Huynh-Feldt	12.768	57.418	0.222			
Lower-bound	12.768	32	0.399			

The difference in the mean scores of amount of raktasrava was tested using F-test. The result was found to be statistically highly significant at p=0.003. The result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

(I) Amount	(J) Amount	MD (I-J)	Std. Error	Sig.[b]
1	2	0.182	0.119	0.407
	3	.394	0.123	0.009
2	1	-0.182	0.119	0.407
	3	0.212	0.084	0.051
3	1	-.394	0.123	0.009
	2	-0.212	0.084	0.051

b. Based on estimated marginal means

Pairwise comparisons between assessments were performed.The

comparison between the first and second assessments showed a mean difference of 0.182±0.119 which was statistically insignificant at p=0.407. The comparison between second and third assessment showed a mean difference of 0.212±0.084 which was statistically significant at p=0.051 (p>0.05). The result shows that the treatment produced slight change in the symptom during the third assessment than second assessment.

GROUP – E

	Mean	SD
FU_1	3.3939	0.55562
FU_2	3.2121	0.59987
FU_3	3	0.61237

In group E the mean score of the symptom amount of raktasrava was 3.39±0.555 during the first assessment, which was reduced to 3.21±0.599 during the second assessment and in the third assessment the mean was again reduced to 3.000±0.612.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Amount	0.829	5.82	2	0.054	0.854	0.897	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically

insignificant with p=0.054. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Amount						
Sphericity Assumed	2.566	2	1.283	6.43	0.003	0.167
Greenhouse-Geisser	2.566	1.708	1.502	6.43	0.005	0.167
Huynh-Feldt	2.566	1.794	1.43	6.43	0.004	0.167
Lower-bound	2.566	1	2.566	6.43	0.016	0.167
Error (Raktasrava Amount)						
Sphericity Assumed	12.768	64	0.199			
Greenhouse-Geisser	12.768	54.646	0.234			
Huynh-Feldt	12.768	57.418	0.222			
Lower-bound	12.768	32	0.399			

The difference in the mean scores of amount of raktasrava was tested using F-test. The result was found to be statistically highly significant at p=0.003. The result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

(I) Amount	(J) Amount	MD (I-J)	Std. Error	Sig.[b]
1	2	0.182	0.119	0.407
	3	.394	0.123	0.009
2	1	-0.182	0.119	0.407
	3	0.212	0.084	0.051
3	1	-.394	0.123	0.009
	2	-0.212	0.084	0.051

Pairwise comparisons between assessments were performed.The comparison between the first and second assessments showed a mean difference of 0.182±0.119 which was statistically insignificant at p=0.407. The comparison between second and third assessment showed a mean difference of 0.212±0.084 which was statistically significant at p=0.051 (p>0.05). The result shows that the treatment produced significant change in the symptom during the third assessment than second assessment.

Descriptives - FU1_FU2 - Amount 1

	Mean	**SD**	**SE**
GROUP A	0.0909	0.57899	0.10079
GROUP B	0.0606	0.24231	0.04218
GROUP C	0.1515	0.61853	0.10767
GROUP D	0.1818	0.68258	0.11882
GROUP E	0.2727	0.71906	0.12517
Total	**0.1515**	**0.59064**	**0.04598**

In the Group A the mean score of amount of artava raktasrava during the first and second assessment observed was 0.09±0.57, in Group B 0.06±0.24, in Group C 0.15±0.61, in Group D 0.18±0.68 and in Group E 0.27±0.71.

ANOVA - FU1_FU2 - Artava raktasrava - Amount 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.909	4	0.227	0.646	0.631
Within Groups	56.303	160	0.352		
Total	**57.212**	**164**			

Groupwise comparison during first and second assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.631. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding amount of artava raktasrava .

Artava raktasrava - Amount 2

	Mean	SD	SE
GROUP A	0.2121	0.48461	0.08436
GROUP B	0.0606	0.34816	0.06061
GROUP C	0.0606	0.4962	0.08638
GROUP D	0.2121	0.48461	0.08436
GROUP E	-0.2121	0.48461	0.08436
Total	**0.0667**	**0.48305**	**0.03761**

During second and third assessment the mean score of amount of artava raktasrava observed in Group A was 0.21±0.48, in Group B 0.06±0.34, in Group C 0.06±0.49, in Group D 0.21±0.48 and in Group E -0.21±0.48.

ANOVA - Artava raktasrava - Amount 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.964	4	0.991	4.622	0.001
Within Groups	34.303	160	0.214		
Total	38.267	164			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The result was found to be highly significant statistically with a p-value 0.001. The result indicates that the change in the mean score of amount of artava raktasrava was significantly differed between groups.

Post Hoc Tests

Group wise multiple comparison was done during second and third assessments. The comparison between Group A and Group B showed a mean difference of 0.15±0.11 which was statistically insignificant at p=0.673. The comparison between the Group A and Group C showed a mean difference of 0.15±0.11 which was statistically insignificant at p=0.673.

The comparison between the Group A and Group D showed a mean difference of 0.00±0.11 which was also statistically insignificant at p=1.00. The comparison between the Group A and Group E showed a mean difference of 0.42±0.11 which was statistically highly significant at p=0.003. The result shows that the medicine given in the Group E produced significant change in amount of artava raktasrava comparing to other groups during second and third assessments.

Post Hoc Tests

Multiple Comparisons - Dependent Variable: Amount 2

Tukey HSD

(I) Groups	(J) Groups	MD (I-J)	Std. Error	Sig.
GROUP A	GROUP B	0.15152	0.11399	0.673
	GROUP C	0.15152	0.11399	0.673
	GROUP D	0	0.11399	1
	GROUP E	0.42424	0.11399	0.003
GROUP B	GROUP A	-0.15152	0.11399	0.673
	GROUP C	0	0.11399	1
	GROUP D	-0.15152	0.11399	0.673
	GROUP E	0.27273	0.11399	0.123
GROUP C	GROUP A	-0.15152	0.11399	0.673
	GROUP B	0	0.11399	1
	GROUP D	-0.15152	0.11399	0.673
	GROUP E	0.27273	0.11399	0.123
GROUP D	GROUP A	0	0.11399	1
	GROUP B	0.15152	0.11399	0.673
	GROUP C	0.15152	0.11399	0.673
	GROUP E	.42424	0.11399	0.003
GROUP E	GROUP A	-.42424	0.11399	0.003
	GROUP B	-0.27273	0.11399	0.123
	GROUP C	-0.27273	0.11399	0.123
	GROUP D	-.42424	0.11399	0.003

The mean difference is significant at the 0.05 level.

Table – 4.1.59 Rajasrava kala

GROUP A – Descriptive Statistics

	Mean	SD
FU_1	3	1.52069
FU_2	3	1.47902
FU_3	2.7576	1.45839

The symptom of Rajasrava kala in group A were recorded as 3.00±1.52 during first follow-up assessment, which was maintained in the second assessment 3.00±1.479 and later further reduced to 2.7576±1.458 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Duration	0.675	12.197	2	0.002	0.755	0.784	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically highly significant at p=0.002. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.784.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Rajasrava kala					
Sphericity Assumed	1.293	2	0.646	2.691	0.075
Greenhouse-Geisser	1.293	1.509	0.857	2.691	0.092
Huynh-Feldt	1.293	1.568	0.825	2.691	0.09
Lower-bound	1.293	1	1.293	2.691	0.111
Error (Rajasrava kala)					
Sphericity Assumed	15.374	64	0.24		
Greenhouse-Geisser	15.374	48.292	0.318		
Huynh-Feldt	15.374	50.167	0.306		
Lower-bound	15.374	32	0.48		

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.090). Hence multiple comparisons were not performed.

GROUP – B - Descriptive Statistics

	Mean	SD
FU_1	2.8788	1.13901
FU_2	2.9394	1.29758
FU_3	2.7273	1.12563

In group B the symptom of Rajasrava kala were recorded as 2.8788±1.139 during first follow-up assessment, which was slightly elevated

to 2.939±1.297 during the second assessment and later further reduced to 2.7273±1.1256 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse -Geisser	Epsilon[b] Huynh -Feldt	Lower -bound
Duration	0.606	15.507	2	0	0.718	0.742	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically highly significant at p=0.000. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse - Geisser correction was applied as the epsilon was less than 0.75. So, the new P-valuewas corrected to 0.718.

Tests of Within-Subjects Effects

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.352). Hence multiple comparisons were not performed.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Rajasrava kala					
Sphericity Assumed	0.788	2	0.394	1	0.374
Greenhouse-Geisser	0.788	1.435	0.549	1	0.352
Huynh-Feldt	0.788	1.484	0.531	1	0.354
Lower-bound	0.788	1	0.788	1	0.325
Error (Rajasrava kala)					
Sphericity Assumed	25.212	64	0.394		
Greenhouse-Geisser	25.212	45.924	0.549		
Huynh-Feldt	25.212	47.489	0.531		
Lower-bound	25.212	32	0.788		

GROUP – C - Descriptive Statistics

	Mean	SD
FU_1	3.5152	1.06423
FU_2	3.4848	1.03444
FU_3	3.2727	0.94448

In group C, the mean score of the symptom of Rajasrava kala was 3.5152±1.064 during the first follow up assessment, which was reduced to 3.4848±1.0344 during the second assessment and later further reduced to 3.2727±0.944 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Duration	0.686	11.701	2	0.003	0.761	0.791	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.003. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.791.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Rajasrava kala						
Sphericity Assumed	1.152	2	0.576	1.057	0.353	
Greenhouse-Geisser	1.152	1.522	0.757	1.057	0.339	
Huynh-Feldt	1.152	1.582	0.728	1.057	0.341	
Lower-bound	1.152	1	1.152	1.057	0.312	
Error (Rajasrava kala)						
Sphericity Assumed	34.848	64	0.545			
Greenhouse-Geisser	34.848	48.691	0.716			
Huynh-Feldt	34.848	50.62	0.688			
Lower-bound	34.848	32	1.089			

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.341). Hence multiple comparisons were not performed.

GROUP – D

	Mean	SD
FU_1	2.9394	0.78817
FU_2	2.9394	1.29758
FU_3	2.5758	1.00095

In group D the symptom of Rajasrava kala during first follow up assessment was 2.939±0.788, which was same 2.939±1.297 during the second assessment and later further reduced to 2.575±1.0009 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Duration	0.753	8.783	2	0.012	0.802	0.838	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.012. Hence the assumption of sphericity is violated by the data and hence

the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.838.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Rajasrava kala						
Sphericity Assumed	2.909	2	1.455	3.275	0.044	0.093
Greenhouse-Geisser	2.909	1.604	1.813	3.275	0.056	0.093
Huynh-Feldt	2.909	1.676	1.736	3.275	0.054	0.093
Lower-bound	2.909	1	2.909	3.275	0.08	0.093
Error (Rajasrava kala)						
Sphericity Assumed	28.424	64	0.444			
Greenhouse-Geisser	28.424	51.335	0.554			
Huynh-Feldt	28.424	53.627	0.53			
Lower-bound	28.424	32	0.888			

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (P=0.054). Hence multiple comparisons were not performed.

GROUP – E

	Mean	SD
FU_1	2.9394	0.78817
FU_2	2.9394	1.29758
FU_3	2.5758	1.00095

The symptom of Rajasrava kala were recorded as 2.939±0.788, which was same 2.939±1.297 during the second assessment and later further reduced to 2.575±1.0009 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Duration	0.753	8.783	2	0.012	0.802	0.838	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.012. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.838.

Tests of Within-Subjects Effects

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.054). Hence multiple comparisons were not performed.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Rajasrava kala						
Sphericity Assumed	2.909	2	1.455	3.275	0.044	0.093
Greenhouse-Geisser	2.909	1.604	1.813	3.275	0.056	0.093
Huynh-Feldt	2.909	1.676	1.736	3.275	0.054	0.093
Lower-bound	2.909	1	2.909	3.275	0.08	0.093
Error (Rajasrava kala)						
Sphericity Assumed	28.424	64	0.444			
Greenhouse-Geisser	28.424	51.335	0.554			
Huynh-Feldt	28.424	53.627	0.53			
Lower-bound	28.424	32	0.888			

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (P=0.054). Hence multiple comparisons were not performed.

Descriptives - Rajasrava kala 1

	N	Mean	SD	SE
GROUP A	33	0	0.55902	0.09731
GROUP B	33	-0.0606	0.55562	0.09672
GROUP C	33	0.0303	1.21153	0.2109
GROUP D	33	0	1.11803	0.19462
GROUP E	33	-0.1515	1.12142	0.19521
Total	165	-0.0364	0.94927	0.0739

During first and second assessment, the mean score of duration of artava raktasrava observed in Group A was 0.00±0.55, in Group B - 0.06±0.55, in Group C 0.03±1.21, in Group D - 0.00±1.11 and in Group E - 0.15±1.12.

ANOVA - Rajasrava kala 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.691	4	0.173	0.188	0.944
Within Groups	147.091	160	0.919		
Total	147.782	164			

Groupwise comparison during first and second assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.944. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding duration of artava raktasrava.

Rajasrava kala 2

	N	Mean	SD	SE
GROUP A	33	0.2424	0.61392	0.10687
GROUP B	33	0.2121	0.96039	0.16718
GROUP C	33	0.2121	0.69631	0.12121
GROUP D	33	0.3636	0.96236	0.16753
GROUP E	33	0.1212	0.96039	0.16718
Total	**165**	**0.2303**	**0.84554**	**0.06582**

During second and third assessment the mean score of duration of artava raktasrava observed in Group A was 0.24±0.61, in Group B 0.21±0.96, in Group C 0.21±0.69, in Group D 0.36±0.96 and in Group E 0.12±0.96.

ANOVA - Rajasrava kala 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.006	4	0.252	0.346	0.846
Within Groups	116.242	160	0.727		
Total	117.248	164			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.846. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding duration of artava raktasrava.

Table – 4.1.60 Artava raktasrava - Interval

GROUP – A - Descriptive Statistics

	Mean	SD
FU_1	3.1818	1.21075
FU_2	3.1818	1.18466
FU_3	3.1818	1.23629

The mean score of the symptom of interval of artava raktasrava was 3.1818±1.210 during the first follow up assessment, which was same 3.1818±1.210 during the second assessment and later in the third assessment also the mean value didn't change, 3.1818±1.236.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Interval	1	0	2	1	1	1	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=1.00. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Artava raktasrava - Interval					
Sphericity Assumed	0	2	0	0	1
Greenhouse-Geisser	0	2	0	0	1
Huynh-Feldt	0	2	0	0	1
Lower-bound	0	1	0	0	1
Error (Artava raktasrava - Interval)					
Sphericity Assumed	2	64	0.031		
Greenhouse-Geisser	2	64	0.031		
Huynh-Feldt	2	64	0.031		
Lower-bound	2	32	0.062		

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=1.000). Hence multiple comparisons were not performed.

GROUP – B - Descriptive Statistics

	Mean	SD
FU_1	3.1515	0.66714
FU_2	3.1212	0.69631
FU_3	3.0303	0.46669

The mean score of the symptom of interval of artava raktasrava was 3.1515±0.667 during the first follow up assessment, which was reduced to 3.1212±0,696 during second assessment and later the mean was again reduced to 3.0303±0.4666 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Interval	0.847	5.149	2	0.076	0.867	0.913	0.5

Mauchly's Test of Sphericity - The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.076. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Artava raktasrava - Interval					
Sphericity Assumed	0.263	2	0.131	1.189	0.311
Greenhouse-Geisser	0.263	1.735	0.151	1.189	0.307
Huynh-Feldt	0.263	1.825	0.144	1.189	0.309
Lower-bound	0.263	1	0.263	1.189	0.284
Error (Artava raktasrava- Interval)					
Sphericity Assumed	7.071	64	0.11		
Greenhouse-Geisser	7.071	55.505	0.127		
Huynh-Feldt	7.071	58.406	0.121		
Lower-bound	7.071	32	0.221		

Tests of Within-Subjects Effects- The within-subjects variability was tested using F-test and was found to be statistically insignificant ($p>0.05$). This shows that there was no statistically significant change in the mean scores of symptom interval of artava raktasrava.

GROUP – C DESCRIPTIVE STATISTICS

	Mean	SD
FU_1	3.1818	1.21075
FU_2	3.1818	1.18466
FU_3	3.1818	1.23629

The mean score of the symptom of interval of artava raktasrava was 3.1818±1.210 during the first follow up assessment, which was same 3.1818±1.210 during the second assessment and later in the third assessment also the mean value didn't change, 3.1818±1.236.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Interval	1	0	2	1	1	1	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=1.00. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Artava raktasrava - Interval						
Sphericity Assumed	0	2	0	0	1	0
Greenhouse-Geisser	0	2	0	0	1	0
Huynh-Feldt	0	2	0	0	1	0
Lower-bound	0	1	0	0	1	0
Error (Artava raktasrava - Interval)						
Sphericity Assumed	2	64	0.031			
Greenhouse-Geisser	2	64	0.031			
Huynh-Feldt	2	64	0.031			
Lower-bound	2	32	0.062			

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=1.000). Hence multiple comparisons were not performed.

GROUP – D

	Mean	SD
FU_1	3	0.43301
FU_2	2.9697	0.72822
FU_3	2.9091	0.80482

The mean score of interval of artava raktasrava in group D were recorded as 3.00±0.433 during first follow-up assessment, which was reduced to 2.969±0.728 in the second assessment and later further reduced to 2.9091±0.804 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Interval	0.584	16.691	2	0	0.706	0.729	0.5

Mauchly's Test of Sphericity - The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically highly significant at p=0.000 Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse – Geisser correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.706.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Artava raktasrava - Interval						
Sphericity Assumed	0.141	2	0.071	0.459	0.634	0.014
Greenhouse-Geisser	0.141	1.412	0.1	0.459	0.568	0.014
Huynh-Feldt	0.141	1.458	0.097	0.459	0.574	0.014
Lower-bound	0.141	1	0.141	0.459	0.503	0.014
Error (Artava raktasrava- Interval)						
Sphericity Assumed	9.859	64	0.154			
Greenhouse-Geisser	9.859	45.187	0.218			
Huynh-Feldt	9.859	46.658	0.211			
Lower-bound	9.859	32	0.308			

Tests of Within-Subjects Effects - The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.568). Hence multiple comparisons were not performed.

GROUP – E

	Mean	SD
FU_1	3	0.43301
FU_2	2.9697	0.72822
FU_3	2.9091	0.80482

The mean score of interval of artava raktasrava were recorded as 3.00±0.433 during first follow-up assessment, which was reduced to

2.969±0.728 in the second assessment and later further reduced to 2.9091±0.804 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse -Geisser	Epsilon[b] Huynh -Feldt	Lower -bound
Interval	0.584	16.691	2	0	0.706	0.729	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically highly significant at p=0.000. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse – Geisser correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.706.

Tests of Within-Subjects Effects

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.568). Hence multiple comparisons were not performed.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Artava raktasrava- Interval						
Sphericity Assumed	0.141	2	0.071	0.459	0.634	0.014
Greenhouse-Geisser	0.141	1.412	0.1	0.459	0.568	0.014
Huynh-Feldt	0.141	1.458	0.097	0.459	0.574	0.014
Lower-bound	0.141	1	0.141	0.459	0.503	0.014
Error (Artava raktasrava- Interval)						
Sphericity Assumed	9.859	64	0.154			
Greenhouse-Geisser	9.859	45.187	0.218			
Huynh-Feldt	9.859	46.658	0.211			
Lower-bound	9.859	32	0.308			

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.568). Hence multiple comparisons were not performed.

Descriptives - Bleeding Interval - 1

	N	Mean	SD	SE
GROUP A	33	0.2424	0.61392	0.10687
GROUP A	33	0	0.25	0.04352
GROUP B	33	0.0303	0.46669	0.08124
GROUP C	33	0.0909	0.45851	0.07982
GROUP D	33	0.0303	0.58549	0.10192
GROUP E	33	-0.0909	0.38435	0.06691
Total	165	0.0121	0.44156	0.03438

During first and second assessment the mean score of interval between artava raktasrava observed in Group A was 0.00±0.25, in Group B 0.03±0.46, in Group C 0.09±0.45, in Group D 0.03±0.58 and in Group E the mean score was -0.09±0.38.

ANOVA - Artava raktasrava- Interval - 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.582	4	0.145	0.741	0.565
Within Groups	31.394	160	0.196		
Total	31.976	164			

Groupwise comparison during first and second assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.565. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding menstrual interval.

Descriptives -INTERVAL2

	N	Mean	SD	SE
GROUP A	33	0	0.25	0.04352
GROUP B	33	0.0909	0.38435	0.06691
GROUP C	33	-0.0303	0.30464	0.05303
GROUP D	33	0.0606	0.34816	0.06061
GROUP E	33	0	0.25	0.04352
Total	**165**	**0.0242**	**0.3114**	**0.02424**

During second and third assessment, the mean score of interval between artava raktasrava observed in Group A was 0.00±0.25, in Group B 0.09±0.38, in Group C -0.03±0.30, in Group D 0.06±0.34 and in Group E the mean score was 0.00±0.25.

ANOVA - INTERVAL 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.327	4	0.082	0.84	0.501
Within Groups	15.576	160	0.097		
Total	15.903	164			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.501. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding interval between menstruation.

Table – 4.1.61 Artavasula

GROUP – A - Descriptive Statistics

	Mean	SD
FU_1	1.8182	1.446
FU_2	1.4848	1.27772
FU_3	1.303	1.26206

The symptom of artavasula in group A during the follow-up period

assessments showed a mean score of 1.818±1.446, which was reduced to 1.4848±1.277 during the second assessment. The mean score again reduced to 1.3030±1.262 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse -Geisser	Epsilon[b] Huynh -Feldt	Lower -bound
Artavasula	0.507	21.058	2	0	0.67	0.688	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.000. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse Geisser correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.670.

Tests of Within-Subjects Effects

The difference in the mean scores of artavasula was tested using F-test along with the Greenhouse - Geisser correction. The result was found to be statistically significant at p=0.014. the result indicates that the change in the mean score of pain significantly differed between assessments.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Artavasula					
Sphericity Assumed	4.505	2	2.253	5.655	0.005
Greenhouse-Geisser	4.505	1.34	3.363	5.655	0.014
Huynh-Feldt	4.505	1.377	3.273	5.655	0.014
Lower-bound	4.505	1	4.505	5.655	0.024
Error (Artavasula)					
Sphericity Assumed	25.495	64	0.398		
Greenhouse-Geisser	25.495	42.866	0.595		
Huynh-Feldt	25.495	44.05	0.579		
Lower-bound	25.495	32	0.797		

Pairwise Comparisons

(I) Artava Sula	(J) Artava Sula	MD (I-J)	SE	Sig.b	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	0.333	0.094	0.004	0.096	0.571
	3	0.515	0.195	0.038	0.022	1.008
2	1	-0.333	0.094	0.004	-0.571	-0.096
	3	0.182	0.16	0.789	-0.221	0.585
3	1	-0.515	0.195	0.038	-1.008	-0.022
	2	-0.182	0.16	0.789	-0.585	0.221

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.333±0.094 which was highly significant at p=0.004. The comparison between second and third assessment showed a mean difference of 0.182±0.160 which was statistically insignificant

(p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no statically significant change afterwards till the third assessment.

GROUP – B - Descriptive Statistics

	Mean	SD
FU_1	1.0303	1.1315
FU_2	0.7879	0.89294
FU_3	0.6667	0.88976

In group B the symptom of artavasula during the follow-up period assessments showed a mean score of 1.0303±1.131, which was reduced to 0.7879±0.892 during the second assessment. The mean score again reduced to 0.666±0.889 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Artavasula	0.566	17.621	2	0	0.698	0.719	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.000. Hence the assumption of sphericity is violated by the data and

hence the epsilon correction was applied. Greenhouse Geisser correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.719.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Artavasula					
Sphericity Assumed	2.263	2	1.131	5.539	0.006
Greenhouse-Geisser	2.263	1.395	1.622	5.539	0.014
Huynh-Feldt	2.263	1.439	1.572	5.539	0.013
Lower-bound	2.263	1	2.263	5.539	0.025
Error (Artavasula)					
Sphericity Assumed	13.071	64	0.204		
Greenhouse-Geisser	13.071	44.643	0.293		
Huynh-Feldt	13.071	46.046	0.284		
Lower-bound	13.071	32	0.408		

The difference in the mean scores of artavasula was tested using F-test along with the Greenhouse - Geisser correction. The result was found to be statistically significant at p=0.014. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.242±0.087 which was highly significant at p=0.027. The comparison between second and third assessment

showed a mean difference of 0.121±0.095 which was statistically insignificant at p=0.632 (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no statically significant change afterwards till the third assessment.

Pairwise Comparisons

(I) Artava sula	(J) Artava Sula	MD (I-J)	SE	Sig.b	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	0.242	0.087	0.027	0.022	0.463
	3	0.364	0.143	0.048	0.002	0.725
2	1	-0.242	0.087	0.027	-0.463	-0.022
	3	0.121	0.095	0.632	-0.119	0.361
3	1	-0.364	0.143	0.048	-0.725	-0.002
	2	-0.121	0.095	0.632	-0.361	0.119

GROUP – C - Descriptive Statistics

	Mean	SD
FU_1	1.8182	1.446
FU_2	1.4848	1.27772
FU_3	1.303	1.26206

The symptom of artavasula in group C during the follow-up period assessments showed a mean score of 1.818±1.446, which was reduced to 1.4848±1.277 during the second assessment. The mean score again reduced to 1.3030±1.262 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Artavasula	0.507	21.058	2	0	0.67	0.688	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Artavasula						
Sphericity Assumed	4.505	2	2.253	5.655	0.005	0.15
Greenhouse-Geisser	4.505	1.34	3.363	5.655	0.014	0.15
Huynh-Feldt	4.505	1.377	3.273	5.655	0.014	0.15
Lower-bound	4.505	1	4.505	5.655	0.024	0.15
Error (Artavasula)						
Sphericity Assumed	25.495	64	0.398			
Greenhouse-Geisser	25.495	42.866	0.595			
Huynh-Feldt	25.495	44.05	0.579			
Lower-bound	25.495	32	0.797			

Mauchly's Test of Sphericity - The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.000. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse Geisser correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.670.

Tests of Within Subjects Effects - The difference in the mean scores of artavasula was tested using F-test along with the Greenhouse - Geisser correction. The result was found to be statistically significant at p=0.014. The result indicates that the change in the mean score of artavasula significantly differed between assessments.

Pairwise Comparisons

(I) Artavasula	(J) Artavasula	MD (I-J)	SE	Sig.b	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	0.333	0.094	0.004	0.096	0.571
	3	0.515	0.195	0.038	0.022	1.008
2	1	-0.333	0.094	0.004	-0.571	-0.096
	3	0.182	0.16	0.789	-0.221	0.585
3	1	-0.515	0.195	0.038	-1.008	-0.022
	2	-0.182	0.16	0.789	-0.585	0.221

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.333±0.094 which was highly significant at p=0.004. The comparison between second and third assessment showed a mean difference of 0.182±0.160 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no statically significant change afterwards till the third assessment.

GROUP – D

	Mean	SD
FU_1	0.9394	0.93339
FU_2	0.6061	0.70442
FU_3	0.6061	0.74747

The symptom of artavasula during the follow-up period assessments showed a mean score of 0.9394±0.933, which was reduced to 0.6061±0.7044 during the second assessment. In the third assessment the mean score didn't change (0.6061±0.7474).

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Artavasula	0.919	2.628	2	0.269	0.925	0.979	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Artavasula						
Sphericity Assumed	2.444	2	1.222	7.652	0.001	0.193
Greenhouse-Geisser	2.444	1.85	1.322	7.652	0.001	0.193
Huynh-Feldt	2.444	1.958	1.248	7.652	0.001	0.193
Lower-bound	2.444	1	2.444	7.652	0.009	0.193
Error (Artavasula)						
Sphericity Assumed	10.222	64	0.16			
Greenhouse-Geisser	10.222	59.189	0.173			
Huynh-Feldt	10.222	62.66	0.163			
Lower-bound	10.222	32	0.319			

Mauchly's Test of Sphericity - The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with P=0.269. This indicates that the data has passed the assumption of sphericity.

Tests of Within Subjects Effects - The difference in the mean scores of artavasula was tested using F-test. The result was found to be statistically highly significant at p=0.001. The result indicates that the change in the mean score of artavasula significantly differed between assessments.

Pairwise Comparisons

(I) Artava Sula	(J) Artava Sula	MD (I-J)	SE	Sig.b	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	0.333	0.083	0.001	0.123	0.544
	3	0.333	0.104	0.009	0.072	0.595
2	1	-0.333	0.083	0.001	-0.544	-0.123
	3	0	0.107	1	-0.269	0.269
3	1	-0.333	0.104	0.009	-0.595	-0.072
	2	0	0.107	1	-0.269	0.269

Pairwise comparisons between assessments were performed. The comparison between the first and second assessments showed a mean difference of 0.333±0.083 which was statistically highly significant at p=0.001. The comparison between second and third assessment showed a mean difference of 0.000±0.107 which was statistically insignificant at p=1.0 (p>0.05). The result shows that the treatment produced significant change in

the symptom during the second comparison, while there was no significant change afterwards till the third assessment.

GROUP – E

	Mean	SD
FU_1	0.9394	0.93339
FU_2	0.6061	0.70442
FU_3	0.6061	0.74747

The symptom of artavasula during the follow-up period assessments showed a mean score of 0.9394±0.933, which was reduced to 0.6061±0.7044 during the second assessment. In the third assessment the mean score didn't change (0.6061±0.7474).

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Artavasula	0.919	2.628	2	0.269	0.925	0.979	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.269. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Artavasula						
Sphericity Assumed	2.444	2	1.222	7.652	0.001	0.193
Greenhouse-Geisser	2.444	1.85	1.322	7.652	0.001	0.193
Huynh-Feldt	2.444	1.958	1.248	7.652	0.001	0.193
Lower-bound	2.444	1	2.444	7.652	0.009	0.193
Error (Artavasula)						
Sphericity Assumed	10.222	64	0.16			
Greenhouse-Geisser	10.222	59.189	0.173			
Huynh-Feldt	10.222	62.66	0.163			
Lower-bound	10.222	32	0.319			

The difference in the mean scores of artavasula was tested using F-test. The result was found to be statistically highly significant at p=0.001. The result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

(I) Artava Sula	(J) Artava Sula	MD (I-J)	SE	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	0.333	0.083	0.001	0.123	0.544
	3	0.333	0.104	0.009	0.072	0.595
2	1	-0.333	0.083	0.001	-0.544	-0.123
	3	0	0.107	1	-0.269	0.269
3	1	-0.333	0.104	0.009	-0.595	-0.072
	2	0	0.107	1	-0.269	0.269

Pairwise comparisons between assessments were performed.The

comparison between the first and second assessments showed a mean difference of 0.333±0.083 which was statistically highly significant at p=0.001. The comparison between second and third assessment showed a mean difference of 0.000±0.107 which was statistically insignificant at p=1.0 (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment.

Descriptives - Artavasula - 1

	N	Mean	SD	SE
GROUP A	33	0.3333	0.54006	0.09401
GROUP B	33	0.2424	0.50189	0.08737
GROUP C	33	0.303	0.46669	0.08124
GROUP D	33	0.3333	0.47871	0.08333
GROUP E	33	0.3636	0.69903	0.12168
Total	165	0.3152	0.53881	0.04195

During first and second assessment the mean score of artavasula observed in Group A was 0.33±0.54, in Group B 0.24±0.50, in Group C 0.30±0.46, in Group D 0.33±0.47 and in Group E the mean score was 0.36±0.69.

ANOVA - Artavasula - 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.279	4	0.07	0.236	0.918
Within Groups	47.333	160	0.296		
Total	47.612	164			

Groupwise comparison during first and second assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.918. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding artavasula.

Descriptives - Artavasula - 2

	N	Mean	SD	SE
GROUP A	33	0	0.25	0.04352
GROUP A	33	0.1818	0.91701	0.15963
GROUP B	33	0.1212	0.5453	0.09492
GROUP C	33	0.0303	0.58549	0.10192
GROUP D	33	0	0.61237	0.1066
GROUP E	33	0.1212	0.64988	0.11313
Total	**165**	**0.0909**	**0.67008**	**0.05217**

During second and third assessment the mean score of artavasula observed in Group A was 0.18±0.91, in Group B 0.12±0.54, in Group C 0.03±0.58, in Group D 0.00±0.61 and in Group E the mean score was 0.12±0.64.

ANOVA - Artavasula -2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.727	4	0.182	0.399	0.809
Within Groups	72.909	160	0.456		
Total	73.636	164			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.809. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding artavasula.

Table – 4.1.62 Vastisula

GROUP – A - Descriptive Statistics

	Mean	SD
FU_1	0.4242	0.50189
FU_2	0.3636	0.4885
FU_3	0.2424	0.43519

The symptom of vastisula in group A were recorded as 0.42±0.501 during first follow-up assessment, which was reduced to 0.36±0.48 during the second assessment and later further reduced to 0.24±0.435 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Vastisula	0.604	15.612	2	0	0.717	0.741	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Vastisula					
Sphericity Assumed	0.566	2	0.283	3.797	0.028
Greenhouse-Geisser	0.566	1.433	0.395	3.797	0.043
Huynh-Feldt	0.566	1.482	0.382	3.797	0.041
Lower-bound	0.566	1	0.566	3.797	0.06
Error (Vastisula)					
Sphericity Assumed	4.768	64	0.074		
Greenhouse-Geisser	4.768	45.857	0.104		
Huynh-Feldt	4.768	47.413	0.101		
Lower-bound	4.768	32	0.149		

Mauchly's Test of Sphericity - The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at $p<0.001$. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse-Geisser epsilon correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.717.

Tests of Within Subjects Effects - The difference in the mean scores of vastisula was tested using F-test along with the Greenhouse-Geisser correction. The result was found to be statistically significant at $p=0.043$. the result indicates that the change in the mean score of vastisula significantly differed between assessments.

Pairwise Comparisons

(I) Udara Sula	(J) Udara Sula	MD (I-J)	SE	Sig.[a]	95% Confidence Interval for Difference[a] Lower Bound
1	2	0.061	0.042	0.481	-0.046
	3	0.182	0.081	0.095	-0.023
2	1	-0.061	0.042	0.481	-0.167
	3	0.121	0.072	0.31	-0.061
3	1	-0.182	0.081	0.095	-0.386
	2	-0.121	0.072	0.31	-0.304

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.061±0.042 which was insignificant at p=0.481. The comparison between second and third assessment showed a mean difference of 0.121±0.072 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment. The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction of 0.182±0.081 which was also statistically insignificant at p=0.095, indicating that there was a slight elevation in the symptoms during the third assessment.

GROUP – B - Descriptive Statistics

	Mean	SD
FU_1	0.303	0.46669
FU_2	0.1818	0.39167
FU_3	0.2424	0.43519

The symptom of vastisula in group B were recorded as 0.3030±0.4666 during first follow-up assessment, which was reduced to 0.1818±0.3916 during the second assessment and the mean was slightly elevated to 0.2424±0.435 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Vastisula	0.719	10.218	2	0.006	0.781	0.814	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.006. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.814.

Tests of Within-Subjects Effects

The difference in the mean scores of vastisula was tested using F-test along with the Huynh-Feldt correction. The result was found to be statistically insignificant at p=0.332. the result indicates that there was no statistically significant difference in the mean scores between three assessments (p=175). Hence multiple comparisons were not performed.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Vastisula					
Sphericity Assumed	0.242	2	0.121	1.094	0.341
Greenhouse-Geisser	0.242	1.562	0.155	1.094	0.329
Huynh-Feldt	0.242	1.627	0.149	1.094	0.332
Lower-bound	0.242	1	0.242	1.094	0.303
Error (Vastisula)					
Sphericity Assumed	7.091	64	0.111		
Greenhouse-Geisser	7.091	49.968	0.142		
Huynh-Feldt	7.091	52.071	0.136		
Lower-bound	7.091	32	0.222		

The difference in the mean scores of vastisula was tested using F-test along with the Huynh-Feldt correction. The result was found to be statistically insignificant at p=0.332. The result indicates that there was no statistically significant difference in the mean scores between three assessments (p=175). Hence multiple comparisons were not performed.

GROUP – C - Descriptive Statistics

	Mean	SD
FU_1	0.4242	0.50189
FU_2	0.3636	0.4885
FU_3	0.2424	0.43519

In Group C, the mean score of the symptom vastisula was 0.4242±0.5018 during the first assessment, which was reduced to 0.3636±0.4885 during the second assessment and the mean further reduced to 0.2424±0.4351 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Vastisula	0.604	15.612	2	0	0.717	0.741	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Vastisula						
Sphericity Assumed	0.566	2	0.283	3.797	0.028	0.106
Greenhouse-Geisser	0.566	1.433	0.395	3.797	0.043	0.106
Huynh-Feldt	0.566	1.482	0.382	3.797	0.041	0.106
Lower-bound	0.566	1	0.566	3.797	0.06	0.106
Error (Vastisula)						
Sphericity Assumed	4.768	64	0.074			
Greenhouse-Geisser	4.768	45.857	0.104			
Huynh-Feldt	4.768	47.413	0.101			
Lower-bound	4.768	32	0.149			

Mauchly's Test of Sphericity - The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.000. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse-Geisser epsilon correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.717.

Tests of Within Subjects Effects - The difference in the mean scores of vasti sula was tested using F-test along with the Greenhouse-Geisser correction. The result was found to be statistically significant at p=0.043. the result indicates that the change in the mean score of vastisula significantly differed between assessments.

Pairwise Comparisons

(I) Vasti sula	(J) Vasti sula	MD (I-J)	SE	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.061	0.042	0.481	-0.046	0.167
	3	0.182	0.081	0.095	-0.023	0.386
2	1	-0.061	0.042	0.481	-0.167	0.046
	3	0.121	0.072	0.31	-0.061	0.304
3	1	-0.182	0.081	0.095	-0.386	0.023
	2	-0.121	0.072	0.31	-0.304	0.061

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.061±0.042 which was statistically insignificant at p=0.48. The comparison between second and third assessment showed a mean difference of 0.121±0.072 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment. The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction of -0.182±0.081 which was also statistically insignificant at p=0.095, indicating that the reduction in the symptom was very slow.

GROUP – D

	Mean	SD
FU_1	0.2727	0.45227
FU_2	0.0303	0.17408
FU_3	0.0606	0.24231

In group D the symptom of vastisula were recorded as 0.2727±0.452 during first follow-up assessment, which was reduced to 0.0303±0.174 during the second assessment and the mean was slightly elevated to 0.06±0.2423 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Vastisula	0.404	28.071	2	0	0.627	0.64	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at $p<0.001$. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse-Geisser epsilon correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.627.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Vastisula						
Sphericity Assumed	1.152	2	0.576	8.812	0	0.216
Greenhouse-Geisser	1.152	1.253	0.919	8.812	0.003	0.216
Huynh-Feldt	1.152	1.28	0.899	8.812	0.003	0.216
Lower-bound	1.152	1	1.152	8.812	0.006	0.216
Error (Vastisula)						
Sphericity Assumed	4.182	64	0.065			
Greenhouse-Geisser	4.182	40.108	0.104			
Huynh-Feldt	4.182	40.966	0.102			
Lower-bound	4.182	32	0.131			

The difference in the mean scores of vastisula was tested using F-test along with the Greenhouse-Geisser correction. The result was found to be statistically highly significant at p=0.003. The result indicates that the change in the mean score of vastisula significantly differed between assessments.

Pairwise Comparisons

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.242±0.076 which was statistically significant at p=0.009. The comparison between second and third assessment showed a mean difference of -0.030±0.030 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment.

(I) Vasti sula	(J) Vasti sula	MD (I-J)	SE	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.242	0.076	0.009	0.051	0.434
	3	0.212	0.072	0.018	0.03	0.395
2	1	-0.242	0.076	0.009	-0.434	-0.051
	3	-0.03	0.03	0.974	-0.107	0.046
3	1	-0.212	0.072	0.018	-0.395	-0.03
	2	0.03	0.03	0.974	-0.046	0.107

The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction of -0.212±0.072 which was statistically significant at p=0.018, indicating that the there is consistent reduction in the symptom in third assessment.

GROUP – E

	Mean	SD
FU_1	0.2727	0.45227
FU_2	0.0303	0.17408
FU_3	0.0606	0.24231

In group E the symptom of vastisula were recorded as 0.2727±0.452 during first follow-up assessment, which was reduced to 0.0303±0.174 during the second assessment and the mean was slightly elevated to 0.06±0.2423 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Vastisula	0.404	28.071	2	0	0.627	0.64	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Vastisula						
Sphericity Assumed	1.152	2	0.576	8.812	0	0.216
Greenhouse-Geisser	1.152	1.253	0.919	8.812	0.003	0.216
Huynh-Feldt	1.152	1.28	0.899	8.812	0.003	0.216
Lower-bound	1.152	1	1.152	8.812	0.006	0.216
Error (Vastisula)						
Sphericity Assumed	4.182	64	0.065			
Greenhouse-Geisser	4.182	40.108	0.104			
Huynh-Feldt	4.182	40.966	0.102			
Lower-bound	4.182	32	0.131			

Mauchly's Test of Sphericity- The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at $p<0.001$. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse-Geisser epsilon correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.627.

Tests of Within-Subjects Effects- The difference in the mean scores of vastisula was tested using F-test along with the Greenhouse-Geisser correction. The result was found to be statistically highly significant at p=0.003. the result indicates that the change in the mean score of vastisula significantly differed between assessments.

Pairwise Comparisons

(I) Udara sula	(J) Udara sula	MD (I-J)	SE	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	.242	0.076	0.009	0.051	0.434
	3	.212	0.072	0.018	0.03	0.395
2	1	-.242	0.076	0.009	-0.434	-0.051
	3	-0.03	0.03	0.974	-0.107	0.046
3	1	-.212	0.072	0.018	-0.395	-0.03
	2	0.03	0.03	0.974	-0.046	0.107

Based on estimated marginal means.

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.242±0.076 which was statistically significant at p=0.009. The comparison between second and third assessment showed a mean difference of -0.030±0.030 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment. The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction

of -0.212±0.072 which was statistically significant at P=0.018, indicating that the there is consistent reduction in the symptom in third assessment.

Descriptives - Vastisula -1

	N	Mean	SD	SE
GROUP A	33	0.0606	0.24231	0.04218
GROUP B	33	0.1212	0.33143	0.0577
GROUP C	33	0.0303	0.17408	0.0303
GROUP D	33	0.2424	0.43519	0.07576
GROUP E	33	0.303	0.46669	0.08124
Total	**165**	**0.1515**	**0.35964**	**0.028**

The mean score of vastisula during first and second assessment observed in Group A was 0.06±0.24, in Group B 0.12±0.33, in Group C 0.03±0.17, in Group D 0.24±0.43 and in Group E the mean score was 0.30±0.46.

ANOVA - Vastisula - 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.818	4	0.455	3.75	0.006
Within Groups	19.394	160	0.121		
Total	21.212	164			

Groupwise comparison during first and second assessment was done using ONE WAY ANOVA test. The result was found to be highly significant statistically with a p-value 0.006. The result indicates that the change in the mean score of vastisula was significantly differed between groups.

Post Hoc Tests

Multiple Comparisons - Dependent Variable: Vastisula - 1

Tukey HSD

(I) Groups	(J) Groups	MD (I-J)	Std. Error	Sig.
GROUP A	GROUP B	-0.06061	0.08571	0.955
	GROUP C	0.0303	0.08571	0.997
	GROUP D	-0.18182	0.08571	0.216
	GROUP E	-.24242	0.08571	0.042
GROUP B	GROUP A	0.06061	0.08571	0.955
	GROUP C	0.09091	0.08571	0.826
	GROUP D	-0.12121	0.08571	0.619
	GROUP E	-0.18182	0.08571	0.216
GROUP C	GROUP A	-0.0303	0.08571	0.997
	GROUP B	-0.09091	0.08571	0.826
	GROUP D	-0.21212	0.08571	0.102
	GROUP E	-.27273	0.08571	0.015
GROUP D	GROUP A	0.18182	0.08571	0.216
	GROUP B	0.12121	0.08571	0.619
	GROUP C	0.21212	0.08571	0.102
	GROUP E	-0.06061	0.08571	0.955
GROUP E	GROUP A	0.24242	0.08571	0.042
	GROUP B	0.18182	0.08571	0.216
	GROUP C	0.27273	0.08571	0.015
	GROUP D	0.06061	0.08571	0.955

Group wise multiple comparison was done during first and second assessments. The comparison between the Group A and Group B showed a mean difference of -0.06±0.08 which was statistically insignificant at p=0.955.

The comparison between the Group A and C showed a mean difference of 0.03±0.08 which was statistically insignificant at p=0.997.

The comparison between the Group A and D showed a mean difference of -0.18±0.08 which was also statistically insignificant at p=0,216 The comparison between the Group A and E showed a mean difference of -0.24±0.08 which was statistically significant at p=0.042. The result shows that significant change occurs to vastisula in the Group E comparing to other groups during first and second assessments.

Descriptives - Vastisula 2

	N	Mean	SD	SE
GROUP A	33	0.1212	0.41515	0.07227
GROUP B	33	-0.0606	0.55562	0.09672
GROUP C	33	-0.0303	0.17408	0.0303
GROUP D	33	-0.0303	0.17408	0.0303
GROUP E	33	-0.0303	0.17408	0.0303
Total	**165**	**-0.0061**	**0.34032**	**0.02649**

The mean score of vastisula during second and third assessment observed in Group A was 0.12±0.41, in Group B -0.06±0.55, in Group C -0.03±0.17, in Group D -0.03±0.17 and in Group E the mean score was 0.03±0.17.

ANOVA - Vastisula - 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.691	4	0.173	1.51	0.202
Within Groups	18.303	160	0.114		
Total	**18.994**	**164**			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.202. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding vastisula during second and third assessment.

Table – 4.1.63 Udara gurutvam

GROUP - A

Descriptive Statistics

	Mean	SD
FU_1	0.1818	0.39167
FU_2	0.0909	0.29194
FU_3	0.1515	0.36411

In Group A, the mean score of the symptom udara gurutvam was 0.1818±0.3916 during the first assessment, which was reduced to 0.0909±0.2919 during the second assessment and the mean was slightly elevated to 0.1515±0.364 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Udara gurutvam	0.952	1.532	2	0.465	0.954	1	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with P=0.465. this indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Udara gurutvam					
Sphericity Assumed	0.141	2	0.071	1.418	0.25
Greenhouse-Geisser	0.141	1.908	0.074	1.418	0.25
Huynh-Feldt	0.141	2	0.071	1.418	0.25
Lower-bound	0.141	1	0.141	1.418	0.243
Error (Udara gurutvam)					
Sphericity Assumed	3.192	64	0.05		
Greenhouse-Geisser	3.192	61.055	0.052		
Huynh-Feldt	3.192	64	0.05		
Lower-bound	3.192	32	0.1		

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores

between three assessments (p=0.250). hence multiple comparisons were not performed.

GROUP B - Descriptive Statistics

	Mean	SD
FU_1	0.2121	0.41515
FU_2	0.0909	0.29194
FU_3	0.0909	0.29194

In Group B, the mean score of the symptom udara gurutvam was 0.2121±0.41515 during the first assessment, which was reduced to 0.0909±0.2919 during the second assessment and the mean was same 0.0909±0.2919 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse -Geisser	Epsilon[b] Huynh -Feldt	Lower -bound
U.gurutvam	0	.	2	.	0.5	0.5	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.5. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Udara gurutvam					
Sphericity Assumed	0.323	2	0.162	4.414	0.016
Greenhouse-Geisser	0.323	1	0.323	4.414	0.044
Huynh-Feldt	0.323	1	0.323	4.414	0.044
Lower-bound	0.323	1	0.323	4.414	0.044
Error (Udara gurutvam)					
Sphericity Assumed	2.343	64	0.037		
Greenhouse-Geisser	2.343	32	0.073		
Huynh-Feldt	2.343	32	0.073		
Lower-bound	2.343	32	0.073		

The difference in the mean scores of udara gurutvam was tested using F-test.The result was found to be statistically significant at p=0.016. The result indicates that the change in the mean score of udara gurutvam was significantly differed between assessments.

Pairwise Comparisons

(I) Ud. g'tm	(J) Ud. g'tm	MD (I-J)	Std. Error	Sig.[-]
1	2	0.121	0.058	0.131
	3	0.121	0.058	0.131
2	1	-0.121	0.058	0.131
	3	0	0	.
3	1	-0.121	0.058	0.131
	2	0	0	.

The comparison between the first and second assessments showed a mean difference of 0.121±0.058 which was insignificant at p=0.131. The

comparison between second and third assessment showed a mean difference of 0.121±0.072 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment. The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction of 0.182±0.081 which was also statistically insignificant at p=0.095, indicating that there was a slight elevation in the symptoms during the third assessment.

GROUP C - Descriptive Statistics

	Mean	SD
FU_1	0.1818	0.39167
FU_2	0.0909	0.29194
FU_3	0.1515	0.36411

In Group C, the mean score of the symptom udara gurutvam was 0.1818±0.3916 during the first assessment, which was reduced to 0.0909±0.2919 during the second assessment and the mean was slightly elevated to 0.1515±0.364 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Ud. g'tm	0.952	1.532	2	0.465	0.954	1	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.465. this indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Udara gurutvam						
Sphericity Assumed	0.141	2	0.071	1.418	0.25	0.042
Greenhouse-Geisser	0.141	1.908	0.074	1.418	0.25	0.042
Huynh-Feldt	0.141	2	0.071	1.418	0.25	0.042
Lower-bound	0.141	1	0.141	1.418	0.243	0.042
Error (Udara gurutvam)						
Sphericity Assumed	3.192	64	0.05			
Greenhouse-Geisser	3.192	61.055	0.052			
Huynh-Feldt	3.192	64	0.05			
Lower-bound	3.192	32	0.1			

The mean reduction in the scores for the symptom udara gurutvam was tested using repeated measures Analysis of variance and was found to be statistically significant p=0.042.The result indicates that the mean score for raktasrava significantly changed between three assessments.

Pairwise Comparisons

The comparison between the first and second assessments showed a mean difference of 0.091±0.051 which was insignificant at p=0.249. The comparison between second and third assessment showed a mean difference of -0.061±0.061 which was statistically insignificant (p>0.05).

Pairwise Comparisons

(I) Udara g'tvm	(J) Udara g'tvm	MD (I-J)	SE	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
1	2	0.091	0.051	0.249	-0.037	0.219
	3	0.03	0.053	1	-0.104	0.164
2	1	-0.091	0.051	0.249	-0.219	0.037
	3	-0.061	0.061	0.974	-0.214	0.093
3	1	-0.03	0.053	1	-0.164	0.104
	6	0.061	0.061	0.974	-0.093	0.214

GROUP – D

	Mean	SD
FU_1	0.2727	0.45227
FU_2	0.0606	0.24231
FU_3	0.0909	0.29194

The mean score of the symptom udara gurutvam in Group D was 0.2727±0.4522 during the first assessment, which was reduced to 0.0606±0.2423 during the second assessment and the mean was slightly elevated to 0.0909±0.2919 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Ud. g'tm	0.798	6.997	2	0.03	0.832	0.872	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.030. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.872.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Udara gurutvam						
Sphericity Assumed	0.869	2	0.434	5.417	0.007	
Greenhouse-Geisser	0.869	1.664	0.522	5.417	0.011	
Huynh-Feldt	0.869	1.744	0.498	5.417	0.01	
Lower-bound	0.869	1	0.869	5.417	0.026	
Error (Udara gurutvam)						
Sphericity Assumed	5.131	64	0.08			
Greenhouse-Geisser	5.131	53.242	0.096			
Huynh-Feldt	5.131	55.807	0.092			
Lower-bound	5.131	32	0.16			

The difference in the mean scores of udara gurutvam was tested using F-test along with the Huynh-Feldt correction. The result was found to be statistically significant at p=0.010. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

(I) Ud. g'tm	(J) Ud. g'tm	MD (I-J)	Std. Error	Sig.[a]
1	2	0.212	0.072	0.018
	3	0.182	0.081	0.095
2	1	-0.212	0.072	0.018
	3	-0.03	0.053	1
3	1	-0.182	0.081	0.095
	2	0.03	0.053	1

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.212±0.072 which was significant at p=0.18. The comparison between second and third assessment showed a mean difference of -0.030±0.053 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment. The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction of -0.182±0.081 which was also statistically insignificant at p=0.095, indicating that there was a slight elevation in the symptoms during the third assessment.

GROUP - E

	Mean	SD
FU_1	0.2727	0.45227
FU_2	0.0606	0.24231
FU_3	0.0909	0.29194

The mean score of the symptom udara gurutvam in Group E was 0.2727±0.4522 during the first assessment, which was reduced to 0.0606±0.2423 during the second assessment and the mean was slightly elevated to 0.0909±0.2919 during the third assessment.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Udara gurutvam						
Sphericity Assumed	0.869	2	0.434	5.417	0.007	0.145
Greenhouse-Geisser	0.869	1.664	0.522	5.417	0.011	0.145
Huynh-Feldt	0.869	1.744	0.498	5.417	0.01	0.145
Lower-bound	0.869	1	0.869	5.417	0.026	0.145
Error (Udara gurutvam)						
Sphericity Assumed	5.131	64	0.08			
Greenhouse-Geisser	5.131	53.242	0.096			
Huynh-Feldt	5.131	55.807	0.092			
Lower-bound	5.131	32	0.16			

Pairwise Comparisons

(I) Ud. g'tm	(J) Ud. g'tm	MD (I-J)	Std. Error	Sig.
1	2	0.212	0.072	0.018
	3	0.182	0.081	0.095
2	1	-0.212	0.072	0.018
	3	-0.03	0.053	1
3	1	-0.182	0.081	0.095
	2	0.03	0.053	

Tests of Within-Subjects Effects - The difference in the mean scores of udara gurutvam was tested using F-test along with the Huynh-Feldt correction. The result was found to be statistically significant at p=0.010. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise comparisons - Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.212±0.072 which was significant at p=0.018. The comparison between second and third assessment showed a mean difference of -0.030±0.053 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment. The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction of 0.182±0.081 which was also statistically insignificant at p=0.095, indicating that there was a slight elevation in the symptoms during the third assessment.

Descriptives - Udara gurutvam - 1

	N	Mean	SD	SE
GROUP A	33	0.0909	0.29194	0.05082
GROUP B	33	0.1212	0.33143	0.0577
GROUP C	33	0.0909	0.29194	0.05082
GROUP D	33	0.2121	0.41515	0.07227
GROUP E	33	0.2727	0.45227	0.07873
Total	**165**	**0.1576**	**0.36545**	**0.02845**

The mean score of udara gurutvam in Group A during first and second assessment observed was 0.09±0.29, in the Group B 0.12±0.33, in the Group C 0.09±0.29, in the Group D it was 0.21±0.41 and in the Group E the mean score was 0.27±0.45.

ANOVA - Udara gurutvam - 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.873	4	0.218	1.66	0.162
Within Groups	21.03	160	0.131		
Total	**21.903**	**164**			

Groupwise comparison during first and second assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.162. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding udara gurutvam .

Descriptives - Udara gurutvam - 2

	N	Mean	SD	SE
GROUP A	33	0.1212	0.41515	0.07227
GROUP B	33	-0.0606	0.55562	0.09672
GROUP C	33	-0.0303	0.17408	0.0303
GROUP D	33	-0.0303	0.17408	0.0303
GROUP E	33	-0.0303	0.17408	0.0303
Total	**165**	**-0.0061**	**0.34032**	**0.02649**

The mean score of udara gurutvam in Group A during second and third assessment observed was 0.12±0.41, in the Group B -0.06±0.55, in the Group C -0.03±0.17, in the Group D it was -0.03±0.17 and in the Group E the mean score was -0.03±0.17.

ANOVA - Udara gurutvam - 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.691	4	0.173	1.51	0.202
Within Groups	18.303	160	0.114		
Total	**18.994**	**164**			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.202. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding udara gurutvam .

Table – 4.1.64 Udaragrandhi

GROUP - A - Descriptive Statistics

	Mean	SD
FU_1	0.1212	0.33143
FU_2	0.0606	0.24231
FU_3	0.0909	0.29194

The symptom of feeling of udaragrandhi showed a mean score of

0.12±0.33 during the first follow-up assessment which was reduced to 0.06±0.24 in the second assessment and slightly elevated to 0.09±0.29 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
U.grandhi	0.645	13.616	2	0.001	0.738	0.765	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Udaragrandhi					
Sphericity Assumed	0.061	2	0.03	1	0.374
Greenhouse-Geisser	0.061	1.476	0.041	1	0.354
Huynh-Feldt	0.061	1.53	0.04	1	0.356
Lower-bound	0.061	1	0.061	1	0.325
Error (Udaragrandhi)					
Sphericity Assumed	1.939	64	0.03		
Greenhouse-Geisser	1.939	47.216	0.041		
Huynh-Feldt	1.939	48.949	0.04		
Lower-bound	1.939	32	0.061		

Mauchly's Test of Sphericity : Since the mean scores were not independent, the change in the mean scores were tested using repeated measures ANOVA (RM-ANOVA). The means were tested for the null hypothesis of equality of means across the assessments. The initial assumption

for RM-ANOVA, following sphericity, is tested using Mauchly's test of sphericity. The test was found to be statistically significant with p=0.001, and hence the assumption of sphericity is violated and Huynh-Feldt epsilon correction was applied by adjusting the degrees of freedom and the p-value was adjusted to p=0.765.

Tests of Within-Subjects Effects : The within-subjects variability was tested using F-test and was found to be statistically insignificant (p>0.05). This shows that there was no statistically significant change in the mean scores of symptom udaragrandhi .

GROUP B - Descriptive Statistics

	Mean	SD
FU_1	0.0606	0.24231
FU_2	0.0303	0.17408
FU_3	0.0606	0.24231

The symptom of feeling of udaragrandhi showed a mean score of 0.0606±0.2423 during the first follow-up assessment which was reduced to 0.0303±0.174 in the second assessment and slightly elevated to 0.0606±0.2423 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
U.grandhi	0	--	2	0.5	0.5	0.5	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with P=0.5. this indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Udaragrandhi					
Sphericity Assumed	0.02	2	0.01	1	0.374
Greenhouse-Geisser	0.02	1	0.02	1	0.325
Huynh-Feldt	0.02	1	0.02	1	0.325
Lower-bound	0.02	1	0.02	1	0.325
Error (Udaragrandhi)					
Sphericity Assumed	0.646	64	0.01		
Greenhouse-Geisser	0.646	32	0.02		
Huynh-Feldt	0.646	32	0.02		
Lower-bound	0.646	32	0.02		

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=374). hence multiple comparisons were not performed.

GROUP C - Descriptive Statistics

	Mean	SD
FU_1	0.1212	0.33143
FU_2	0.0606	0.24231
FU_3	0.0909	0.29194

The symptom of feeling of udaragrandhi showed a mean score of 0.12±0.33 during the first follow-up assessment which was reduced to 0.06±0.24 in the second assessment and slightly elevated to 0.09±0.29 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
U.grandhi	0.645	13.616	2	0.001	0.738	0.765	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.001. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.765.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Udaragrandhi						
Sphericity Assumed	0.061	2	0.03	1	0.374	0.03
Greenhouse-Geisser	0.061	1.476	0.041	1	0.354	0.03
Huynh-Feldt	0.061	1.53	0.04	1	0.356	0.03
Lower-bound	0.061	1	0.061	1	0.325	0.03
Error (Udaragrandhi)						
Sphericity Assumed	1.939	64	0.03			
Greenhouse-Geisser	1.939	47.216	0.041			
Huynh-Feldt	1.939	48.949	0.04			
Lower-bound	1.939	32	0.061			

The difference in the mean scores of udaragrandhi was tested using F-test along with the Huynh-Feldt correction. The result was found to be statistically significant at p=0.030. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

(I) U.grandhi	(J) U.grandhi	MD (I-J)	Std. Error	Sig.[a]
1	2	0.061	0.042	0.481
	3	0.03	0.053	1
2	1	-0.061	0.042	0.481
	3	-0.03	0.03	0.974
3	1	-0.03	0.053	1
	2	0.03	0.03	0.974

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second

assessments showed a mean difference of 0.061±0.042 which was insignificant at p=0.481. The comparison between second and third assessment showed a mean difference of -0.030±0.030 which was statistically insignificant (p>0.05). The overall reduction in the symptom from initial assessment and final assessment showed a mean reduction of 0.030±0.053 which was also statistically insignificant at p=1.0, indicating that there was no significant difference during the assessment period.

GROUP – 4

	Mean	**SD**
FU_1	0.0909	0.29194
FU_2	0	0
FU_3	0.0606	0.24231

The symptom of feeling of udaragrandhi showed a mean score of 0.0909±0.2919 during the first follow-up assessment which was reduced to 0.00±0.00 in the second assessment and slightly elevated to 0.0606±0.2423 in the third assessment.

Within Subjects Effect	**Mauchly's W**	**Approx. Chi-Square**	**df**	**Sig.**	**Greenhouse -Geisser**	**Epsilon[b] Huynh -Feldt**	**Lower -bound**
U.grandhi	0.931	2.203	2	0.332	0.936	0.992	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.33 this indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Udaragrandhi						
Sphericity Assumed	0.141	2	0.071	1.792	0.175	0.053
Greenhouse-Geisser	0.141	1.872	0.076	1.792	0.178	0.053
Huynh-Feldt	0.141	1.984	0.071	1.792	0.175	0.053
Lower-bound	0.141	1	0.141	1.792	0.19	0.053
Error (Udaragrandhi)						
Sphericity Assumed	2.525	64	0.039			
Greenhouse-Geisser	2.525	59.891	0.042			
Huynh-Feldt	2.525	63.475	0.04			
Lower-bound	2.525	32	0.079			

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.175). hence multiple comparisons were not performed.

GROUP - E

	Mean	SD
FU_1	0.0909	0.29194
FU_2	0	0
FU_3	0.0606	0.24231

The symptom of feeling of udaragrandhi showed a mean score of 0.0909±0.2919 during the first follow-up assessment which was reduced to 0.00±0.00 in the second assessment and slightly elevated to 0.0606±0.2423 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
U.grandhi	0.931	2.203	2	0.332	0.936	0.992	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.33 this indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=175). Hence multiple comparisons were not performed.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Udaragrandhi						
Sphericity Assumed	0.141	2	0.071	1.792	0.175	0.053
Greenhouse-Geisser	0.141	1.872	0.076	1.792	0.178	0.053
Huynh-Feldt	0.141	1.984	0.071	1.792	0.175	0.053
Lower-bound	0.141	1	0.141	1.792	0.19	0.053
Error (Udaragrandhi)						
Sphericity Assumed	2.525	64	0.039			
Greenhouse-Geisser	2.525	59.891	0.042			
Huynh-Feldt	2.525	63.475	0.04			
Lower-bound	2.525	32	0.079			

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=175). hence multiple comparisons were not performed.

Descriptives - Udaragrandhi 1

	N	Mean	SD	SE
GROUP A	33	0.0606	0.24231	0.04218
GROUP B	33	0.0303	0.17408	0.0303
GROUP C	33	0.0303	0.17408	0.0303
GROUP D	33	0.0909	0.29194	0.05082
GROUP E	33	0.0303	0.17408	0.0303
Total	**165**	**0.0485**	**0.21544**	**0.01677**

During first and second assessment the mean score of udaragrandhi observed in Group A was 0.06±0.24, in Group B 0.03±0.17, in Group C 0.03±0.17, in Group D 0.09±0.29 and in Group E the mean score was 0.03±0.17.

ANOVA - Udaragrandhi 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.097	4	0.024	0.516	0.724
Within Groups	7.515	160	0.047		
Total	7.612	164			

Groupwise comparison during first and second assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.724. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding feeling of udara grandhi.

Udaragrandhi 2

	N	Mean	SD	SE
GROUP A	33	-0.0303	0.17408	0.0303
GROUP B	33	-0.0303	0.17408	0.0303
GROUP C	33	-0.0303	0.17408	0.0303
GROUP D	33	-0.0606	0.24231	0.04218
GROUP E	33	-0.0303	0.17408	0.0303
Total	**165**	**-0.0364**	**0.18776**	**0.01462**

During second and third assessment the mean score of udaragrandhi observed in Group A was -0.03±0.17, in Group B -0.03±0.17, in Group C -0.03±0.17, in Group D -0.06±0.24 and in Group E the mean score was -0.03±0.17.

ANOVA - Udaragrandhi 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.024	4	0.006	0.168	0.954
Within Groups	5.758	160	0.036		
Total	5.782	164			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a p-value 0.954. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding feeling of udara grandhi.

Table – 4.1.65 Maidhuna Sula

GROUP - A - Descriptive Statistics

	Mean	SD
FU_1	0.1818	0.46466
FU_2	0.1212	0.41515
FU_3	0.1212	0.41515

The symptom of feeling of Maidhuna Sula showed a mean score of 0.181±0.464 during the first follow-up assessment which was reduced to 0.121±0.415 in the second assessment and during the second assessment and later in the third assessment also the mean value didn't change 0.121±0.415 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
M.sula	0.998	0.055	2	0.973	0.998	1	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.973. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III sum of Squares	Df	Mean Square	F	Sig.
Maidhuna Sula					
Sphericity Assumed	0.081	2	0.04	1.347	0.267
Greenhouse-Geisser	0.081	1.996	0.04	1.347	0.267
Huynh-Feldt	0.081	2	0.04	1.347	0.267
Lower-bound	0.081	1	0.081	1.347	0.254
Error (Maidhuna Sula)					
Sphericity Assumed	1.919	64	0.03		
Greenhouse-Geisser	1.919	63.887	0.03		
Huynh-Feldt	1.919	64	0.03		
Lower-bound	1.919	32	0.06		

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.267). Hence multiple comparisons were not performed.

GROUP B - Descriptive Statistics

	Mean	SD
FU_1	0.1818	0.39167
FU_2	0	0
FU_3	0.0606	0.24231

The symptom of feeling of Maidhuna Sula showed a mean score of 0.181±0.464 during the first follow-up assessment which was reduced to 0.000±0.000 during the second assessment and later in the third assessment the mean value slightly elevated to 0.06±0.242.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
M.Sula	0.699	11.097	2	0.004	0.769	0.8	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at

p=0.004. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new P value was corrected to 0.800.

Tests of Within-Subjects Effects

Source	Type III sum of Squares	Df	Mean Square	F	Sig.
Maidhuna Sula					
Sphericity Assumed	0.566	2	0.283	4.414	0.016
Greenhouse-Geisser	0.566	1.537	0.368	4.414	0.025
Huynh-Feldt	0.566	1.6	0.354	4.414	0.024
Lower-bound	0.566	1	0.566	4.414	0.044
Error (Maidhuna Sula)					
Sphericity Assumed	4.101	64	0.064		
Greenhouse-Geisser	4.101	49.197	0.083		
Huynh-Feldt	4.101	51.193	0.08		
Lower-bound	4.101	32	0.128		

The difference in the mean scores of Maidhuna Sula was tested using F-test along with the Huynh-Feldt correction. The result was found to be statistically significant at p=0.024. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.182±0.068 which was highly significant at p=0.036.

Maidhuna sula		MD (I-J)	SE	Sig.[a]	95% Confidence Interval for Difference[a]	
(I)	(J)				Lower Bound	Upper Bound
1	2	.182	0.068	0.036	0.01	0.354
	3	0.121	0.072	0.31	-0.061	0.304
2	1	-.182	0.068	0.036	-0.354	-0.01
	3	-0.061	0.042	0.481	-0.167	0.046
3	1	-0.121	0.072	0.31	-0.304	0.061
	2	0.061	0.042	0.481	-0.046	0.167

The comparison between second and third assessment showed a mean difference of 0.061±0.042 which was statistically insignificant p=0.48. The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment.

GROUP C - Descriptive Statistics

	Mean	SD
FU_1	0.1818	0.46466
FU_2	0.1212	0.41515
FU_3	0.1212	0.41515

The symptom of feeling of Maidhuna Sula showed a mean score of 0.181±0.464 during the first follow-up assessment which was reduced to 0.121±0.415 during the second assessment and later in the third assessment the mean value slightly elevated to 0.121±0.415.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
M.Sula	0.998	0.055	2	0.973	0.998	1	0.5

The mean scores were tested for sphericity assumption using Mauchly's test of sphericity and the test result was found to be statistically insignificant with p=0.973. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Maidhuna Sula						
Sphericity Assumed	0.081	2	0.04	1.347	0.267	0.04
Greenhouse-Geisser	0.081	1.996	0.04	1.347	0.267	0.04
Huynh-Feldt	0.081	2	0.04	1.347	0.267	0.04
Lower-bound	0.081	1	0.081	1.347	0.254	0.04
Error (Maidhuna Sula)						
Sphericity Assumed	1.919	64	0.03			
Greenhouse-Geisser	1.919	63.887	0.03			
Huynh-Feldt	1.919	64	0.03			
Lower-bound	1.919	32	0.06			

The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically significant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.267). Hence multiple comparisons were not performed.

GROUP – D

	Mean	SD
FU_1	0.3333	0.69222
FU_2	0.2727	0.6742
FU_3	0.303	0.68396

The symptom of maidhuna sula showed a mean score of 0.333±0.692 during the first follow-up assessment which was reduced to 0.272±0.674 in the second assessment and during the second assessment and later in the third assessment also the mean value slightly elevated 0.303±0.683 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
M.Sula	0.645	13.616	2	0.001	0.738	0.765	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.001. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.765.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Maidhuna Sula						
Sphericity Assumed	0.061	2	0.03	1	0.374	0.03
Greenhouse-Geisser	0.061	1.476	0.041	1	0.354	0.03
Huynh-Feldt	0.061	1.53	0.04	1	0.356	0.03
Lower-bound	0.061	1	0.061	1	0.325	0.03
Error (Maidhuna Sula)						
Sphericity Assumed	1.939	64	0.03			
Greenhouse-Geisser	1.939	47.216	0.041			
Huynh-Feldt	1.939	48.949	0.04			
Lower-bound	1.939	32	0.061			

Tests of Within-Subjects Effects - The difference in the mean scores of maidhuna sula was tested using F-test along with the Huynh-Feldt correction. The result was found to be statistically significant at p=0.030. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

Maidhuna sula		MD (I-J)	SE	Sig.[a]	95% Confidence Interval for Difference[a]	
(I)	(J)				Lower Bound	Upper Bound
1	2	0.061	0.042	0.481	-0.046	0.167
	3	0.03	0.053	1	-0.104	0.164
2	1	-0.061	0.042	0.481	-0.167	0.046
	3	-0.03	0.03	0.974	-0.107	0.046
3	1	-0.03	0.053	1	-0.164	0.104
	2	0.03	0.03	0.974	-0.046	0.107

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.061±0.042 which was in significant at p=0.481. The comparison between second and third assessment showed a mean difference of -0.030±0.053 which was statistically also insignificant (p>0.05) indicating that there was no significant difference during the assessment period.

GROUP - E

	Mean	SD
FU_1	0.3333	0.69222
FU_2	0.2727	0.6742
FU_3	0.303	0.68396

The symptom of maidhuna sula showed a mean score of 0.333±0.692 during the first follow-up assessment which was reduced to 0.272±0.674 in the second assessment and during the second assessment and later in the third assessment also the mean value didn't change 0.303±0. 683 in the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
M.Sula	0.645	13.616	2	0.001	0.738	0.765	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.001. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.765.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Maidhuna Sula						
Sphericity Assumed	0.061	2	0.03	1	0.374	0.03
Greenhouse-Geisser	0.061	1.476	0.041	1	0.354	0.03
Huynh-Feldt	0.061	1.53	0.04	1	0.356	0.03
Lower-bound	0.061	1	0.061	1	0.325	0.03
Error (Maidhuna Sula)						
Sphericity Assumed	1.939	64	0.03			
Greenhouse-Geisser	1.939	47.216	0.041			
Huynh-Feldt	1.939	48.949	0.04			
Lower-bound	1.939	32	0.061			

The difference in the mean scores of maidhuna sula was tested using F-test along with the Huynh-Feldt correction. The result was found to be statistically significant at p=0.030. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

Maidhuna sula					95% Confidence Interval for Difference[a]	
(I)	(J)	MD (I-J)	SE	Sig.[a]	Lower Bound	Upper Bound
1	2	0.061	0.042	0.481	-0.046	0.167
	3	0.03	0.053	1	-0.104	0.164
2	1	-0.061	0.042	0.481	-0.167	0.046
	3	-0.03	0.03	0.974	-0.107	0.046
3	1	-0.03	0.053	1	-0.164	0.104
	2	0.03	0.03	0.974	-0.046	0.107

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.061±0.042 which was in significant at p=0.481. The comparison between second and third assessment showed a mean difference of -0.030±0.053 which was statistically insignificant (p>0.05), indicating that there was no significant difference during the assessment period.

Descriptives - Maidhuna Sula 1

	N	Mean	SD	SE
GROUP A	33	0.0606	0.24231	0.04218
GROUP B	33	0.1818	0.39167	0.06818
GROUP C	33	-0.0303	0.17408	0.0303
GROUP D	33	0.0606	0.24231	0.04218
GROUP E	33	0.1515	0.36411	0.06338
Total	**165**	**0.0848**	**0.30053**	**0.0234**

During first and second assessment the mean score of maidhuna sula observed in Group A was 0.06±0.24, in Group B 0.18±0.39, in Group C -0.03±0.17, in Group D 0.06±0.24 and in Group E 0.15±0.36.

ANOVA - Maidhuna Sula 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.933	4	0.233	2.69	0.033
Within Groups	13.879	160	0.087		
Total	14.812	164			

Groupwise comparison during first and second assessment was done using one way ANOVA test. The result was found to be statistically significant with a p-value 0.033. The result indicates that the change in the mean score of maidhuna sula was significantly differed between groups.

Post Hoc Tests

Group wise multiple comparison was done during Group A and second assessments. The comparison between the and Group B showed a mean difference of -0.12±0.07 which was statistically insignificant at p=0.454. The comparison between the Group A and Group C showed a mean difference of 0.09±0.07 which was statistically insignificant at p=0.720.

The comparison between the Group A and Group D showed a mean difference of 0.00±0.07 which was also statistically insignificant at p=1.00. The comparison between the Group A and Group E showed a mean difference of 0.03±0.07 which was statistically again insignificant at p=0.720.

The result shows that all groups got equal result regarding the symptom maidhuna sula.

Post Hoc Tests

Multiple Comparisons - Dependent Variable: Maidhuna Sula 2

Tukey HSD

(I) Groups	(J) Groups	MD (I-J)	Std. Error	Sig.
GROUP A	GROUP B	-0.12121	0.07251	0.454
	GROUP C	0.09091	0.07251	0.72
	GROUP D	0	0.07251	1
	GROUP E	-0.09091	0.07251	0.72
GROUP B	GROUP A	0.12121	0.07251	0.454
	GROUP C	.21212	0.07251	0.032
	GROUP D	0.12121	0.07251	0.454
	GROUP E	0.0303	0.07251	0.994
GROUP C	GROUP A	-0.09091	0.07251	0.72
	GROUP B	-.21212	0.07251	0.032
	GROUP D	-0.09091	0.07251	0.72
	GROUP E	-0.18182	0.07251	0.094
GROUP D	GROUP A	0	0.07251	1
	GROUP B	-0.12121	0.07251	0.454
	GROUP C	0.09091	0.07251	0.72
	GROUP E	-0.09091	0.07251	0.72
GROUP E	GROUP A	0.09091	0.07251	0.72
	GROUP B	-0.0303	0.07251	0.994
	GROUP C	0.18182	0.07251	0.094
	GROUP D	0.09091	0.07251	0.72

Descriptives - Maidhuna Sula - 2

	N	Mean	SD	SE
GROUP A	33	0	0.25	0.04352
GROUP B	33	-0.0606	0.24231	0.04218
GROUP C	33	0	0	0
GROUP D	33	-0.0303	0.17408	0.0303
GROUP E	33	0.0303	0.17408	0.0303
Total	**165**	**-0.0121**	**0.19089**	**0.01486**

During second and third assessment the mean score of maidhuna sula observed in Group A was 0.00±0.25, in Group B -0.06 +0.24, in Group C 0.00±0.00, in Group D -0.03±0.17 and in Group E 0.03±0.17

ANOVA - Maidhuna Sula - 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.158	4	0.039	1.083	0.367
Within Groups	5.818	160	0.036		
Total	5.976	164			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment (p=0.367). Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding maidhuna sula.

Table – 4.1.66 Yonisrava

GROUP - A - Descriptive Statistics

	Mean	SD
FU_1	0.1212	0.33143
FU_2	0.0909	0.29194
FU_3	0.0606	0.24231

The symptom of yonisrava in group A during the follow-up period assessments showed a mean score of 0.12±0.33, which was reduced to 0.09±0.29 during the second assessment. The mean score again reduced to 0.06±0.24 during the third assessment.

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Yonisrava	0.773	7.972	2	0.019	0.815	0.853	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.019. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new P value was corrected to 0.853.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Yonisrava					
Sphericity Assumed	0.061	2	0.03	1.524	0.226
Greenhouse-Geisser	0.061	1.63	0.037	1.524	0.228
Huynh-Feldt	0.061	1.706	0.036	1.524	0.228
Lower-bound	0.061	1	0.061	1.524	0.226
Error (Yonisrava)					
Sphericity Assumed	1.273	64	0.02		
Greenhouse-Geisser	1.273	52.17	0.024		
Huynh-Feldt	1.273	54.581	0.023		
Lower-bound	1.273	32	0.04		

The difference in the mean scores of yonisrava was tested using F-test along with the Huynh-Feldt correction. The test was found to be statistically insignificant with a p=0.228. The result indicates that there was no statistically significant difference in the mean scores between three assessments (p=0.228). Hence multiple comparisons were not performed.

GROUP B- Descriptive Statistics

	Mean	SD
FU_1	0.3333	0.47871
FU_2	0.0606	0.24231
FU_3	0	0

The symptom of yonisrava in group B during the follow-up period assessments showed a mean score of 0.33±0.47, which was reduced to 0.06±0.24 during the second assessment. The mean score again reduced to 0.00±0.00 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Yonisrava	0.58	16.89	2	0	0.704	0.727	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.030. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Greenhouse - Geisser correction was applied as the epsilon was less than 0.75. So, the new p-value was corrected to 0.704.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Yonisrava					
Sphericity Assumed	2.081	2	1.04	12.677	0
Greenhouse-Geisser	2.081	1.408	1.477	12.677	0
Huynh-Feldt	2.081	1.454	1.431	12.677	0
Lower-bound	2.081	1	2.081	12.677	0.001
Error (Yonisrava)					
Sphericity Assumed	5.253	64	0.082		
Greenhouse-Geisser	5.253	45.069	0.117		
Huynh-Feldt	5.253	46.525	0.113		
Lower-bound	5.253	32	0.164		

The difference in the mean scores of yonisrava was tested using F-test along with the Greenhouse – Geisser correction. The result was found to be statistically highly significant at P=0.000. the result indicates that the change in the mean score of pain significantly differed between assessments.

Pairwise Comparisons

(I) Yoni srava	(J) Yoni srava	MD (I-J)	SE	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
1	2	0.273	0.079	0.005	0.074	0.472
	3	0.333	0.083	0.001	0.123	0.544
2	1	-0.273	0.079	0.005	-0.472	-0.074
	3	0.061	0.042	0.481	-0.046	0.167
3	1	-0.333	0.083	0.001	-0.544	-0.123
	2	-0.061	0.042	0.481	-0.167	0.046

Pairwise comparisons between assessments were performed after applying Bonferroni corrections. The comparison between the first and second assessments showed a mean difference of 0.273±0.079 which was significant at P=0.005. The comparison between second and third assessment showed a mean difference of 0.061±0.042 which was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was a significant reduction occurs on the third assessment.

GROUP C - Descriptive Statistics

	Mean	SD
FU_1	0.1212	0.33143
FU_2	0.0909	0.29194
FU_3	0.0606	0.24231

The symptom of yonisrava in group C during the follow-up period assessments showed a mean score of 0.12±0.33, which was reduced to 0.09±0.29 during the second assessment. The mean score again reduced to 0.06±0.24 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon Huynh-Feldt	Lower-bound
Yonisrava	0.773	7.972	2	0.019	0.815	0.853	0.5

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.019. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.853.

The difference in the mean scores of yonisrava was tested using

F-test along with the Huynh-Feldt correction. The test was found to be statistically insignificant with a p=0.228. This indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Yonisrava						
Sphericity Assumed	0.061	2	0.03	1.524	0.226	0.045
Greenhouse-Geisser	0.061	1.63	0.037	1.524	0.228	0.045
Huynh-Feldt	0.061	1.706	0.036	1.524	0.228	0.045
Lower-bound	0.061	1	0.061	1.524	0.226	0.045
Error (Yonisrava)						
Sphericity Assumed	1.273	64	0.02			
Greenhouse-Geisser	1.273	52.17	0.024			
Huynh-Feldt	1.273	54.581	0.023			
Lower-bound	1.273	32	0.04			

The difference in the mean scores of yonisrava was tested using F-test along with the Huynh-Feldt correction. The test was found to be statistically insignificant with a p=0.228. The result indicates that there was no statistically significant difference in the mean scores between three assessments (p=0.228). Hence multiple comparisons were not performed.

GROUP – D

	Mean	SD
FU_1	0.1818	0.39167
FU_2	0.1515	0.36411
FU_3	0.0606	0.24231

The symptom of yonisrava in group D during the follow-up period assessments showed a mean score of 0.18±0.39, which was reduced to 0.15±0.36 during the second assessment. The mean score again reduced to 0.06±0.24 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Yonisrava	0.653	13.203	2	0.001	0.742	0.77	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Yonisrava						
Sphericity Assumed	0.263	2	0.131	1.312	0.276	0.039
Greenhouse-Geisser	0.263	1.485	0.177	1.312	0.272	0.039
Huynh-Feldt	0.263	1.54	0.17	1.312	0.273	0.039
Lower-bound	0.263	1	0.263	1.312	0.26	0.039
Error (Yonisrava)						
Sphericity Assumed	6.404	64	0.1			
Greenhouse-Geisser	6.404	47.519	0.135			
Huynh-Feldt	6.404	49.292	0.13			
Lower-bound	6.404	32	0.2			

Mauchly's Test of Sphericity :- The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test

for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.001. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh - Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.704.

The difference in the mean scores of yonisrava was tested using F-test along with the Huynh-Feldt correction. The test was found to be statistically insignificant with a p=0.273. This indicates that the data has passed the assumption of sphericity.

GROUP - E

	Mean	**SD**
FU__1	0.1818	0.39167
FU__2	0.1515	0.36411
FU__3	0.0606	0.24231

The symptom of yonisrava in group E during the follow-up period assessments showed a mean score of 0.18±0.39, which was reduced to 0.15±0.36 during the second assessment. The mean score again reduced to 0.06±0.24 during the third assessment.

Mauchly's Test of Sphericity

The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using

Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.001. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh - Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.704.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon Huynh-Feldt	Lower-bound
Yonisrava	0.653	13.203	2	0.001	0.742	0.77	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Yonisrava						
Sphericity Assumed	0.263	2	0.131	1.312	0.276	0.039
Greenhouse-Geisser	0.263	1.485	0.177	1.312	0.272	0.039
Huynh-Feldt	0.263	1.54	0.17	1.312	0.273	0.039
Lower-bound	0.263	1	0.263	1.312	0.26	0.039
Error (Yonisrava)						
Sphericity Assumed	6.404	64	0.1			
Greenhouse-Geisser	6.404	47.519	0.135			
Huynh-Feldt	6.404	49.292	0.13			
Lower-bound	6.404	32	0.2			

The difference in the mean scores of yonisrava was tested using F-test along with the Huynh-Feldt correction. The test was found to be statistically insignificant with a p=0.273. The result indicates that there was no

statistically significant difference in the mean scores between three assessments (p=0.273). Hence multiple comparisons were not performed.

Descriptives - Yonisrava 1

	N	Mean	SD	SE
GROUP A	33	0.0303	0.17408	0.0303
GROUP B	33	0.2727	0.45227	0.07873
GROUP C	33	-0.0909	0.45851	0.07982
GROUP D	33	0.0303	0.52944	0.09216
GROUP E	33	0.1515	0.36411	0.06338
Total	165	0.0788	0.42753	0.03328

During first and second assessment the mean score of yonisrava observed in Group A was 0.03±0.17, in Group B 0.27 +0.45, in Group C -0.09±0.45, in Group D 0.03±0.52 and in Group E the mean score was 0.15±0.36.

ANOVA - Yonisrava 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.521	4	0.63	3.673	0.007
Within Groups	27.455	160	0.172		
Total	29.976	164			

Groupwise comparison during first and second assessment was done using ONE WAY ANOVA test. The result was found to be highly

significant statistically with a P value 0.007. The result indicates that the change in the mean score of yonisrava was significantly differed between groups.

Post Hoc Tests

Multiple Comparisons - Dependent Variable: Yonisrava 2

Tukey HSD

(I) Groups	(J) Groups	MD (I-J)	Std. Error	Sig.
GROUP A	GROUP B	-0.24242	0.10198	0.127
	GROUP C	0.12121	0.10198	0.758
	GROUP D	0	0.10198	1
	GROUP E	-0.12121	0.10198	0.758
GROUP B	GROUP A	0.24242	0.10198	0.127
	GROUP C	.36364	0.10198	0.004
	GROUP D	0.24242	0.10198	0.127
	GROUP E	0.12121	0.10198	0.758
GROUP C	GROUP A	-0.12121	0.10198	0.758
	GROUP B	-.36364	0.10198	0.004
	GROUP D	-0.12121	0.10198	0.758
	GROUP E	-0.24242	0.10198	0.127
GROUP D	GROUP A	0	0.10198	1
	GROUP B	-0.24242	0.10198	0.127
	GROUP C	0.12121	0.10198	0.758
	GROUP E	-0.12121	0.10198	0.758
GROUP E	GROUP A	0.12121	0.10198	0.758
	GROUP B	-0.12121	0.10198	0.758
	GROUP C	0.24242	0.10198	0.127
	GROUP D	0.12121	0.10198	0.758

Group wise multiple comparison was done during first and second assessments. The comparison between the Group A and Group B showed a mean difference of -0.24±0.10 which was statistically insignificant at p=0.127. The comparison between the Group A and Group C showed a mean difference of 0.12±0.10 which was statistically insignificant at p=0.758.

The comparison between the Group A and Group D showed a mean difference of 0.00±0.10 which was also statistically insignificant at P=1.00 The comparison between the Group A and Group E showed a mean difference of -0.12±0.10 which was statistically insignificant at p=0.758. The comparison between the Group B and Group C showed a mean difference of 0.36±0.10 which was statistically significant p-value at 0.004. The result shows that significant change occurs to yonisrava in the Group B comparing to other groups during first and second assessments.

Yonisrava 2

	N	Mean	SD	SE
GROUP A	33	0.0303	0.17408	0.0303
GROUP B	33	0.0606	0.24231	0.04218
GROUP C	33	0.2424	0.43519	0.07576
GROUP D	33	0.0909	0.29194	0.05082
GROUP E	33	0.0606	0.24231	0.04218
Total	**165**	**0.097**	**0.29682**	**0.02311**

During second and third assessment the mean score of yonisrava observed in Group A was 0.03±0.17, in Group B 0.06 +0.24, in Group C

0.24±0.43, in Group D 0.09±0.29 and in Group E the mean score was 0.06±0.24.

ANOVA - Yonisrava 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.933	4	0.233	2.762	0.03
Within Groups	13.515	160	0.084		
Total	14.448	164			

Groupwise comparison during second and third assessment was done using ONE WAY ANOVA test. The result was found to be significant statistically with a p-value 0.030. The result indicates that the change in the mean score of yonisrava was significantly differed between groups.

Post Hoc Tests

Group wise multiple comparison was done during second and third assessments. The comparison between the Group A and Group B showed a mean difference of -0.03±0.07 which was statistically insignificant at p=0.993. The comparison between the Group A and Group C showed a mean difference of -0.21±0.07 which was statistically significant at p=0.028.

The comparison between the Group A and Group D showed a mean difference of -0.06±0.07 which was also statistically insignificant at P=0.915. The comparison between the Group A and Group E showed a mean difference of -0.03±0.07 which was statistically insignificant at p=0.993. The result shows that significant change occurs to yonisrava in the Group C comparing to other groups during second and third assessments.

Post Hoc Tests

Multiple Comparisons - Dependent Variable: Yonisrava 2

Tukey HSD

(I) Groups	(J) Groups	MD (I-J)	Std. Error	Sig.
GROUP A	GROUP B	-0.0303	0.07155	0.993
	GROUP C	-.21212	0.07155	0.028
	GROUP D	-0.06061	0.07155	0.915
	GROUP E	-0.0303	0.07155	0.993
GROUP B	GROUP A	0.0303	0.07155	0.993
	GROUP C	-0.18182	0.07155	0.087
	GROUP D	-0.0303	0.07155	0.993
	GROUP E	0	0.07155	1
GROUP C	GROUP A	.21212	0.07155	0.028
	GROUP B	0.18182	0.07155	0.087
	GROUP D	0.15152	0.07155	0.218
	GROUP E	0.18182	0.07155	0.087
GROUP D	GROUP A	0.06061	0.07155	0.915
	GROUP B	0.0303	0.07155	0.993
	GROUP C	-0.15152	0.07155	0.218
	GROUP E	0.0303	0.07155	0.993
GROUP E	GROUP A	0.0303	0.07155	0.993
	GROUP B	0	0.07155	1
	GROUP C	-0.18182	0.07155	0.087
	GROUP D	-0.0303	0.07155	0.993

Table – 4.1.67 Katisula

GROUP - A - Descriptive Statistics

	Mean	SD
FU_1	0.3333	0.47871
FU_2	0.2121	0.41515
FU_3	0.1212	0.33143

The symptom of Katisula in group A during the follow-up period assessments showed a mean score of 0.33±0.47, which was reduced to 0.21±0.41 during the second assessment. The mean score again reduced to 0.12±0.33 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Katisula	0.921	2.538	2	0.281	0.927	0.982	0.5

The difference in the means during three assessment in the symptom of Katisula was tested using the repeated measure ANOVA as the assessments violated the assumption of independence. Mauchly's test for sphericity was performed initially to check whether the data follows sphericity. The test was found to be statistically insignificant with a p=0.281. The results shows that the data follows sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Katisula					
Sphericity Assumed	0.747	2	0.374	4.041	0.022
Greenhouse-Geisser	0.747	1.854	0.403	4.041	0.025
Huynh-Feldt	0.747	1.963	0.381	4.041	0.023
Lower-bound	0.747	1	0.747	4.041	0.053
Error (Katisula)					
Sphericity Assumed	5.919	64	0.092		
Greenhouse-Geisser	5.919	59.336	0.1		
Huynh-Feldt	5.919	62.831	0.094		
Lower-bound	5.919	32	0.185		

Tests of Within-Subjects Contrasts

Source	Katisula	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Kati	Linear	0.742	1	0.742	6.323	0.017	
sula	Quadratic	0.005	1	0.005	0.075	0.786	
Error	Linear	3.758	32	0.117			
(Katisula)	Quadratic	2.162	32	0.068			

The difference in means during each assessment was tested using F-test and was found to be statistically significant with p=0.022 and an F ratio of 4.041. The result indicates that there is a significant change in the mean scores across the three assessments.

Pairwise Comparisons

(I) Kati Sula	(J) Kati Sula	MD (I-J)	SE	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.121	0.072	0.31	-0.061	0.304
	3	0.212	0.084	0.051	-0.001	0.425
2	1	-0.121	0.072	0.31	-0.304	0.061
	3	0.091	0.067	0.551	-0.078	0.26
3	1	-0.212	0.084	0.051	-0.425	0.001
	2	-0.091	0.067	0.551	-0.26	0.078

The means were further tested using pairwise multiple comparisons after applying Bonferroni correction. The comparison between first and second assessment showed a mean difference of 0.121±0.072 which was statistically insignificant (p=0.310). The assessment between second and third assessments showed a mean difference of 0.091±0.067 which was also statistically insignificant (p=0.551). But the overall change in the mean during the initial and final assessments showed a significant difference (p=0.05) with a mean difference of 0.212±0.084. The results shows that the treatment produced an overall significant change in the symptom of Katisula, but the change between each assessment were not profound enough to produce a statistical significance.

GROUP B - Descriptive Statistics

	Mean	SD
FU_1	0.3333	0.47871
FU_2	0.303	0.46669
FU_3	0.1818	0.39167

In Group B, the mean score of the symptom katisula was 0.333±0.478 during the first assessment, which was reduced to 0.3030±0.466 during the second assessment and the mean score was again reduced to 0.1818±0.391 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Katisula	0.952	1.532	2	0.465	0.954	1	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Katisula					
Sphericity Assumed	0.424	2	0.212	1.418	0.25
Greenhouse-Geisser	0.424	1.908	0.222	1.418	0.25
Huynh-Feldt	0.424	2	0.212	1.418	0.25
Lower-bound	0.424	1	0.424	1.418	0.243
Error (Katisula)					
Sphericity Assumed	9.576	64	0.15		
Greenhouse-Geisser	9.576	61.055	0.157		
Huynh-Feldt	9.576	64	0.15		
Lower-bound	9.576	32	0.299		

Mauchly's Test of Sphericity - The difference in the means during three assessment in the symptom of Katisula was tested using the repeated measure ANOVA as the assessments violated the assumption of independence. Mauchly's test for sphericity was performed initially to check whether the

data follows sphericity. The test was found to be statistically insignificant with a p=0.465. this indicates that the data has passed the assumption of sphericity.

Tests of Within-Subjects Effects - The mean differences across the three assessments were then tested using the RM-ANOVA and the test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between three assessments (p=0.250). Hence multiple comparisons were not performed.

GROUP C - Descriptive Statistics

	Mean	SD
FU_1	0.3333	0.47871
FU_2	0.2121	0.41515
FU_3	0.1212	0.33143

The symptom of katisula in group C during the follow-up period assessments showed a mean score of 0.33±0.47, which was reduced to 0.21±0.41 during the second assessment. The mean score again reduced to 0.12±0.33 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Katisula	0.921	2.538	2	0.281	0.927	0.982	0.5

Mauchly's Test of Sphericity - The difference in the means during

three assessment in the symptom of Katisula was tested using the repeated measure ANOVA as the assessments violated the assumption of independence. Mauchly's test for sphericity was performed initially to check whether the data follows sphericity. The test was found to be statistically insignificant with a p=0.281. The results shows that the data follows sphericity.

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Katisula						
Sphericity Assumed	0.747	2	0.374	4.041	0.022	0.112
Greenhouse-Geisser	0.747	1.854	0.403	4.041	0.025	0.112
Huynh-Feldt	0.747	1.963	0.381	4.041	0.023	0.112
Lower-bound	0.747	1	0.747	4.041	0.053	0.112
Error (Katisula)						
Sphericity Assumed	5.919	64	0.092			
Greenhouse-Geisser	5.919	59.336	0.1			
Huynh-Feldt	5.919	62.831	0.094			
Lower-bound	5.919	32	0.185			

The difference in means during each assessment was tested using F-test and was found to be statistically significant with p=0.022 and an F ratio of 4.041. The result indicates that there is a significant change in the mean scores across the three assessments.

Pairwise Comparisons

(I) Kati Sula	(J) Kati Sula	MD (I-J)	SE	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
1	2	0.121	0.072	0.31	-0.061	0.304
	3	0.212	0.084	0.051	-0.001	0.425
2	1	-0.121	0.072	0.31	-0.304	0.061
	3	0.091	0.067	0.551	-0.078	0.26
3	1	-0.212	0.084	0.051	-0.425	0.001
	2	-0.091	0.067	0.551	-0.26	0.078

The means were further tested using pairwise multiple comparisons after applying Bonferroni correction. The comparison between first and second assessment showed a mean difference of 0.121±0.072 which was statistically insignificant (p=0.310). The assessment between second and third assessments showed a mean difference of 0.091±0.067 which was also statistically insignificant (p=0.551). But the overall change in the mean during the initial and final assessments showed a significant difference (p=0.05) with a mean difference of 0.212±0.084. The results shows that the treatment produced an overall significant change in the symptom of katisula, but the change between each assessment were not profound enough to produce a statistical significance.

GROUP – D

	Mean	SD
FU_1	0.5152	0.50752
FU_2	0.303	0.46669
FU_3	0.2727	0.45227

The symptom of katisula in group D during the follow-up period assessments showed a mean score of 0.33±0.50, which was reduced to 0.3030±0.466 during the second assessment. The mean score again reduced to 0.27±0.45 during the third assessment.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Factor 1 Katisula	0.802	6.825	2	0.033	0.835	0.876	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Factor-1 Katisula						
Sphericity Assumed	1.152	2	0.576	3.025	0.056	0.086
Greenhouse-Geisser	1.152	1.67	0.69	3.025	0.066	0.086
Huynh-Feldt	1.152	1.751	0.658	3.025	0.063	0.086
Lower-bound	1.152	1	1.152	3.025	0.092	0.086
Error (Factor-1 Katisula)						
Sphericity Assumed	12.182	64	0.19			
Greenhouse-Geisser	12.182	53.439	0.228			
Huynh-Feldt	12.182	56.034	0.217			
Lower-bound	12.182	32	0.381			
Lower-bound	12.768	32	0.399			

Mauchly's Test of Sphericity - The difference in mean scores during the three assessment periods were tested using repeated measures ANOVA

(RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.030. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.876.

Tests of Within-Subjects Effects - The difference in the mean scores of Katisula was tested using F-test along with the Huynh-Feldt correction. The test was found to be statistically insignificant with a p=0.063. The result indicates that there was no statistically significant difference in the mean scores between three assessments (p=0.063). Hence multiple comparisons were not performed.

GROUP - E

	Mean	**SD**
FU_1	0.5152	0.50752
FU_2	0.303	0.46669
FU_3	0.2727	0.45227

The symptom of katisula in group E during the follow-up period assessments showed a mean score of 0.33±0.50, which was reduced to 0.3030±0.466 during the second assessment. The mean score again reduced to 0.27±0.45 during the third assessment.

Mauchly's Test of Sphericity

The difference in mean scores during the three assessment periods

were tested using repeated measures ANOVA (RM-ANOVA). The initial assumption of RM-ANOVA, i.e, the test for Sphericity was assessed using Mauchly's test of Sphericity. The result was found to be statistically significant at p=0.033. Hence the assumption of sphericity is violated by the data and hence the epsilon correction was applied. Huynh-Feldt correction was applied as the epsilon was more than 0.75. So, the new p-value was corrected to 0.876.

Mauchly's Test of Sphericity

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon[b] Huynh-Feldt	Lower-bound
Katisula	0.802	6.825	2	0.033	0.835	0.876	0.5

Tests of Within-Subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Katisula						
Sphericity Assumed	1.152	2	0.576	3.025	0.056	0.086
Greenhouse-Geisser	1.152	1.67	0.69	3.025	0.066	0.086
Huynh-Feldt	1.152	1.751	0.658	3.025	0.063	0.086
Lower-bound	1.152	1	1.152	3.025	0.092	0.086
Error (Katisula)						
Sphericity Assumed	12.182	64	0.19			
Greenhouse-Geisser	12.182	53.439	0.228			
Huynh-Feldt	12.182	56.034	0.217			
Lower-bound	12.182	32	0.381			

The difference in the mean scores of Katisula was tested using F-

test along with the Huynh-Feldt correction. The test was found to be statistically insignificant with a p=0.063. This indicates that the data has passed the assumption of sphericity.

Descriptives - Katisula

	N	Mean	SD	SE
GROUP A	33	0.1212	0.41515	0.07227
GROUP B	33	0.0303	0.58549	0.10192
GROUP C	33	0.2727	0.51676	0.08996
GROUP D	33	0.2121	0.64988	0.11313
GROUP E	33	0.0606	0.34816	0.06061
Total	**165**	**0.1394**	**0.51676**	**0.04023**

During First and second assessment the mean score of katisula observed in Group A was 0.12±0.415, in Group B 0.03 +0.585 in Group C 0.27±0.52, in Group D 0.21±0.65 and in Group E the mean score was 0.06±0.35.

ANOVA - Katisula 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.37	4	0.342	1.291	0.276
Within Groups	42.424	160	0.265		
Total	43.794	164			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a P value

0.276. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding katisula.

Katisula 2

	N	Mean	SD	SE
GROUP A	33	0.0909	0.38435	0.06691
GROUP B	33	0.1212	0.48461	0.08436
GROUP C	33	0.0606	0.34816	0.06061
GROUP D	33	0.0303	0.46669	0.08124
GROUP E	33	0.0303	0.46669	0.08124
Total	**165**	**0.0667**	**0.4296**	**0.03344**

During second and third assessment the mean score of katisula observed in Group A was 0.09±0.38, in Group B 0.12 +0.48 in Group C 0.06±0.34, in Group D 0.03±0.46 and in Group E the mean score was 0.03±0.46.

ANOVA - Katisula 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.206	4	0.052	0.274	0.894
Within Groups	30.061	160	0.188		
Total	30.267	164			

Groupwise comparison during second and third assessment was done using one way ANOVA test. The test was found to be statistically insignificant suggesting that there was no statistically significant difference in the mean scores between five groups during third assessment with a P value 0.894. Hence multiple comparisons between groups were not performed. The result indicates that all groups got equal result regarding katisula.

Chapter - V

DISCUSSION, SUMMARY & CONCLUSION

DISCUSSION

Total 170 Patients were selected randomly as per block randomization and divided into 5 groups with 33 patients in each group. Different medicines were administered for each groups and the effect of drugs within the five groups were compared. In Group A, Vyaghrivarunadi qwadha & Kanchanaraguggulu gulika was given for 33 patients, in Group B Trayantyadi qwadha & Kanchanara guggulu was given, in Group C Vyaghrivarunadi qwadha was given, in Group D Trayantyadi qwadha was given and in Group E Kanchanaraguggulu gulika was given. The observations during the study were recorded and analysed using appropriate statistical test between the groups and with in the groups.

The study was conducted at Vaidyratnam Ayurveda College, Ollur, Thrissur, Kerala as Randomized control trial.

Vyaghrivarunadi qwadha and Kanchanara guggulu were given in Group A. This qwadha was found to be effective in clinical practice but no clinical study has not been done so far. This combination of drugs was selected in this study to find out the efficacy in uterine fibroid (Garbhasaya grandhi) and also a comparison was done to evaluate the efficacies of Vyaghrivarunadi qwadha along with Kanchanaragulgulu,

Trayantyadi qwadha along with Kanchanaragulgulu, Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanaragulgulu independently on symptoms and size of Uterine fibroid.

Kanchanaragulggulu is indicated for Gandamala, grandhi etc and on evaluation of the ingredients, it is having the properties of vatakapha samana, garbhasaya sankochaka, deepana and lekhana[1]. Trayandhyadi qwadha is indicated for antharvidradhi and the drug is having the properties of tridoshahara, sothahara, deepana, bhedana etc[2]. Vyaghrivarunadi qwadha is also indicated for antharvidradhi and its reference is seen in Chikitsamanjari (Keraleeya chikitsa grandha)[3]. The ingredients of the drug is having the properties of ushna veerya, katu tiktha rasa, laghu, ruksha guna, deepana, pachana, sodhahara, medohara, bhedi and vatakaphasamana.

Vyaghrivarunadi qwadha and Kanchanara gulugulu are having the properties of vatakaphasamana and is indicated for Grandhi and vidradhi. Trayantyadi qwadha is having the property of tridoshahara mainly kaphapithahara.

Samprapthi

Due to nidana mentioned for grandhi, vitiation of pittakapha doshas occur which leads to jadaragni mandya. This causes agnimandya at dhatwagni level especially, rakta dhatwagni causing vitiation of mamsa dhatu which in turn leads to vitiation of medas in garbhasaya. This vitiated mamsa and medo dhatu cause avarana of vata leading to formation of a kathina vivarna sopha (granthi) in garbhasaya. ie; Vata causes grathanata of mamsa dhatu in garbhasaya causing formation of mamsa granthi[4].

Samprapthi ghataka of Garbhasaya Grandhi

Dosa	-	Pitta kapha
Dushya	-	Rakata, mamsa, medas
Upadhatu	-	Artava
Srotas	-	Artavavaha srotas, rasavaha and raktavaha srotas
Srotodushti	-	Sanga, Vimargagamana, Atipravrutti
Asaya	-	Garbhasaya
Agni	-	Jatharagni and dhatwagni
Sthanasamsraya	-	Rajovahasira of Garbhasaya

Garbhasaya is the seat of apana vata and for the normal functioning of female reproductive cycle its normalcy along with samana is needed. The developing granthi hinders the normal movement of vata, resulting in its further vitiation. The vitiated vata cause artava vaha srotodushti and atipravrtti of rajas occurs. Due to atipravrtti of rajas the sara and drava qualities of pitta decreases and its opposite qualities mrutsna and sthira increases due to kapha anubandhata. This causes formation of clots. As viguna vata tries to expel this clotted rakta, sula occurs leading to krichrartava. Vitiation of apana vayu also creates mutrapradosha vyadhies, malabandha, soola etc.

In this study on statistical evaluation, Vyaghrivarunadi qwadha which was given in Group C was found to be effective in reducing the number of uterine fibroid. Vyaghrivarunadi qwadha is indicated for antharvidradhi but due to the properties of ingredients of this qwadha it is found to be effective in grandhi also. Since grandhi is producing due to vatakapha vitiation so the ingredients in the Vyaghrivarunadi qwadha are having the properties of vatakapha samana. All the ingredients in Vyghrivarunadi

qwadha is having ushna veerya, katu tiktha rasa, laghu, ruksha, deepana, pachana, sodhahara, medohara, bhedi and vatakaphasamana.

All these properties are helpful to reduce dosha dushti there by reducing the number of fibroids.

Age is an important factor in fibroids as it is influenced greatly by ovarian steroidal hormones. These hormones are high during reproductive period so there is higher incidence of fibroids for those woman who is in their reproductive period and those who have beyond the age 30yrs[5]. In the present study majority of patients belong to the age 35-50. In Group A & E 90.1% were between the age 35-50. No reference is available in Ayurveda regarding the relation of age and development of grandhi and vidradhi.

Majority of fibroids presented as symptomatic and the fibroids nearer to the endometrial cavity are more likely to cause symptoms especially menstrual symptoms[6]. In the present study symptomatic fibroids and asymptomatic fibroids are present in all the five groups. In Group A and in Group D, 27.3% had asymptomatic fibroids and remaining 72.7% were symptomatic where as in Group B 24.2% were asymptomatic and 75.8% were symptomatic. In Group C 21.2 % were asymptomatic and 78.8% had symptomatic. In Group E only 15.15% were asymptomatic and in the remaining 84.84% symptoms present. When Grandhi or Vidradhi develop in the garbhasaya it will affect normal function of Apanavata due to the srothorodha produced. This will disrupt the normal regulation of artavapravritti and produce different types of artava dushtis like atyartava (excessive bleeding), deerghakaalanubandhi artava (prolonged bleeding), artavasula or krichrartava (dysmenorrhea) etc.

Regarding the history of treatment, majority of patients in all the five groups underwent treatment previously. In Group A 51.5% of patients, in Group B 57.6% in Group C 42.42%, in Group D 45.45% and in Group E 39.4% out of 33 had received treatment for fibroid previously.

Artavasula (Congestive dysmenorrhoea) is one of the complaint that may occur in case of fibroid[7]. This is due to vitiation of vata especially apanavata which is situated in yoni. . In the present study, artavasula (dysmenorrhoea) is present for 72.7% in Group A, 57.6% in Group B, 66.7% in Group C, 63.6 % in Group D and 75.8 in Group E. Majority of the patients in all the groups had the complaint of artavasula.

In Group A &C 33.3% had observed severe artavasula, in Group B 27.3%, in Group D and in Group E, 36.4% had severe artavasula. On observation majority of the patients in all the five groups had artavasula.

Vastisula (lower abdominal pain) present for 54.5% in Group A, 45.5% in Group B, 66.7% in Group C, 60.6% in Group D, and 72.7% in Group E. Udaragurutvam (heaviness of abdomen) present for 42.4% in Group A & C, 48.5% in Group B, 60.6% in Group D, and E had lower abdominal pain. Udaragrandhi (feeling of lump in the abdomen) present for 21.2% in Group A, 24.2% in Group B, 12.1% in Group C & D, and in Group E 9.1%. Kadisula (low back pain) present in 90.9% in Group A and in D 57.6% in Group B, 72.7% in Group C, and 45.5% in Group E

Large uterine fibroids cause pressure on bladder and results in frequency of urination[8]. Urinary symptoms present in 45.5% in Group A, 36.4% in Group B, 30.3% in Group C and in D, and 42.4% in Group E. 3% of patients complaining of

frequency of urination in Group A & D and 6.1% in Group B. No patients complained about frequent urination in Group C and in Group E.

Some patients may complaining of a painless mass in the lower abdomen and causes a sensation of heaviness in the lower abdomen [9] . Feeling of a mass in lower abdomen (udaragrandhi) is absent for 78.8% in Group A, 75.8% in group B, 87.9% in group C & D and 90.9% in group E. Heaviness of lower abdomen (udaragurutvam) present for 42.4% in group A & C. In group B 48.5%, and in GroupD & E, 60.6 % had the symptom of heaviness of lower abdomen (udaragurutvam).

The pressure effects on the gastrointestinal tract are less conspicuous. The fibroids in the posterior wall may produce malabandha[9]. In this study 18.2% in Group A, 9.1% in Group B, 30.3% in Group C, 27.3% in Group D and 39.4% in Group E had malabandha.

Intermittent or chronic vaginal discharge or post coital bleeding may be present in fibroid cases. Here in this study54.5% in Group A, Group B and D Group, 36.4% in Group C and in Group E 39.4% is having yonisrava (vaginal discharge).

Family history of fibroid present for 48.5 % in Group A, 84.8% in Group B and in Group C, 69.7% in Group D & E. In this study majority of the patients in all the five groups had a family history of uterine fibroid. There is an increased risk for developing fibroids in families having uterine fibroid history.

The most common symptom of uterine myoma is abnormal uterine bleeding

like athy artava or asrgdara (menorrhagia) and deerghakalanubandha artava rakta srava (prolonged bleeding). This may be associated with flooding, gushing and clotting[10]. In Group A 45.5% & in Group B 39.4% had asrgdara. In Group C & E 51.5% had asrgdara and in Group D, 33.3% had the symptom of asrgdara. Deerghakalanubandha artava rakta srava (Prolonged bleeding) for >9days present for 15.2% in Group A, 21.2% in Group B & C, 15.2% in Group D and 9.1% in Group E. Interval is regular for 25-30 days in almost all the patients. In Group A 54.5% in Group, in Group B 60.6%, in Group C 84.8%, in Group D 63.6% and in Group E 75.7% had the cycle interval of 25-30. Clots present in the menstrual blood for 69.7% patients in Group A & Group C, 57.6% in Group B, 63.6% in Group D and 60, 6% in Group E.

Parity (number of deliveries) is one of the factor influencing the fibroid with a reduction in incidence with increasing parity[11]. In this study 3% patients were nulliparous (not delivered) and in Group A, 6.1% in Group B & C, 9% in Group D were nulliparous. Majority of patients were delivered women with one or two children.

On assessing the prakriti of the patients 39.4% in Group A, 33.3% in Group B & C, are coming under Vatapitta prakrithi. 30.3% of patients in Group E are having kaphaprakrithy and 21.2% in Group D and 24.2% in group C are having Vatkapha prakrithi.

The effect of medicines of five groups between three assessments were calculated regarding the following symptoms;

Artavapravritti (Bleeding), artava matra (Amount), artava kala (duration)

and interval between artava, vastisula (lower abdominal pain), udaragurutvam (heaviness of abdomen), udaragrandhi (feeling of lump in the abdomen), maidhunasula (dyspareunia), yonisrava (vaginal discharge) and katisula (low back ache) were assessed after treatment.

Artavapravritti (bleeding)

The excessive amount of artavapravritti before treatment was 45.5% which was reduced to 9.1% in group A, 39.4% in group B reduced to 18.2%, in group C 51.5% was reduced to 24.2%, in group D 33.3% was reduced to 15.2% and in group E artavapravritti was reduced to 18.2% from 51.5%. Moderate amount of normal artavapravritti was found after treatment for 72.8% in group A, 75.8% in group B, 69.7% in group D, 81.8% in group D and 66.7% in group E.

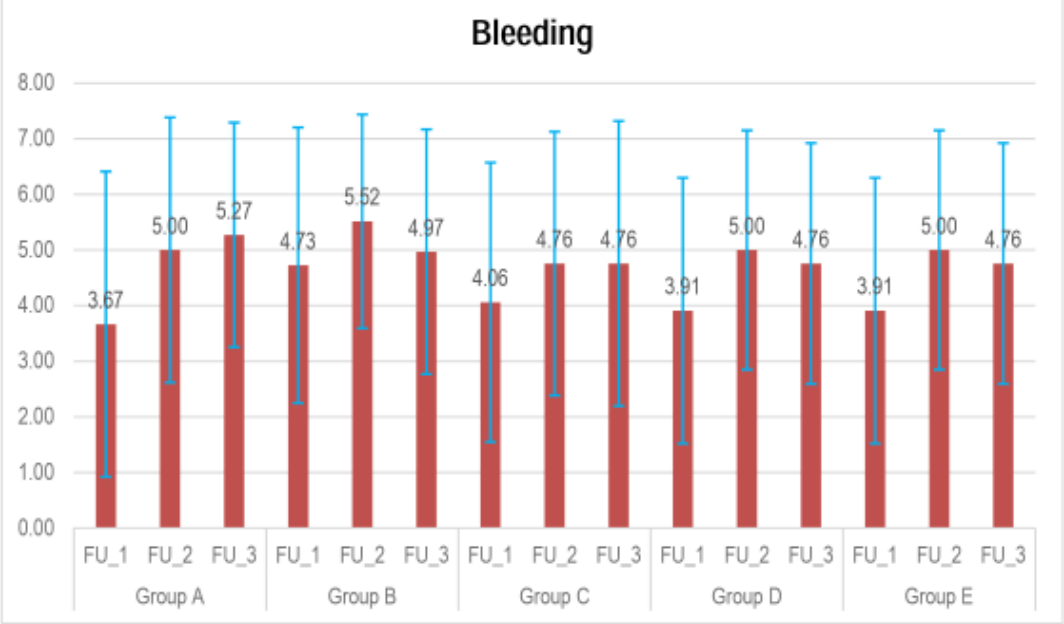

Fig. 5.37 Anova Test – Followup (Artava)

In Group A the mean score for the symptom of artavaraktasrava between three assessments were significantly elevated during second assessment and again further elevated during third assessment. The mean score of menstrual artavaraktasrava between assessments in Group B was slightly increased during second assessment and during the third assessment the level was reduced significantly. In Group C the mean score for the symptom of artavaraktasrava between three assessments was elevated during second assessment and the no change occurs to the artavaraktasrava during third assessment. In Group D the mean score for the symptom of artavaraktasrava between three assessments was significantly elevated during second assessment and the symptom was reduced during the third assessment. The mean score for the symptom of artavaraktasrava between three assessments in Group E was elevated during second assessment and the symptom was then reduced during the third assessment.

Artavamatra (Amount of menstrual bleeding)

In Group A, the mean score for the symptom of artavamatra between three assessments was reduced during second assessment and again reduced during the third assessment. In Group B, the mean score for the symptom of artavamatra between three assessments was reduced during second assessment and again reduced during the third assessment. The mean score for the symptom of artavamatra between three assessments in Group C, was reduced during second assessment and again reduced during the third assessment. In Group D and in group E, the mean score for the symptom of artavamatra between three assessments was reduced during second assessment and again reduced during the third assessment.

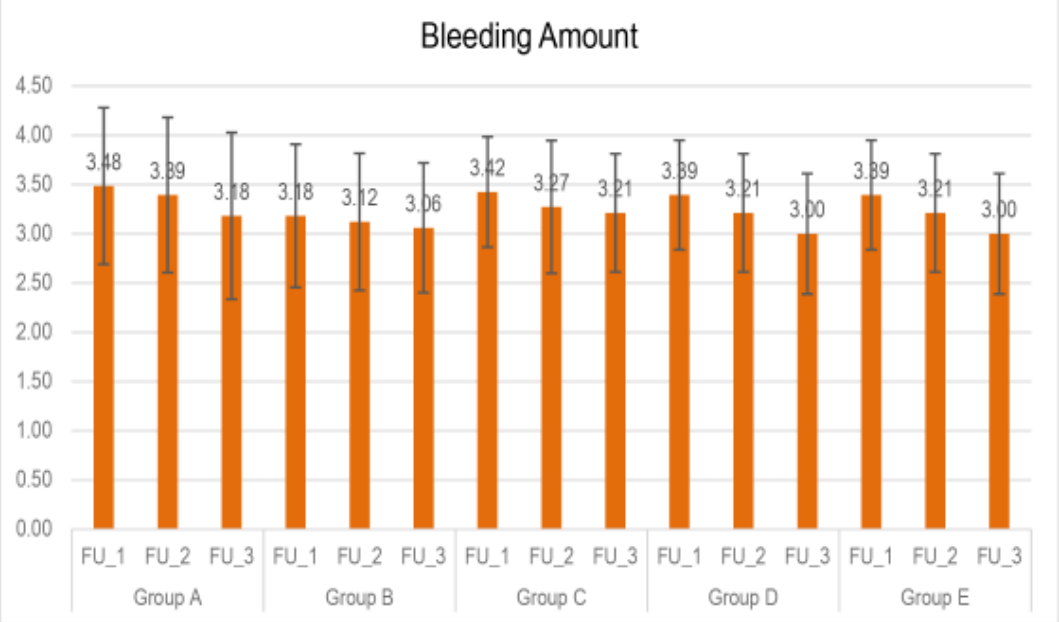

Fig. 5.38 Anova Test – Followup (Bleeding Amount)

Repeated measure of ANOVA was used to finding out the mean reduction in the scores for the symptom of artava pravritti and artava matra (amount of bleeding) was found to be statistically significant in Group A, D & E while in group B &C the result was insignificant ($p<0.05$). This shows, the mean score for the artavaraktasrava significantly changed between three assessments in group A, D & E and unchanged in Group B & C even after the third assessment. On pair wise comparison in group A, D & E, the comparison between first and second assessments was statistically significant and second and third assessment was statistically insignificant in group A. Regarding artavamatra, comparison between first and second assessments insignificant second and third assessment was statistically slightly significant in group A. From the comparison of these results it can be assumed that the medicines in group A ie. Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika had a slow and steady positive effect on the symptom

of artavapravritti and artavamatra. Kanchanaraguggulu is having kapha vata Samana property and the ingredients have a medohara property, hence helps in reducing the size of fibroid and there by reducing the artavamatra. Vyakhivarunadi kwatha is also having kapha vata Samana and thus helps in reducing the grandhi.

Artavapravritti

Excessive secretion of artava or menstrual blood is termed as raktapradara or asrgdara[12, 13, 14]. In garbhasayagrandhi the normal function of apana vata has been disturbed. It may affect normal duration and interval of artavaraktasrava. Samprapthighatakas of asrgdara, include Vata, Pitta & Kapha dosha and rasa & rakta. In garbhasayagrandhi mamsa dushti also occurs. Due to nidana seva vitiated Vata increases the amount of rakta. Vyana vayu is responsible for for increasing raktachamkramana in garbhasaya and apana vata for artava nishkramana. Increased amount of rakta enters into the garbhasaya gata sira and vitiated apanavata causes atyadhika artava srava or deerghanubandhi artava srava leads to asrgdara[15,16]. Due to asrayasrayi bhava of rakta and pitta, pitta dosha is also vitiated in asrgdara. So in the treatment, vatakapha samana treatment along with vatapitta samana treatment required.

Samprapti ghataka in asrgdara

Dosa ..... Vata, Pitta, Kapha

Dushya ..... Rasa, rakta, artava

Upadhatu ..... Artava

Srotas ..... Artavavaha srotas, rasavaha srotas, raktavaha srotas

Srotodushti ..... Atipravritti

Asaya ..... Garbhasaya

Agni ..... Jataragni, Dhatvagni

Sthanasamsraya ..... Rajovaha sira of garbhasaya

Pittakapha samana property of drugs in Trayantyadi qwadha and kaphavata samana property of drugs in Kanchanara Guggulu and Vyaghrivarunadi qwadha help to alleviate the symptoms. Kanchanara guggulu had the properties of vatakaphahara, chedana, bhedana, medohara which will normalize the raktachamkramana through garbhasaya siras and anuloma property helps to normalize the function of apanavata. Pittakaphasamana property of Trayantyadi qwadha along with raktaprasadana, bhewdana property and vatakaphahara property of Vyaghrivarunadi qwadha along with sodhahara and anulomana properties also help to reduce garbhasayagrandhi and normalize the function of apanavata there by normalize the circulation through the garbhasaya there by normal artavaraktasrava is established.

Kaphavatahara property of Kanchanara guggulu and Vyaghrivarunadi qwadha help to stop the growth of garbhasayagrnadhi. Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela[17, 18, 19, 20], help to normalize the function of apanavata and maintain the circulation there by achieved normal bleeding after treatment. Chedana property of maricha, bhedana property of varuna, bibhitaki, medohara property of guggulu[21, 22, 23, 24]. help to reduce the growth of uterine fibroid or garbhasaya grandhi there by reduce the complication of artava dushtis.

In group D & E, pair wise comparison between first and second assessment and second and third assessment were statistically insignificant regarding artavapravritti. Pair wise comparison between first and second assessment was insignificant second and third assessment were statistically significant regarding amount of artavapravritti. Trayantyadi qwadha in group D & Kanchanaraguggulu in group E, maintain the nature of artavapravritti and produced slight change regarding artavamatra.

In Group B & C the symptom artavapravritti and artavamatra (amount) remain unchanged even after the third assessment. Trayantyadi qwadha along with Kanchanaraguggulu gullika in group B and Vyaghrivarunadi qwadha alone in group C does not change the symptoms of artavapravritti.

Kaphapittahara property of Trayantyadi qwadha help to maintain the size of Garbhasyagrandhi. Almost all drugs in Trayantyadi Kashayam have garbhasayasankocha, bhedana, lekhana, rakta prasadana properties which help in hethu vipareetha chikitsa. These reduce pelvic congestion, reducing the stasis and dilatation of various blood vessels draining the endometrium. Grahi property of kanchanara[17] & masura[25], doshanulomana property of hareethaki, nagara, ela[18, 26, 20], raktaprasadana property of madhuka[27] help to normalize the function of apanavata and maintain the circulation there by achieved normal artavaraktasrava after treatment. Chedana property of maricha, bhedana property of varuna, bibhitaki, kaduka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain the size of uterine fibroid or garbhasayagrandhi there by reduce the complication of artava dushtis.

Trayantyadi qwadha given in group D having kaphapitta samana property. Major content in this qwadha is masura which is having the property of sangrahi25. Virechana property of trivrut and padolamoola[28, 29] present equal to masura may be the cause of the qwadha having no change on the artava chakra. Kanchanaraguggulu alone given in group E is having teekshna guna and so there is no considerable change on nature of artava pravritti. No result was obtained in group B & C due to ushna teekshna property of drugs administered in these groups.

Groupwise comparison was done using one way ANOVA test. The test was statistically insignificant during first and second and between second and third assessment between 5 groups indicates that all groups got equal result regarding artava pravrithi.

Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara, ela, raktaprasadana property of madhuka, chedana property of maricha, bhedana property of varuna, bibhitaki, kaduka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain artava pravritti during the treatment period in all the five groups.

On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and highly significant between group A & E during second and third assessment indicates Kanchanaraguggulu given in group E produced significant change in amount of artavaraktasrava comparing to other groups.

Kaphavata samana property of drugs in Kanchanara Guggulu help in

shrinkage of fibroid whereby alleviating its lakshanas. Ingredients in Kanchanara Guggulu are srotovibandhahara, sothahara, medohara, chedana properties which also helpful to reduce the size of garbhasayagrandhi. All these help in reducing athy artava.

Artavakala (Duration of menstrual bleeding)

On assessing the duration of artavaraktasrava, no significant change was obtained after treatment. Before treatment 45.5% had 4-5days artavaraktasrava in group A, which was changed to 54.5% had 4-5days and 15.2% had 5-6days artavaraktasrava after treatment. >9days artavaraktasrava before treatment was observed for 15.2% in group A was reduced to 9.1% in group A.

In group B, 54.5% before treatment and after treatment 4-5days artavaraktasrava was obtained for 42.4% & 24.2% had 5-6 days bleeding. 21.2% had >9days artavaraktasrava before treatment and after treatment which was 9.1%.

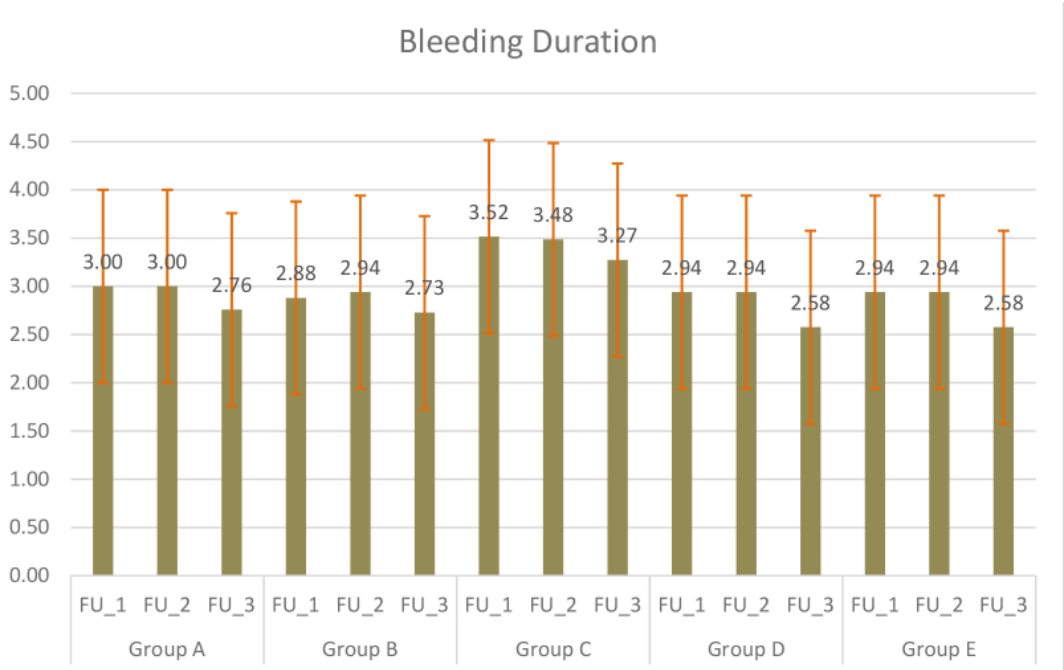

Fig. 5.39 Anova Test – Followup (Bleeding Duration)

In group C 39.4% had 4-5days artavaraktasrava and after treatment 3% had 4-5days artavaraktasrava and 60.6% had 5-6days artavaraktasrava. 21.2% had >9days artavaraktasrava before treatment and after treatment which was 12.1%.

In group D 51.5% had 4-5days artavaraktasrava and after treatment 60.6% had 4-5days artavaraktasrava and 21.2%had 5-6 days artavaraktasrava. 15.2% had >9days artavaraktasrava before treatment and after treatment which was 9.1%.

In group E 42.4% had 4-5days artavaraktasrava and after treatment 9.1% had 4-5days artavaraktasrava 60.6% had 5-6days artavaraktasrava. 9.1% had >9days artavaraktasrava before treatment and after treatment which was 3%.

In Group A, the mean score for the symptom of duration of artavaraktasrava between three assessments were recorded. No change occurs during second assessment but the mean score was reduced during the third assessment. In Group B, the mean score for the symptom of duration of artavaraktasrava between three assessments in the second group was elevated during second assessment and the symptom was then reduced during the third assessment. In Group C, the mean score for the symptom of duration of artavaraktasrava between three assessments was reduced during second assessment and again reduced during the third assessment. In Group D and in Group E the mean score for the symptom of duration of artavaraktasrava between three assessments was recorded. No change occurs during second assessment but the mean score was reduced during the third assessment.

Interval of Artavaraktasrava

On assessing the interval of artavaraktasrava most of the patients had normal 25-30day cycle before treatment. Only few patients had >35days bleeding interval. 6.1% in group A, 3% in group B, C&D, 9.1% in group E. After treatment only 3% had an interval of >35days.

In Group A and in Group C the mean score for the symptom of interval of artavaraktasrava between three assessments was recorded . No change occurs during second and third assessment . In Group B, the mean score for the symptom of interval of artavaraktasrava between three assessments was reduced during second assessment and again reduced during the third assessment. In the fourth and fifth group the mean score for the symptom of interval of artavaraktasrava between three assessments was reduced during second assessment and again reduced during the third assessment.

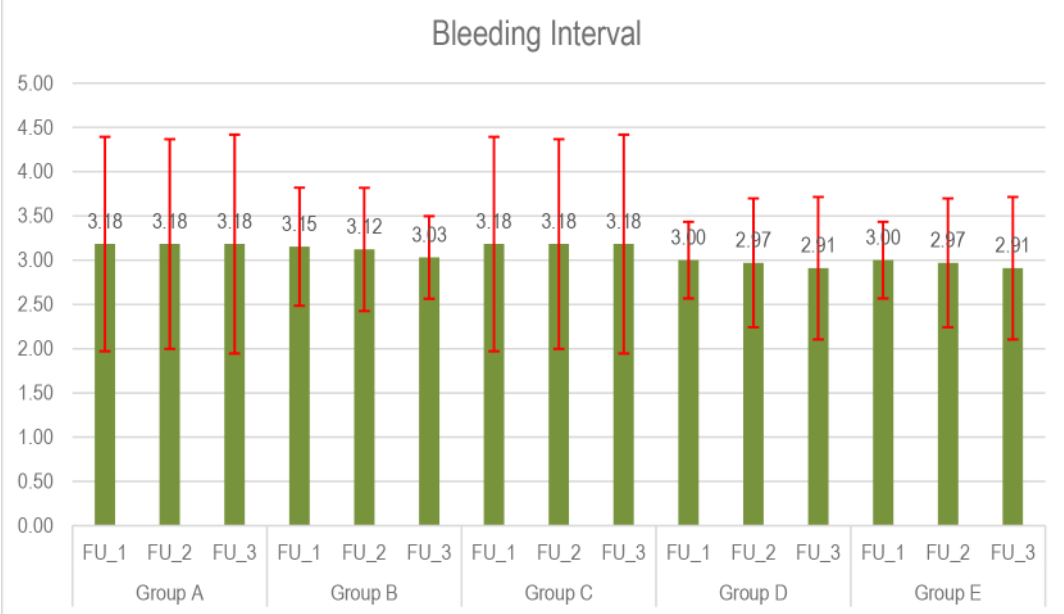

Fig. 5.40 Anova Test – Followup (Artava - Interval)

Repeated measure of ANOVA was used to finding out the mean reduction in the scores for the symptom of interval between artava and duration of artavapravritti and was found to be statistically insignificant in all the 5 Groups. Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika, Trayantyadi qwadha along with Kanchanaraguggulu gulika, Vyaghrivarunadi qwadha, Trayantyadi qwadha, Kanchanara guggulu gulika had an effect to maintain the normalcy of the interval between artava and duration of artava prakriya. Trayandhyadi kwatha has kapha pitta Samana property, hence it has sangrahi property. Kanchanaraguggulu having kapha vata Samana has srotovibandhahara property. Vyaghryadi kwatha was having also has kapha vata Samana that helps maintain artava pravrutti, thereby correcting the artavachakra.

On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between second and third assessment regarding interval between artavaraktasrava and duration of artavapravritti indicates that all groups got equal result regarding interval between artavaraktasrava and duration of artava pravrithi.

Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara and ela, raktaprasadana property of madhuka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain artava pravritti with normal duration and interval during the treatment period in all the five groups.

Artava soola or krichrartava (Pain during menstruation)

After treatment krichrartava was found to be absent in 30.3% in group A,

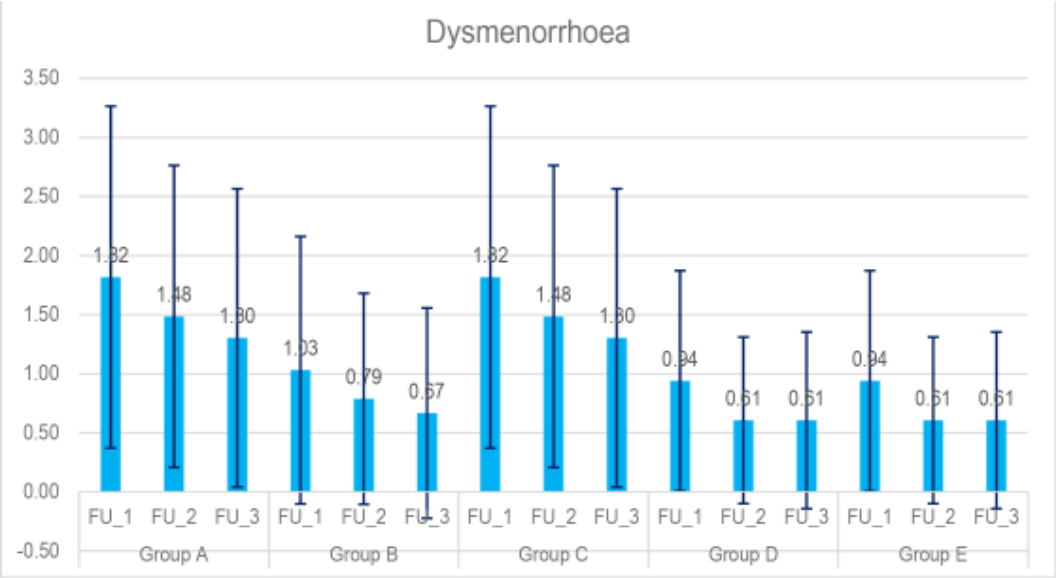

Fig. 5.41 Anova Test – Followup (Artavasula)

54.5% in group B, C and D, and in group E the symptom krichrartava was absent for 51.5% of cases. In Group A, and in Group C the mean score for the symptom of krichrartava between three assessments were assessed and the score was reduced during second assessment and it again reduced during the third assessment. The mean score for the symptom of krichrartava between three assessments in group B was significantly reduced during second assessment and then it again reduced during the third assessment. In Group D and in Group E the mean score for the symptom of krichrartava between three assessments was assessed and the score was reduced during second assessment and the value was remain unchanged even after the third assessment.

Krichrartava

The symptom of krichrartava was tested using Repeated measure of ANOVA and was found to be statistically significant in all the 5 groups. Pair wise comparison between assessment was then conducted and was found to be highly

significant statistically between the first and second assessments and was insignificant between second and third assessment as $p<0.05$ in all the groups. The result shows that the treatment slowly reduce krichrartava during second assessment than third assessment. Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika, Trayantyadi qwadha along with Kanchanaraguggulu gulika, Vyaghrivarunadi qwadha alone, Trayantyadi qwadha alone and Kanchanara guggulu gulika alone produced significant change during second assessment, while there was no significant change afterwards till the third assessment.

On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between second and third assessment regarding krichrartava, indicates that all groups got equal result regarding krichrartava.

Among Tridosas, Vata is responsible for pain. For production of Ârtava, Vyâna and Apâna have a coordinate relation with each other. Vyâna Vâyu is responsible for raktachamkramana through whole body including garbhasaya gatha siras and anulomana or munchana of artava is done by apâna vâyu. Due to the presence of Garbhasayagrandhi, artava vaha sroto dushti occurs as sanga and vimarga gamana. By means of srotovaigunya, vitiated dosha circulated through srotas leads to sanga and vimarga gamana in artavavaha srotas, which obstruct the movement of apanavata (sanga and avarana) resulting in prathiloma gati of rajas present as krichrartava ie. Artavasula[30]. Vitiated apanavata then produce avarana to artavavaha srothas which will also cause sula during artavapravritti. As in all cases of artava sula, Vataprakopa is the main cause; the treatment should be aimed at to normalize the vitiated vata. As

vata is main causative factor of all yonivyapats, vata should be treated first[31]. Snigdha, ushna, amla and lavana articles should be used for the relief from artava sula due to Vata[32]. For avrita apana vayu, treatment should be agnideepaka, grahi, vatanulomana and pakvashaya shuddhikara.

Doshanulomana property of harithaki, nagara, deepana, pachana property of nagara, maricha, pippali, varuna, ela in kanchanaraguggulu gulika, Doshanulomana property of harithaki, nagara, deepana property of thrayanthi, katuka, virechana (pakwasayasuddhi kara) property of thrivrith, padolamula in Trayantyadi qwadha, deepana, pachana property of vyaghri, varuna, sigru, nagara, Doshanulomana property of nagara & punarnava help to reduce avarana of apanavata. For alleviating sroto vaigunya, kaphamedohara yoga is required. All the yogas used in this study are having the property of kaphamedohara which would create srotosudhi should rectify vatavaigunya there by artava sula reduced.

Vastisula & Katisula (Lower abdominal pain & Low back ache)

Vastisula absent after treatment for 75.8% in group A, B, & in group C. For 93.9% in group D & 87.9% in group E had no vastisula after treatment.

In Group A and in Group C the mean score for the symptom of vastisula between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment. The mean score for the symptom of vastisula between three assessments in Group B was significantly reduced during second assessment and then it was elevated during the third assessment. In Group D &E, the mean score for the symptom of vastisula between three assessments

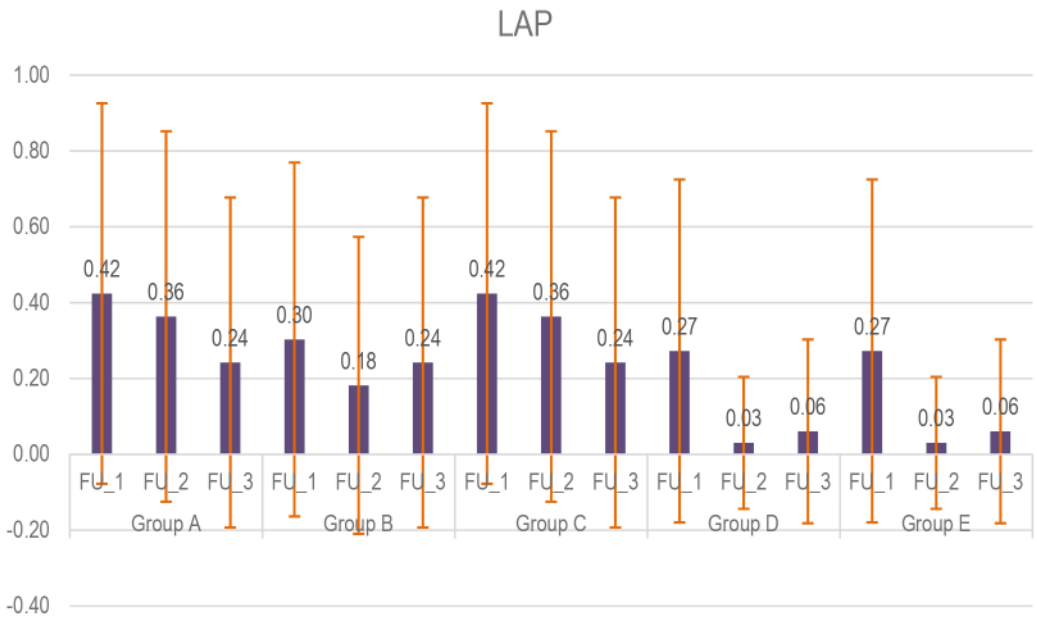

Fig. 5.42 Anova Test – Followup (Vastisula)

were assessed and the score was reduced during second assessment and it then slightly elevated during the third assessment.

Katisula (Low backpain)

On going through the assessment of katisula after treatment, the symptom was absent for 87.9% in group A, 81.8 in group B, 78.8% in group C and 72.7% in group D & E.

In Group A & in Group C, the mean score for the symptom of katisula (between three assessments was assessed and the score was reduced during second assessment and it was again reduced during the third assessment. In Group B, the mean score for the symptom of katisula between three assessments was assessed and the score was reduced during second assessment and it was again reduced during the

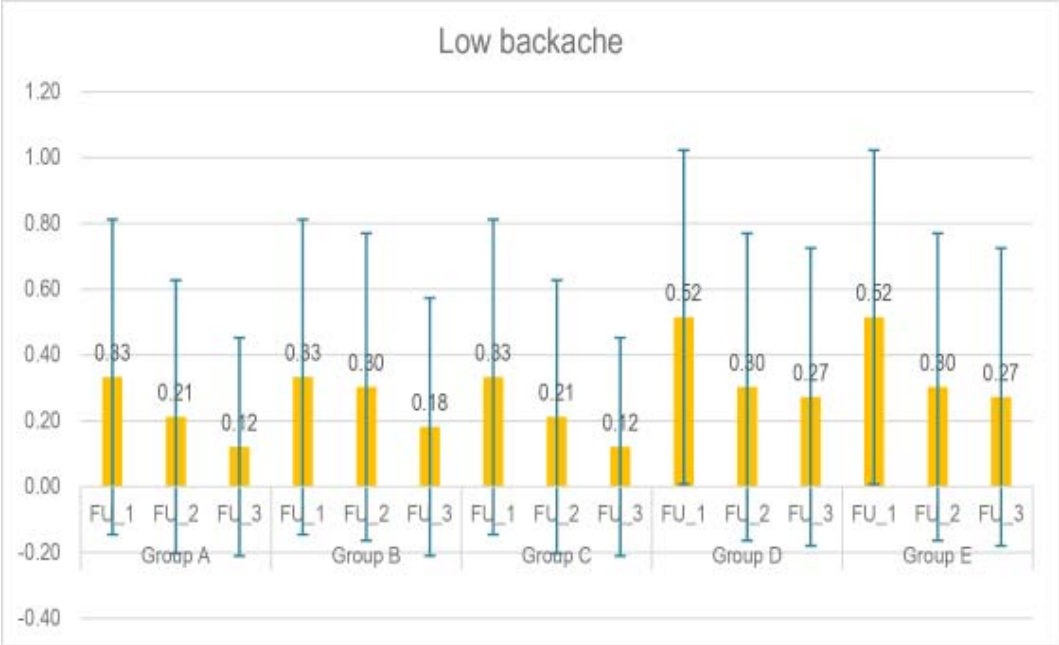

Fig. 5.47 Anova Test – Followup (Katisula)

third assessment. In Group D & in Group E, the mean score for the symptom of katisula between three assessments was assessed and the score was reduced during second assessment and it was again reduced during the third assessment.

The symptom of vastisula and katisula were tested using Repeated measure of ANOVA. The result regarding vastisula was found to be statistically significant in all the groups except Group B. On pair wise comparison between assessments, the result was stastically insignficant between the first and second assessments and between second and third assessment in Group A & C. In group D & E the finding was statistically significant between the first and second assessments and was insignificant between second and third assessment as $p<0.05$. The result shows that the Trayantyadi qwadha alone and Kanchanara guggulu gulika alone slowly reduce vastisula during third assessment than second assessment. Vyaghrivarunadi qwadha along with Kanchanara

guggulu gulika, Vaghrivarunadi qwadha alone in group A & C help to reduce the symptom vastisula slowly. Trayantyadi qwadha along with Kanchanaraguggulu gulika in group B, doesnot produce any significant change during the assessment period.

On groupwise comparison regarding vastisula using oneway ANOVA test, the result between first and second assessment was highly significant second and third assessment was insignificant. So multiple comparison was done and the comparison between Group A & Group E was statistically significant. The result shows that significant change occurs to vastisula in Group E comparing to other groups during first and second assessments.

Apana vata situated in pakwasaya ie. Sroni, vasthi, medra uru etc and is responsible for the nishkramana of sukra, artava, sakrut, mutra and garbha. Vatakaphahara, chedana, bhedana, medohara properties of Kanchanaraguggulu may reduce garbhasayagrandhi and there by normalize the raktachamkramana through Garbhasaya siras and also regularize the function of apanavata[33]. It is predominantly a kaphamedohara yoga that would create srotosudhi and would rectify vata vaigunya. These functions of Kanchanaraguggulu gulika help to reduce vastisula more than that of other yogas and combinations which occurs due to garbhasayagrandhi.

RM – ANOVA test, regarding katisula was insignificant statistically in Group B, D & E and significant in Group A & C. Pair wise comparison was stastically insignicant between the first and second assessments and between second and third assessment in Group A & C. But the overall change in the mean during the initial and final assessments showed a significant difference (p=0.05) with a mean difference of

0.212±0.084. The results shows that the treatment produced an overall significant change in the symptom of katisula.

On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between second and third assessment regarding katisula, indicates that all groups got equal result regarding katisula.

This indicates that the usage of Trayantyadi qwadha along with Kanchanaraguggulu gulika, Trayantyadi Kashaya alone and Kanchanaraguggulu gulika alone does not produce any significant change during the assessment period. Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika and Vyaghrivarunadi qwadha alone help to reduce katisula (low back pain) slowly & both will help to reduce the katisula significantly.

Vatakaphahara, chedana, bhedana, medohara anulomana, sodhahara properties of Kanchanara guggulu, raktaprasadana, bhedana and vatakaphahara, sodhahara, & anulomana properties of Vyaghrivarunadi qwadha help to reduce garbhasayagrandhi there by normalize the circulation through the garbhasaya siras there by decrease the upadravas like katisula.

Udara gurutvam & Udara grandhi (Heaviness of abdomen and feeling of lump in the abdomen)

On going through the assessment of udaragurutvam (heaviness of abdomen) after treatment, the symptom was absent for 90.9% in group B, C & D, in group A 84.8% and in group E 93.9% had absent the same. In Group A the mean score for the symptom of udaragurutvam between three assessments was assessed and the score

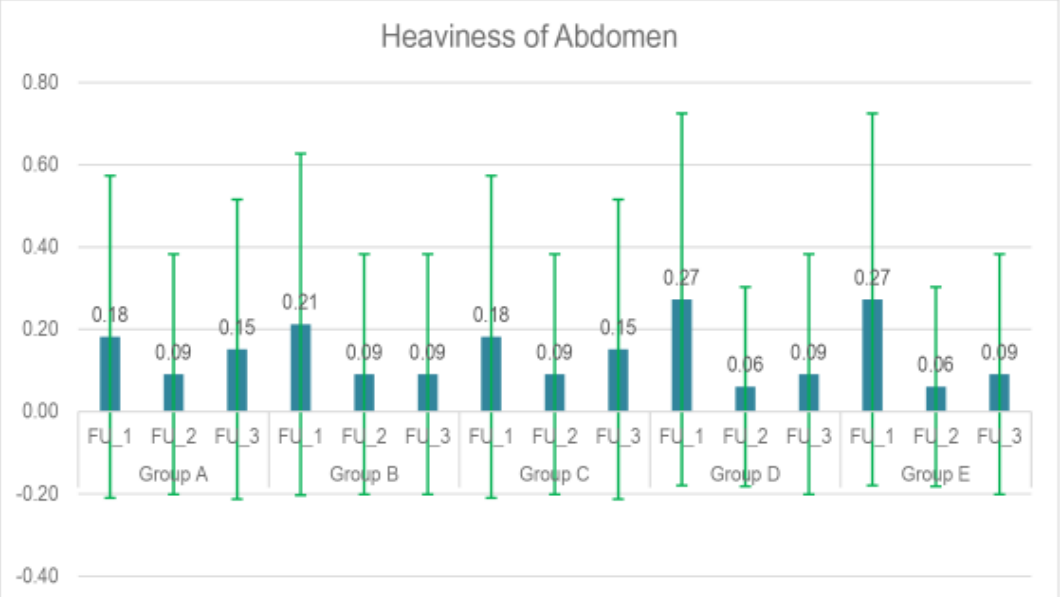

Fig. 5.43 Anova Test – Followup (Udara gurutvam)

was reduced during second assessment and it then elevated during the third assessment. In Group B, the mean score for the symptom of udaragurutvam between three assessments was recorded.The mean score was reduced during second assessment and no change occurs during the third assessment assessment but the mean score was reduced during third assessment. In Group C the mean score for the symptom of udaragurutvam between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group D and in Group E, the mean score for the symptom of udaragurutvam between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment.

RM-ANOVA test was used to find out the mean differences across the three assessments and was found to be statistically significant and change in the mean score of udaraguruthvam was significantly differed between assessments in all the groups except in Group A.

Pair wise comparison was stastically insignicant between the first and second assessments and between second and third assessment in Group B & C.

Pairwise comparisons between the first and second assessments showed a mean difference of 0.212±0.072 which was significant at p=0.018. The comparison between second and third assessment was statistically insignificant (p>0.05). The result shows that the treatment produced significant change in the symptom during the second comparison, while there was no significant change afterwards till the third assessment.

The result indicates that, Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika in group A helps to maintain the symptom udaragurutvam as such. Trayantyadi Kashaya along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha help to reduce the udaragurutvam slowly, Trayantyadi qwadha alone and Kanchanara guggulu gulika alone will help to reduce the symptom udaragurutvam during second assessment than third assessment.

Vyaghrivarunadi qwatha having the property of kapha vata Samana also has sodhahara property and medohara property, this can reduce the size of grandhi and the abdominal fat which can ultimately contribute to reducing udara gurutva. Also kanchanaraguggulu which is also having medohara property helps reduce the size of grandhi and contributes to reducing the udaragurutva.

Trayanthyadi kashaya is also effective in reducing the udaragurutva but in a slow process as the ingredients has doshanulomana, Deepan and virechana property.

Udaragrandhi (Feeling of lump in the abdomen)

While assessing the result of udaragrandhi (feeling of lump in the abdomen) after treatment, the symptom was absent for 90.9% cases in group A 93.9% in B, D &E and in group C for 97%.

In Group A the mean score for the symptom of udaragrandhi between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group B, also the mean score for the symptom of udaragrandhi between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group C, also the mean score for the symptom of udaragrandhi between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group D & in Group E, same thing happened ie. the mean score for the symptom of udaragrandhi between three

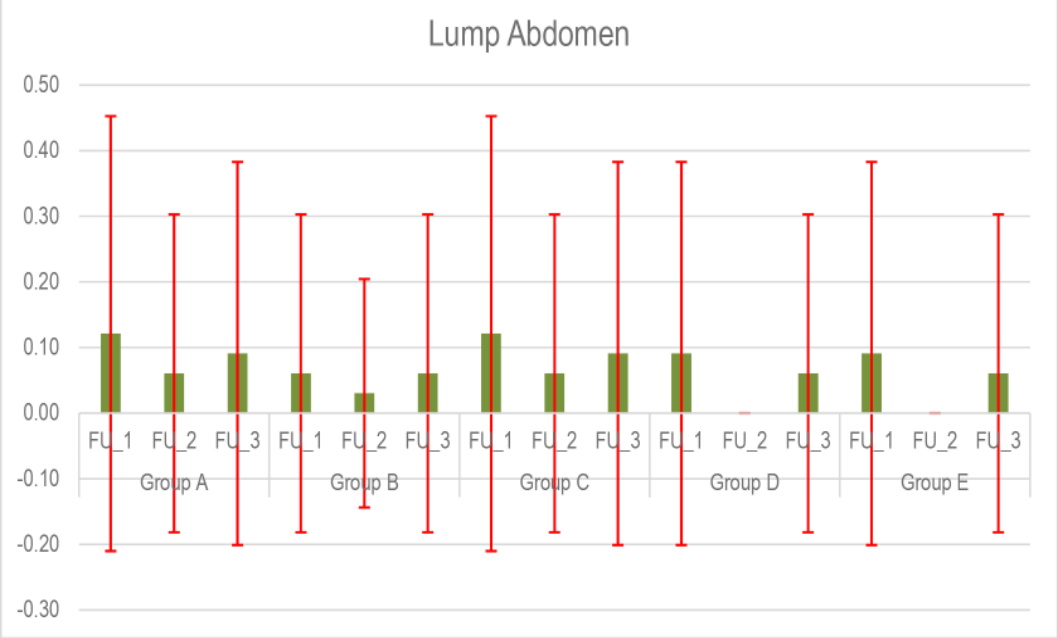

Fig. 5.44 Anova Test – Followup (Udaragrandhi)

assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment.

Repeated measure of ANOVA was used to finding out the mean reduction in the scores for the symptom of udaragrandhi (Feeling of lump in the abdomen) was found to be statistically insignificant in Group A, B, D & E while in group C the result was significant ($p< 0.05$). This shows, the mean score for the udaragrandhi significantly changed between three assessments in group C and unchanged in Group A, B, D & E even after the third assessment. In group C, pair wise comparison was insignificant between first and second assessments and second and third assessments. Initial assessment and final assessment were also statistically insignificant.

Vyaghrivarunadi along with Kanchanaraguggulu gulika, Trayantyadi qwadha along with Kanchanaraguggulu gulika, Trayantyadi qwadha alone and Kanchanaraguggulu gulika alone does not produce significant change in the symptom udaragrandhi. Trayantyadi Kashaya and Kanchanaraguggulu gulika in group C helps to maintain udaragrandhi (the feeling of lump) as such.

On Groupwise comparison using one way ANOVA test, the result was statistically insignificant during first and second assessment and between second and third assessment which indicates that all groups got equal result regarding udaragurutvam and udaragrandhi

Prathiloma gati of apana vayu also causes gulma in mahasrotas leading to udaragurutvam. Vatakapha samana and anulomana property of drugs in all the groups might have helped in maintaining the symptoms.

Maidhuna sula & Yonisrava (Dyspareunia &Vaginal discharge)

On going through the result of maidhunasula, the symptom was absent. In group maidhunasula was absent for 93.9& in A, B & C and 81.8% in group D and 87.9% in group E.

In Group A & in Group C, the mean score for the symptom of maidhunasula between three assessments were recorded. The mean score during the first follow up assessment was reduced in the second assessment and no change occurs during the third assessment. In Group B, the mean score for the symptom of maidhunasula between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment. In Group D & in Group E, the mean score for the symptom of maidhunasula between three assessments was assessed and the score was reduced during second assessment and it then elevated during the third assessment.

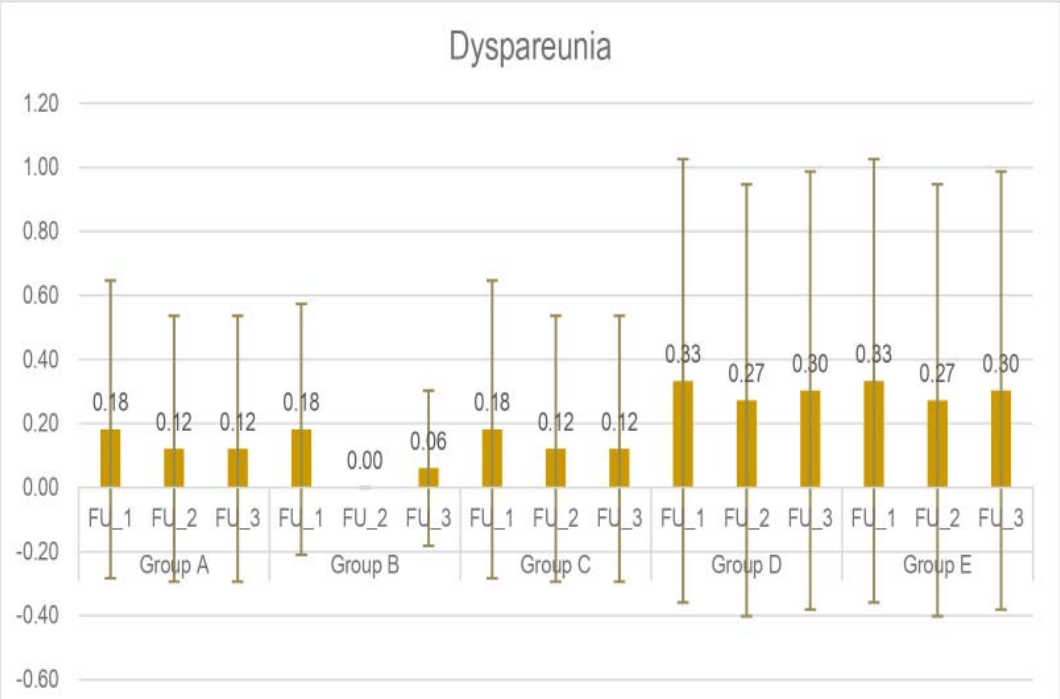

Fig. 5.45 Anova Test – Followup (Maidhuna sula)

On Repeated measure of ANOVA, the mean reduction in the scores for the symptom of maidhuna sula (Dyspareunia) was found to be statistically insignificant in Group A & C while in group B, D & E the result was significant ($p<0.05$). In group B, pair wise comparison was slightly significant between first and second assessments insignificant between second and third assessments

In group D & E, pair wise comparison was insignificant between first and second assessments and second and third assessments.

This indicates that the consumption of Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika and Vyaghrivarunadi qwadha alone will helps to maintain the symptom of maidhunasula without any increase. Trayantyadi qwadha along with Kanchanaraguggulu gulika produced significant change in the symptom maidhunasula during the second comparison, while there was no significant change afterwards till the third assessment. Trayantyadi qwadha alone and Kanchanaraguggulu gulika alone also help to maintain the symptom of maidhunasula without any increase.

Trayanthyadi qwatha has virechana property and doshanulomana property which helps in correcting the apana vayu and reduce the maidhuna Sula.

Kanchanaraguggulu on the other hand is effective as it has srotovibandha and kapha vata property, thus aiding in reducing the maidhuna Sula and yoni Sula by reducing the gandhi size.

Yonisrava (Vaginal discharge)

While assessing the result of yonisrava after treatment, it was absent for 100% in group B. In group A & D yonisrava absent for 93.9% and in group C the

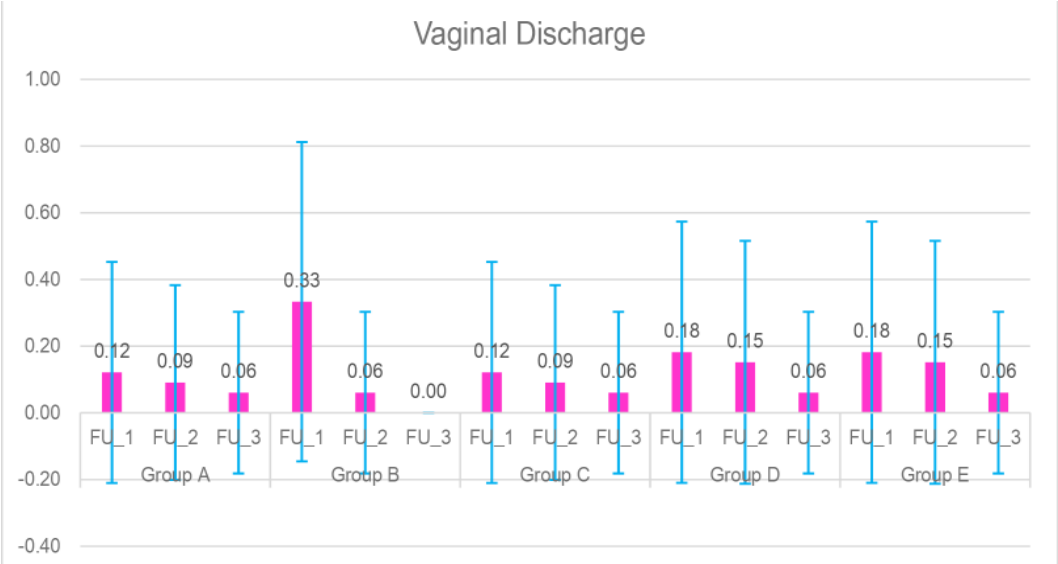

Fig. 5.46 Anova Test – Followup (Yonisrava)

symptom was absent for 97% and in group E 84, 8%. In group A, the mean score for the symptom of vaginal discharge between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment. In Group B, the mean score for the symptom of yonisrava between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment. In Group C, the mean score for the symptom of yonisrava between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment. In Group D & in Group E, the mean score for the symptom of yonisrava between three assessments was assessed and the score was reduced during second assessment and it again reduced during the third assessment.

On Repeated measure of ANOVA, the mean reduction in the scores for the symptom of yonisrava (Vaginal discharge) was found to be statistically insignificant in Group A, C, D & E while in group B the result was significant. In group B, pair wise

comparison was highly significant between first and second assessments insignificant between second and third assessments

This indicates that the consumption of Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika and Vyaghrivarunadi qwadha alone, Trayantyadi qwadha alone and Kanchanaraguggulu gulika alone help to maintain the symptom of yonisrava without any increase. Trayantyadi qwadha along with Kanchanaraguggulu gulika in group B, produced significant change in the symptom yonisrava during the second comparison, while there was no significant change afterwards till the third assessment.

On group wise comparison, using ONE WAY ANOVA test, the first and second assessment and second and third assessment was highly significant statistically . Group wise multiple comparison during first and second assessment was statistically significant between the group B & C. The result shows that significant change occurs to yonisrava in the Group B comparing to other groups during first and second assessments. The comparison between the group A & C during second and third assessment was statistically significant at p=0.028. The result shows that significant change occurs to yonisrava in the Group C comparing to other groups during second and third assessments.

Bleeding time

One of the complaint of uterine fibroid is atyartava or asrugdara. The bleeding time test is used to evaluate how much time to taken to control the bleeding[34]. It is used to assess the function of platelet in bleeding, adhesion, and aggregation. On observation the bleeding time was with in normal limit for all the patients in all the 5 groups before treatment. An attempt was made to assess the effect of drugs in bleeding

time in all the 5 groups after treatment. On statistical analysis using ANOVA test and Paired sample T test, the results were statistically insignificant. This indicates that there was no change in bleeding time before and after treatments in all the groups.

Clotting time

The clotting time is the time of coagulation of blood in vitro and this factor is helpful to control the bleeding in certain conditions[34]. As asrgdara is seen as one of the symptom in fibroids, the value of clotting time was relevant and was recorded in all the five groups before and after treatment and found with in normal limits. To analyse the effect of each drug in clotting time after treatment, ANOVA test and Paired sample T test of were conducted in all the five groups. The result was insignificant statistically. This indicates that there is no effect in clotting time by using the five different types of drugs.

Vitiation of Vata, Pitta and Rakta are the causative factors of Asrugdara having the symptom of artava raktathipravritti. Medicines having raktasthambhana property should be used for raktapradara or asrgdara35. One of the complaint of Uterine fibroid (Garbhasaya grandhi) is raktathisrava. pitta dushta rakta is said to be askandhi ie. does not clot easily and Kapha dushta rakta is having picchila (viscous) and tantumath(contains clot). The ingredients in all the drugs used in this study (Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanra guggulu) are having the property of Vatakaphahara rather than Pittasamana. So there is no change occurs to the bleeding time and clotting time after treatment.

Haemoglobin

As heavy bleeding may be present in uterine fibroid as one of the symptom,

and it may lead to a condition of Pandu (anemia). So an attempt was made to analyse the effect of medicines on the level of haemoglobin, by testing Haemoglobin level in blood before and after treatment. The level of haemoglobin was found very below normal level ie below 10grm % for 5 patients, in group A, B, D and E and in group C it was observed for 6 patients. Paired sample T test was conducted to analyse change in Haemoglobin level in each Group before and after treatment and was statistically insignificant in all the five groups. This result showed that there is no significant difference was observed before and after treatment in respect of haemoglobin level. So all the five different combinations of drugs had no effect in the level of haemoglobin.

Asrgdara which may be seen as a symptom in uterine fibroid leads to Panduroga. Acharya Charaka in panduroga chikitsa adhyaya explained that, dhatukshaya or apatarpana are responsible or unavoidable condition of disease panduroga. Signs and symptoms of dhatukshaya are to be developed in disease panduroga are given in the chapter panduroga chiktsa[36]. Sneha kalpanas are indicated rather than other kalpanas[37]. Jeevaneeya, ojovardhaka, thiktha madhura rasa pradhana drugs are responsible for increasing rakta dhathu. The medicines used in all the groups are kashayas and gulikas which are having the property of vatakapha samana, bhedana and chedana. That might be the reason of all the the different combinations of drugs used in this study had not obtained any change in the level of haemoglobin.

Comparison and efficacy of treatment in Uterine fibroid

The size and number of fibroids were assessed after three months of treatment in all the five groups using Kruskal-Wallis test, Anova test and Wilcoxon Signed Ranks Test.

The number of fibroids were analysed using Kruskal- Wallis test and it was statistically insignificant in all the five groups. This result indicates that the medicines in all the five groups maintain the number of fibroid as such without any increase.

Anova test was used to analyse the differences in the size of fibroids between the five groups and was statistically insignificant. This indicates that no significant change was observed in the size of fibroid before and after treatment in all the five groups.

Wilcoxon Signed Ranks Test was used to analyse the effect of five different combinations of drugs on the number of fibroid in each group. In all the groups except in group C, the difference in number of the fibroid was observed as statistically insignificant. In group C the difference in number of the fibroid was found to be statically significant. This indicates that the drug Vyaghrivarunadi qwadha in the third group produce good result in reducing the number of fibroid comparing to other groups.

In the samprapthi of grandhi vitiated vata and pitta which will then vitiate kapha dosha along with mamsa, rakta and medas producing sopha having the nature of vritta (round), unnatha (protuberant) and vigradhitha (knotty or glandular)[4]. Carakacharya explained mamsagrandhi as mahath and anarthi[38] When grandhi develops in uterus having the characteristic features of mamsa grandhi, it is almost similar to that of uterine fibroid.

Vidradhi occurs due to vitiation of rakta. Vata, pitta and kapha doshas aggravated and then vitiate twak, rakta, mamsa medas and asthi and become localized at place and produce sopha which is slowly increasing. Abhyantaravidradhi is deep rooted and hard like a tumour[39].

Considering the Kapha predominant nature of granthi ie; snigdham, mahantam, anarti, kadinam, chirabhivridhi etc and its nature of gratanata along with the need of alleviating sroto vaigunya, a kaphavatahara yoga predominantly kaphamedohara yoga that would create srotasudhi and would rectify vata vaigunya were used. Medoanile guggulu was quoted by Vagbhatacharya in the context of agrya oushadhas[40]. Here a guggulu preparation which includes mainly kanchanara which is kashaya rasa and samgrahi, which would reduce snigdha, kathina nature of granthi along with trikatu and varuna that are katu rasa pradhana which would give sroto visudhi has been used in this study.

The detoxifying property of Kanchanaraguggulu supports the proper function of the lymphatic drainage and digestive systems, aiding in the prevention of further Kapha accumulation. Its main ingredients Kanchanara (Bauhinia variegate L.), Varuna (Crataeva nurvala Buch.-Ham.), Triphala, Trikatu, Trijataka may also useful in hypothyroidism. Kanchanara Guggulu supports proper function of the lymphatic system, balances Kapha Dosha, promotes elimination of inflammatory toxins. Kanchanara is very useful in extra growth or tumors and helps in reducing bleeding.

Pittakaphahara yoga which is having the property of raktaprasadana has needed. For this Trayantyadi qwadha from vidradhi chikitsa is used. It contains Kaphapittahara dravyas predominantly masura which is madhura rasa, samgrahi, sita virya and rakta prasadana.

Garbhasaya grandhi is a vatakapha predominant disease. The drug given in the C group was Vyaghrivarunadi qwadha. In this research, all medicines in A, B,

C, D & E groups are agni deepnas. Because of that it is having the capability to eliminate or stop the pathology at its primary level. In this disease agni mandya is happening, then it will lead to dhusti of dhathus. So by removing agni mandya using this medications it will make the samprapti vighatana to the disease.

On samprapti vighatana, consider the samprapthi sthana along with vitiation of apana vata. All the ingredients of this qwadha is having the property of vata kapha samana. Deepana, pachana, lekhana, bhedi and shodhahara property are helpful to reduce vata kapha. Varuna indicated for vidradhi and sigru is having the property of medohara. Varuna is katu rasa pradhana which would produce sroto visudhi. All these properties help to reduce garbhasaya gandhi. Sigru and shundi are having the property of anuloma there by normalize the function of apana vata. The drug given in the C group was Vyaghrivarunadi qwadha only and it may act with these properties hence help to reduce the number of fibroid rather than its combination with Kanchanraguggulu, or Trayantyadi qwadha along with Kanchanaraguggulu or the consumption of Kanchanara guggulu alone.

Therefore Vyaghrivarunadi qwadha produce good result in reducing the number of uterine fibroids. On statistical evaluation, Vyaghrivarunadi qwadha, Trayantyadi qwadha & Kanchanaraguggulu gulika both in single and in combination form proved to be very effective in reducing the associated symptoms like atyartava, yonisrava, vastisula, maidhunasula, katisula, adhmana and gulma.

SUMMARY AND CONCLUSION

Summary

In the chapter introduction comprising of a brief explanation of uterine fibroid and its Ayurvedic perspective. In Ayurveda there is no direct correlation about uterine fibroid. Tumors can be considered as grandhi in Ayurveda. Yonirogas having the symptoms of uterine fibroids are mentioned in this chapter. Short description about Vyaghrivarunadi qwadha, Trayantyadi qwadha, Kanchanaraguggulu and randomized control trial were also be given. Aim and objectives of the study and chapter wise classifications are mentioned in this chapter.

Review of literature includes Ayurvedic perspective of uterine fibroid, modern aspect of uterine fibroid and drug review. Ayurvedic descriptions about arbuda, grandhi, artavadushti are also included in this chapter. Explanations about Yonirogas which are having asrgdara and artavasula as symptoms such as vatiki, udavartha, asruja, raktayoni and jathaghni were also mentioned in literary review. Descriptions of uterine fibroid such as its etiology, classification, clinical features, complications and management both medical and surgical were included in the chapter Uterine fibroid. In drug review descriptions about Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanara gulgulu were included.

In the chapter methodology explanations about the study was given. Implemented study design was Randomised control trial. In this study as per the statistical calculation total number of patients were 170. After drop outs of five patients, 33 patients were allocated in each group. A combination of Vyaghrivarunadi qwadha and Kanchanaragulugulu was administered in Group A , Trayantyadi qwatha & Kanchanaraguggulu in Group B, Vyaghrivarunadi qwadha in Group C, Trayantyadi qwadha in Group D and Kanchanara guggulu in Group E were administered respectfully for three months with follow-up every month.

Observation analysis was done and explained under two headings - descriptive statistics and inferential statistics. Descriptive statistics contains observations regarding demographic data, symptoms related to artava, obstetric history, dasavidha pareeksha, ashtasthana pareeksha etc. Inferential statistics provides the data on study variables during the assessment period.

In the present study majority of the patients were included in the age group of 35-50 years. Majority of the cases included under symptomatic varieties.

Regarding artavapravritti, 51.5% in group A, B & E had achieved normal bleeding. In group C 27.3% and in group D 45.5% had normal bleeding. Deerghakalanubandhi artavaraktasrava persists only few patients. 9.1% in group A & C, 6.1% in group B, 12.1% in group D and E had Deerghakalanubandhi artavaraktasrava present after treatment. On statistical analysis there was statistically significant difference observed in Group. A. The treatment in the group C does not influence the symptoms of artavaraktasrava. In other groups such as B, D & E the

bleeding was reduced slowly during the third assessment. This indicates that the medicines in the group A ie. Vyaghrivarunadi qwadha along with Kanchanaraguggulu give better result than other groups. On group wise comparison between first and second & second and third assessments shows that all the groups got equal result during the first, second and third assessment.

Kaphavatahara property of Kanchanara guggulu and Vyaghrivarunadi qwadha help to stop the growth of garbhasayagrnadhi. Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela, help to normalize the function of apanavata and maintain the circulation there by achieved normal bleeding after treatment. Chedana property of maricha, bhedana property of varuna, bibhitaki, medohara property of guggulu help to reduce the growth of uterine fibroid or garbhasaya grandhi there by reduce the complication of artavadushtis.

On evaluating the amount of artavaraktasrava after treatment, moderate menstrual bleeding present for 72.8% in group A, 69.7% in group B and in group C, 81.8% in group D and 66.7% in group E. On statistical analysis, group A showed statistically significant result after treatment than other groups. Group wise comparison was done between first & second assessment and second & third assessment and showed that Kanchanaraguggulu gulika had a significant impact on menstrual bleeding in comparison with other groups during the second and third assessments.

Kaphapittahara property of Trayantyadi qwadha help to maintain the size of Garbhasyagrandhi. Almost all drugs in Trayantyadi Kashayam have garbhasayasankocha, bhedana, lekhana, rakta prasadana properties which help in

hethu vipareetha chikitsa. These reduce pelvic congestion, reducing the stasis and dilatation of various blood vessels draining the endometrium. Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara, ela, raktaprasadana property of madhuka help to normalize the function of apanavata and maintain the circulation there by achieved normal artavaraktasrava after treatment. Chedana property of maricha, bhedana property of varuna, bibhitaki, kaduka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain the size of uterine fibroid or garbhasayagrandhi there by reduce the complication of artavadushtis.

In terms of the duration of menstrual bleeding, 54.5 % reported 4-5 days duration in group A, 42.4% in group B, 60.6% in group D. In group C & in group E 60.6% had observed 5-6 days menstrual bleeding . Statistical analysis was done to find out the mean score for the symptom of duration of menstrual bleeding and difference in mean scores and found that all the groups had normal menstrual duration after treatment. On group wise comparison, no difference was found in all the five groups. This suggests that the drugs in all the five groups had an effect of normalising the duration of menstrual cycle.

On assessing the interval of artavapravrithi most of the patients had normal 25-30day cycle before treatment. Only few patients had >35days bleeding interval. 6.1% in group A, 3% in group B,C&D, 9.1% in group E. After treatment only 3% had an interval of > 35days .

On assessing the interval of artavapravrithi after treatment, normal 25-

30days cycle was found for 48.5% in group A, 78.8% in group B, 63.6% in group C, 72.7% in group D and 81.8% in group E. On statistical analysis, all the five groups got equal result in normalising the interval of menstrual cycle. Group wise comparison between first & second assessments and second & third assessments using one way ANOVA test and got equal result in all the five groups in all the comparisons. This indicates that the medicines used in all the five groups had equal result in normalising the interval of menstrual cycle.

Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara and ela, raktaprasadana property of madhuka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain artavapravritti with normal duration and interval during the treatment period in all the five groups.

Krichrartava

Artavasula present for majority of patients in all the groups before treatment. After treatment artavasula was found to be absent in 30.3% in group A, 54.5% in group B, C and D, and in group E the symptom artavasula was absent for 51.5% of cases. In the first group 9.1% were asymptomatic. That might be the reason for the result of only 30.3% reduction in the symptom artavasula. On statistical analysis . Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika, Trayantyadi qwadha along with Kanchanaraguggulu gulika, Vyaghrivarunadi qwadha alone, Trayantyadi qwadha alone and Kanchanara guggulu gulika alone produced significant change during second assessment, while there was no significant change afterwards till the third assessment.

In group wise comparison regarding krichrartava all the groups got equal result in all the comparisons.

Doshanulomana property of harithaki, nagara, deepana & pachana property of nagara, maricha, pippali, varuna, ela in Kanchanaraguggulu gulika, anulomana property of harithaki & nagara, deepana property of trayanthi & katuka, virechana (pakwasayasuddhi kara) property of trivrith & padolamula in Trayantyadi qwadha, deepana & pachana property of vyaghri, varuna, sigru & nagara, Doshanulomana property of nagara & punarnava help to reduce avarana of apanavata. For alleviating sroto vaigunya, kaphamedohara yoga is required. All the yogas used in this study are having the property of kaphamedohara which would create srotosudhi should rectify vatavaigunya there by artavasula reduced.

Vastisula (Lower abdominal pain)

Vastisula absent after treatment for 75.8% in group A, B, & in group C. For 93.9% in group D & 87.9% in group E had no udarasula after treatment. On statistical analysis The result shows that the Trayantyadi qwadha alone and Kanchanara guggulu gulika alone slowly reduce vastisula during third assessment than second assessment. Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika, Vaghrivarunadi qwadha alone in group A & C help to reduce the symptom vastisula slowly. Trayantyadi qwadha along with Kanchanaraguggulu gulika in group B , doesnot produce any significant change during the assessment period. In group wise comparison significant change occurs to the vastisula in the group E (Kanchanara guggulu) comparing to other groups during first and second assessments.

Vatakaphahara, chedana, bhedana & medohara properties of Kanchanara guggulu may reduce garbhasayagrandhi and there by normalize the raktachamkramana through Garbhasaya siras. It is predominantly a kaphamedohara yoga that would create srothasudhi and would rectify vata vaigunya. These functions of Kanchanaraguggulu gulika help to reduce vastisula more than that of other yogas and combinations which occurs due to garbhasayagrandhi.

Katisula

On going through the assessment of katisula after treatment, the symptom was absent for 87.9% in group A, 81.8 in group B, 78.8% in group C and 72.7% in group D & E. On statistical analysis regarding katisula Trayantyadi qwadha along with Kanchanaraguggulu gulika, Trayantyadi Kashaya alone and Kanchanara guggulu gulika alone doesnot produce any significant change during the assessment period. Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha alone help to reduce katisula (low back pain) slowly & both will help to reduce the katisula significantly.

Vatakaphahara, chedana, bhedana, medohara, anulomana & sodhahara properties of Kanchanara guggulu and raktaprasadana, bhedana and vatakaphahara, sodhahara, & anulomana, properties of Vyaghrivarunadi qwadha help to reduce garbhasayagrandhi there by normalize the circulation through the garbhasaya siras there by decrease the upadravas like katisula.

Udaragurutvam (Abdominal heaviness)

On going through the assessment of udaragurutvam (heaviness of abdomen)

after treatment, the symptom was absent for 90.9% in group B, C & D , in group A 84.8% and in group E 93.9% had absent the same. Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika in group A helps to maintain the symptom udaragurutvam as such. Trayantyadi Kashaya along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha help to reduce the udaragurutvam slowly, Trayantyadi qwadha alone and Kanchanara guggulu gulika alone will help to reduce the symptom udaragurutvam during second assessment than third assessment

While assessing the result of udaragrandhi (feeling of lump in the abdomen) after treatment, the symptom was absent for 90.9% cases in group A 93.9% in B, D & E and in group C for 97% . On analysing statistically Vyaghrivarunadi along with Kanchanara guggulu gulika, Trayantyadi qwadha along with Kanchanaraguggulu gulika, Trayantyadi qwadha alone and Kanchanara guggulu gulika alone does not produce significant change in the symptom udaragrandhi. Trayantyadi Kashaya and Kanchanara guggulu gulika in group C helps to maintain udaragrandhi (the feeling of lump) as such. When group wise comparison was conducted, there was equal result in all the five groups in all the comparisons.

Prathiloma gati of apana vayu also causes gulma in mahasrotas leading to udargurutwam and udaragrandhi. Vatakapha samana and anulomana property of drugs in all the groups might have helped in maintaining the symptoms.

Maidhunasula (Dyspareunia)

On going through the result of maidhunasula, the symptom was absent. In group maidhunasula was absent for 93.9& in A, B & C and 81.8% in group D and

87.9% in group E. On statistical analysis, This indicates that the consumption of Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha alone will helps to maintain the symptom of maidhunasula without any increase . Trayantyadi qwadha along with Kanchanara guggulu gulika produced significant change in the symptom maidhunasula during the second comparison, while there was no significant change afterwards till the third assessment. Trayantyadi qwadha alone and Kanchanara guggulu gulika alone also help to maintain the symptom of Maidhunasula without any increase.

In group wise comparison, all the five groups got equal result in all the comparisons.

While assessing the result of yonisrava after treatment, it was absent for 100% in group B . In group A & D yonisrava absent for 93.9% and in group C the symptom was absent for 97% and in group E 84,8%. Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha alone, Trayantyadi qwadha alone and Kanchanara guggulu gulika alone help to maintain the symptom of yonisrava without any increase . Trayantyadi qwadha along with Kanchanara guggulu gulika in group B, produced significant change in the symptom yonisrava during the second comparison, while there was no significant change afterwards till the third assessment. In group wise comparison, significant change occurs to vaginal discharge in the second group comparing to other groups during first and second assessment.

Bleeding time, Clotting time and Haemoglobin level

The effect of drugs in each group in bleeding time and clotting time was

analysed using ANOVA test and Paired sample T test. After assessment of clotting time and bleeding time by Anova test, the result indicated no significant difference before the treatment and after in all the five groups. The difference with in the same group was analysed using Paired sample T test and was not significant before and after treatment in the same group. This indicates that there was no effect on bleeding time and clotting time by using the five different types of drugs.

Haemoglobin

The effect of drugs of each five groups on haemoglobin before and after treatment was analysed. In Paired sample T test no significant difference was observed before and after treatment in the same group. Therefore, there was no effect of all the 5 drugs on the level of Haemoglobin.

Vitiation of Vata, Pitta and Rakta are the causative factors of Asrugdara having the symptom of artava raktathipravritti. Medicines having raktasthambhana property should be used for raktapradara or asrgdara. One of the complaint of uterine fibroid (garbhasaya grandhi) is raktathisrava. Pitta dushta rakta is said to be askandhi ie. does not clot easily and kapha dushta rakta is having picchila (viscous) and tantumath (contains clot). The ingredients in all the drugs used in this study (Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanra guggulu) are having the property of vatakaphahara rather than pittasamana. So there is no change occurs to the bleeding time and clotting time after treatment.

Comparison and efficacy of treatment in Uterine fibroid

The size and number of fibroids were assessed after three months of

treatment in all the five groups using Kruskal-Wallis test, Anova test and Wilcoxon Signed Ranks Test.

The number of fibroids were analysed using Kruskal- Wallis test and it was statistically insignificant in all the five groups . This result indicates that the medicines in all the five groups maintain the number of fibroid as such without any increase.

Anova test was used to analyse the differences in the size of fibroids between the five groups and was statistically insignificant. This indicates that no significant change was observed in the size of fibroid before and after treatment in all the five groups.

Wilcoxon Signed Ranks Test was used to analyse the effect of five different combinations of drugs on the number of fibroid in each group. In all the groups except in group C, the difference in number of the fibroid was observed as statistically insignificant. In group C the difference in number of the fibroid was found to be statically significant. This indicates that the drug Vyaghrivarunadi qwadha in the third group produce good result in reducing the number of fibroid comparing to other groups.

Considering the Kapha predominant nature of grandhi ie; snigdham, mahantham, anarthi, kadhinam, chirabhivridhi etc and its nature of grathanata along with the need of alleviating sroto vaigunya, a kaphavatahara yoga predominantly kaphamedohara yoga that would create srothasudhi and would rectify vata vaigunya were used. kanchanara which is kashaya rasa and samgrahi, which would reduce snigdha kathina nature of grandhi along with trikatu and varuna that are katu rasa pradhana which would give sroto visudhi is selected.

Pittakaphahara yoga which is having the property of raktaprasadana has needed. For this Trayantyadi qwadha is used. The ingredients are kaphapittahara dravyas predominantly *Masura* which is madhura rasa, samgrahi, sita virya and rakta prasadana.

Garbhasaya grandhi is a vatakapha predominant disease. The drug given in the C group was Vyaghrivarunadi qwadha. All the ingredients of this qwadha is having the property of vata kapha samana. Deepana, pachana, lekhana, bhedi and shodhahara property are helpful to reduce vata kapha. Varuna indicated for vidhradhi and sigru is having the property of medohara. Varuna is katu rasa pradhana which would produce sroto visudhi. All these properties help to reduce garbhasaya gandhi. Sigru and shundi are having the property of anuloma there by normalize the function of apana vata. The drug given in the C group was Vyaghrivarunadi qwadha only and it may act with these properties hence help to reduce the number of fibroid rather than its combination with Kanchanraguggulu, or Trayantyadi qwadha along with Kanchanara guggulu or the consumption of Kanchanara guggulu alone.

Vyaghrivarunadi qwadha produce good result in reducing the number of uterine fibroids. On statistical evaluation, Vyaghrivarunadi qwadha, Trayantyadi qwadha & Kanchanara guggulu gulika both in single and in combination form proved to be very effective in reducing the associated symptoms like athyartava, yonisrava, vastisula, maidhunasula, katisula, udaragurutvam and udaragrandhi.

Conclusion

- On statistical analysis regarding the artavapravritti, Vyaghrivarunadi qwadha and Kanchanaraguggulu had better result than other groups.
- Kaphavatahara property of Kanchanara guggulu and Vyaghrivarunadi qwadha help to stop the growth of garbhasaya grnadhi. Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela, help to normalize the function of apanavata and maintain the circulation there by achieved normal artavapravritti after treatment.
- Kanchanaraguggulu gulika in group E, had a significant difference in amount of artava in comparison with other groups during second and third assessments.
- Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela, help to normalize the function of apanavata and maintain the circulation there by achieved normal amount of artava after treatment.
- In group wise comparison regarding duration, interval of menstrual cycle and pain during menstruation, all the groups produced same result in all the comparisons.
- Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara and ela, raktaprasadana property of madhuka,

medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain artavapravritti with normal duration and interval of artharaktasrava during the treatment period in all the five groups.

- In group wise comparison significant change occurs to the vastisula in the E group (Kanchanara guggulu) comparing to other groups during first and second assessments.

- Kanchanaraguggulu is a kaphamedohara yoga that would create srothasudhi and would rectify vata vaigunya there by reduce udarasula.

- Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha alone help to reduce katisula (low back pain) slowly & both will help to reduce the katisula significantly.

- Vatakaphahara, chedana, bhedana, medohara anulomana, sodhahara properties of Kanchanara guggulu, Pittakaphasamana property of Trayantyadi qwadha along with raktaprasadana, bhedana and vatakaphahara, sodhahara, & anulomana properties of Vyaghrivarunadi qwadha along with sodhahara, anulomana also help to reduce garbhasayagrandhi there by normalize the circulation through the garbhasaya siras there by decrease the upadravas like katisula. .

- On going through the assessment of udaragurutvam and udaragrandhi after treatment, all the five groups got equal result in all the comparisons.

- Prathiloma gati of apana vayu also causes gulma in mahasrotas leading to adhmana. Vatakapha samana and anulomana property of drugs in all the groups might have helped in maintaining the symptoms.

- No change in bleeding time, clotting time and level of Haemoglobin with respect to the drugs in all the 5 groups.

- The ingredients in all the drugs used in this study (Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanra guggulu) are having the property of Vatakaphahara rather than Pittasamana.

- On statistical analysis all the five types of medicines had no effect on reducing the size of fibroids.

- As in group C (Vyaghrivarunadi qwadha) the difference in size of fibroid was statistically significant, the Null Hypothesis is rejected and the Alternate Hypothesis "There is significant difference in the efficacy of Vyaghri varunadi qwadha, Trayantyadi qwadh, or Kanchanaraguggulu either in single drug or in combination in uterine fibroid" is accepted.

- Garbhasaya grandhi is a vatakapha predominant disease. The drug given in the C group was Vyaghrivarunadi qwadha. All the ingredients of this qwadha is having the property of vata kapha samana. Deepana, pachana, lekhana, bhedi and shodhahara property are helpful to reduce Vata kapha. Varuna indicated for vidhradhi and sigru is having the property of medohara. Varuna is katu rasa pradhana which would produce sroto visudhi. All these properties help to reduce garbhasaya grandhi.

- Hence, this study proved that internal administration of Vyaghrivarunadi qwadha for three months in a dose of 20ml two times daily before food alone is effective in reducing the number and size of uterine fibroid.

Limitation and Reccomendations

1. Usually medication for longer duration is provided in uterine fibroid treatment. In this study duration of treatment is 3 months. If the duration of medication had been for 6 months or one year it might have had a different impact on uterine fibroid reduction in size and number.

2. There are many limitations in sample collection due to un willingness to consume only the study medicine due to their associated symptoms like heavy bleeding.

3. Internal medicines, along with shodhana karmas such as vasthi, may help to reduce fibroid.

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Appendix

"Efficacy of *Vyaghrivarunadi qwadha* and *Kanchanaragulgulu* in comparison with *Trayantyadi qwadha* and *Kanchanaragulgulu* inUterine fibroid (Anukthavyadhi) – A Randomised control trial"

CASE REPORT FORM I – SCREENING

1. Code No. (of clinical trial) ☐☐☐☐☐☐
2. Name of the subject: _____
3. S.No. of the subject: _____
4. Gender Female ☐
5. Date of Birth: ☐☐☐☐☐☐ Age (in yrs.) ☐☐
6. Address: _____

_____

CRITERIA FOR INCLUSION

	Yes	No
1. Cases diagnosed as fibroids by USG	☐	☐
2. Size of the fibroid 4cm or below	☐	☐
3. Number of the fibroids upto 4 or below	☐	☐
4 . With symptoms	☐	☐
5. Without symptoms	☐	☐
6. Age between 25 & 50	☐	☐

CRITERIA FOR EXCLUSION	Yes	No
1. Patients with Adenomyosis	☐	☐
2. Patients with Endometriosis	☐	☐

1

3. Patients with DUB ☐ ☐
4. Age group less than 25 and above 50 ☐ ☐
5. Lactating mother ☐ ☐
6. Pregnant lady ☐ ☐
7. Patient with malignancy ☐ ☐

1. **If incusion criteria score is ≥6 and 1 to 7 are 'No' then the participant is eligible for the study and the patient is selected and randomly allotted into group** _

Date:_____ Signature of the Investigator

_____

2

"Efficacy of *Vyaghrivarunadi qwadha* and *Kanchanaragulgulu* in comparison with *Trayantyadi qwadha* and *Kanchanaragulgulu* inUterine fibroid (Anukthavyadhi) – A Randomised control trial"

Case Report form II – History

1. Age :
2. Domicile (2) : Rural [1] /Urban [2] /Slum [3]

3. **Socio economic Status (Kuppuswamy's socio economic status scale)**

Education			
Profession or honors	**7**	Graduate or postgraduate	**6**
Intermediate or post-high school diploma	**5**	High school certifi cate	**4**
Middle school certifi cate	**3**	Primary school certifi cate	**2**
Illiterate	**1**		
Occupation			
Profession	**10**	Semiprofessional	**6**
Clerical, shopowner, farmer	**5**	Skilled worker	**4**
Semiskilled worker	**3**	Unskilled worker	**2**
Unemployed	**1**		
Family income per month			
≥36,997	**12**	18,498-36,996	**10**
13,874-18,497	**6**	9,249-13,873	**4**
5547-9248	**3**	1866-5546	**2**
≤1865	**1**		

Socioeconomic class (3)

Socioeconomic class based on Total Score (Kuppuswami Scale 2012):

3

[1] Upper (26-29) [1] [2] Upper Middle (16-25) [2]

[3]Middle/Lower middle (11-15) [3] [4] Lower/Upper lower (5-10) [4]

[5] Lower (<5) [5]

Score [ ] **SES** [ ]

4. Marital status (4) [1] [2] : Married / Unmarried / [3] [4] Widow / Divorced.

5.**Religion:** **1.** Hindu [1] **2**. Muslim [2]

3. Christian [3] **4.** Sikh [4] **5**. Parsi [5]

6.Treatment history **Yes** [1] **No** [0]

. **Chief complaints** Duration :

9. Asymptomatic : [0] Symptomatic : [1]

Menstrual abnormalities

10. Bleeding

- Excessive menstrual bleeding [1]
- Prolonged menstrual bleeding [2]
- Intermenstrual bleeding [3]
- Frequent menstrual bleeding [4]
- Scanty bleeding [5]
- Normal bleeding [6]
- Mixed [7]
- Menopause [8]

4

1 2 0

11. Pain with menstruation : Present/ NA / Absent

If present,

1 2 3 4

12. Nature - Mild/ Moderate/ Severe/ NA

1 2 3 4 5 6

13. Site - Lower abdomen/ Back / Thigh / Loin / Mixed / NA

1 2 3 4 5

14. Time - Before menses/ During menses/ After menses / MIX / NA

1 0

15. Failure to conceive : Present/ Absent

1 0

17. Lower abdominal pain : Present/ Absent

B. **Associated symptoms**

1 0

20. Heaviness of abdomen : Present/ Absent

1 0

21. Feeling of lump in the abdomen : Present/ Absent

1 0

22. Dysparunia : Present/ Absent

1 0

23. Urinary symptoms : Present/ Absent

If present -

1 2 3 4 5 6 7

24. Increased/ scanty/ burning/ painful/ incontinence/Retention/Mix

1 2 3

25. Bowel movement : Loose stools/constipation/ frequent/

5

[4] [5]

Inadequate defecation/ satisfactory

[0] [1] [2]

26. Recent changes in the weight : no change/increased/ decreased

[1] [0]

27. Back pain : Present/ Absent

[1] [0]

28. Loin pain : Present/ Absent

[1] [0]

29. Vaginal discharge : Present/ Absent

If present -

[1] [2] [3]

30. colour : white/ yellow/ pale yellow

[1] [0]

31. Smell : offensive/ non offensive

[1] [2] [3] [4]

32. Nature : curdy white/mucoid/watery/blood stained

[1] [0]

33. Pruritis : Present/ Absent

C. **History of presenting complaint**

[1] [2] [3] [0]

35. Onset : Sudden/ Incidental/Gradual/ nil

[0] [1] [2]

36. Nature : Nil/ stationary/ progressive

D. **History of past illness :**

[0] [1]

37. History of gynaecological disease : absent / present

[1] [2] [3] [4]

38. History of general illness : UTI /TB /DM /Hypertension/

5 6 7 8

renal disorders/hepatic disorders/ others/ mix

If happened,

0 1 2 3

39. Treatment : Nil /Ayurveda/ Allopathy/ Homeopathy

1 0

40. Disease still continuing or not : YES / NO

1 0

41. H/O surgical intervention : YES / NO

E. **Family history** :

1 2 3 4 5 6

42. History of TB / DM /HT /Carcinoma/ Bleeding disorders/ Mix

43. History of similar illness in the family members :

1 2 3 4 5

mother/ siblings / G.mother/Daughter/ mix

F. **Personal history**

44. Appetite 1 more 2 reduced 3 normal

45. Bowel 1 satisfactory 2 constipated 3 irregular

46. Diet 1 vegetarian 2 non vegeterian 3 mixed

47. Sleep 1 more 2 less 3 sound

G. **Menstrual history**

48. Duration : [1] <3days [2] /4-5days [3] / 5-6days [4] /7-8days [5] />9days/ [6] NA

49. Interval : [1] <20days [2] /20-25days/ [3] 25-30days/ [4] 30-35days/ [5] >35days / NA

50. Amount – [1] scanty / [2] spotting / [3] moderate/ [4] excessive / [5] NA

51. No of pads changed per day- [1] /II/day [2] /III/day [3] /IV/day [4] />V/day / [5] NA

52. Colour - [1] Blackish red/ [2] bright red/ [3] frothy/ [4] pale red / [5] NA

53. Odour - [1] foul [2] /non specific [3] / NA

54. Clots : [1] Present [2] / NA [0] /Absent

55. Pain : [1] Present [2] /NA [0] /Absent

If present

56. onset – [1] pre [2] /pan [3] /post menstrual [4] / mix [5] / NA

57. Degree- [1] mild [2] /moderate [3] /severe [4] / NA

58. Site – [1] lower abdomen [2] / low back [3] /thighs [4] /calf [5] / NA

59. Inter menstrual bleeding : [1] Present [0] /Absent

If present -

60. Duration - [1] <3days [2] / 3-4days [3] />4days [4] / NA

61. Amount - [1] scanty [2] / spotting [3] / average [4] /heavy [5] / NA

62. Clots - [1] Present [0] /Absent

NA : MENOPAUSE

H. **Marital history**

63. [1] Consanguineous [2] / Not

I. **Contraceptive history** :

63. Method : [1] Temporary [2] / Permanent

8

J. **Obstetric history** [65] [66] [67] [68] [69]

NO	Year & date of pregnancy	Duration of pregnancy	Abnormalities in antenatal period	Nature of labour	Puerperal period	Condition of the baby

65. [0] Nil [1] / FT [2] /PT [3] /POT [4] / MIX [5] /NA
FT : FULLTERM. PT : PRETERM, POT : POST TERM NA : UNMARRIED SO NOT APPLICABLE.

66. [1] YES [2] /NA [0] /NO

67. [0] NIL [1] /FTND [2] /LSCS [3] /MIX [4] /NA
FTND : NORMAL DELIVERY, LSCS : CAESAREAN

68. [0] NIL [1] /NORMAL [2] /ABNORMAL [3] / NA

69. [0] NIL [1] HEALTHY [2] / UNHEALTHY [2] /NA

K . **General examination [70]**

1. BP :
2. Body built : [1] Lean [2] moderate [3] obese
3. Height
4. Weight

L. **Physical examination**

Breast : [71]

[1] Normal [0] / Abnormal

M. **Systemic examination [72]** [1] NORMAL [0] /ABNORMAL

N . **Ashtasthana pareeksha**

73. Nadi : [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

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74. Mutra : [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

75. Mala : [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

76. Jihwa : [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

77. Sabda : [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

78. Sparsa : [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

79. Drik : [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

80. Akriti : [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

O. **Dasa vidha pareeksha**

81. Dushya : [1] Raktha [2] /Mamsa [3] /Mix

82. Desa [1] Jangala [2] /Anupa [3] /Sadharana

83. Bala [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

84. Kala [1] vasantha [2] /greeshma [3] /sarath [4] /hemantha [5] /varsha [6] / sisira

85. Anala [1] Manda [2] /Theekshna [3] /Sadharana

86. Prakrit [1] V [2] / P [3] / K [4] /VP [5] /VK [6] /PK [7] /TRI

87. Vaya [1] Madhya [2] / Vriddha

88. Stawa [1] Madhya [2] /Avara [3] /Pravara

89. Satmya [1] Madhya [2] /Theekshna [3] / Sadharana

90. Ahara [1] Avara [2] Madhya [3] Pravara

P. **Local examination**

INSPECTION

10

91. Urethra - [1] Normal [2] Incontinence [3] Inflamed [4] Caruncle [5] ND

92. Vulva - Vulvitis : [1] Present [2] ND [0] Absent

93. Labia - [1] Normal [2] Abnormal [3] ND

94. Cystocele - [1] Present [2] ND [1] Absent

95. Rectocele - [1] Present [2] ND [0] Absent

96. Prolapsed of uterus - [1] Present [2] ND [0] Absent

97. If present, the degree – [0] NIL [1] Ist [2] IInd [3] IIIrd [4] ND

PER SPECULUM

VAGINA

98. Discharge - [1] Present [2] ND [0] Absent

If present-

99. Colour – [1] white [2] pale yellow [3] yellow [4] blood staine [5] others [6] ND [7] NA

100. Amount - [1] mild [2] moderate [3] excessive [4] ND [5] NA

101. Consistency - [1] Thin [2] curdy [3] watery [4] frothy [5] mucoid [6] others [7] ND [8] NA

102. Vaginitis - [1] Present [2] ND [0] Absent

103. Abnormal growth - [1] Present [2] ND [0] Absent

CERVIX

104. Position - [1] middle [2] anterior [3] posterior [4] ND

105. Size - [1] normal [2] hypoplastic [3] hyperplastic [1] ND

106. Cervical os – [1] nulliparous [2] parous [1] ND

107. Cervicitis - [1] Present [1] ND [0] Absent

If present -

108. [1] acute [2] chronic [3] ND [4] NA

109. Erosion - [1] Present [2] ND [0] Absent

If present –

110. site - [1] upper [2] lower [3] all around lip [4] others [5] ND

111. Degree [1] mild [2] moderates [3] Severe [4] NA

112. Presence of abnormal growth - [0] Absent [1] scar [2] laceration [3] Polyps [4] fibroid [5] ND

PER VAGINAL EXAMINATION

UTERUS :

113. Size : [1] bulky [2] normal [3] ND

114. Direction : [1] anteverted [2] retroverted [3] ND

115. Mobility : [1] freely mobile [2] fixed [3] restricted movement [4] ND

116. Consistency : [1] normal [2] hard [3] soft [4] ND

117. Any abnormal growth : [1] Present [2] ND [0] Absent

NA : NOT APPLICABLE

ND : NOT DONE

Q. **Investigations**

BLOOD

Hb: CT : BT :

R. **USG report**

S. **Diagnosis**

T. **Treatment given [118]**

[1] A [2] B [3] C [4] D [5] E

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U. **USG at the end of 3 months of treatment**

V. **Follow up**

No	Signs and symptoms	1st month	2nd month	3rd month
1.	Bleeding [119]			
(a)	Amount [120]			
(b)	Duration [121]			
(c)	Interval [122]			
2.	Pain with menstruation [123]			
3.	Lower abdominal pain [124]			
4.	Heaviness of abdomen [125]			
5.	Feeling of lump [126]			
6.	Dyspareunia [127]			
7.	Vaginal discharge [128]			
8.	Low back ache [129]			
9.	Associated symptoms, if any [130]			

119. Bleeding [1] Excessive [2] Prolonged [3] Intermenstrual [4] Frequent [5] Scanty [6] Mix [7] Normal [8] NA

120. Amount [1] Scanty [2] Spotting [3] Moderate [4] Excessive [5] Mix [6] NA

121. Duration : [1] <3days [2] 4-5days [3] 5-6days [4] 7-8days [5] >9days [6] NA

122. Interval : [1] <20days [2] 20-25days [3] 25-30days [4] 30-35days [5] >35days [6] NA

123. Pain with menstruation : [1] Mild [2] Moderat [3] Severe [4] NA

124. Lower abdominal pain: [1] Presesnt [2] NA [0] Absent

125. Heaviness of abdomen : [1] Presesnt [2] NA [0] Absent

126. Feeling of lump: [1] Presesnt [2] NA [0] Absent

127. Dyspareunia : [1] Presesnt [2] NA [0] Absent

128. Vaginal discharge : [1] Presesnt [2] NA [0] Absent

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129. Lowbackache : [1] Presesnt [2] NA [0] Absent

130. Associated symptoms if any : [1] Presesnt [2] NA [0] Absent

NA : MENOPAUSE

Investigations

Blood	1st month	2nd month	3rd month
Hb%			
BT			
CT			

At the end of third month : USG

Investigation	1st month		3rd month	
USG	Size	Number	Size	Number

RESULT

S

Name of the investigator Dr. Prasanna V N

Address Professor, Dpt. of Prasuthitantra & Streeroga
Vaidyaratnam Ayurveda College, Ollur, Thrissur.

14

VAIDYARATNAM AYURVEDA COLLEGE

OLLUR, THRISSUR

Name of the investigator Dr. Prasanna. V.N

Address PhD scholar, Dpt. of Prasuthitantra & Streeroga

Vaidyaratnam Ayurveda College, Ollur, Trissur.

INFORMED CONSENT

I, the undersigned do hereby give my full consent to participate in the clinical trial after understanding the objectives and nature of the study as described below, which as explained and understood by me in my own language.

This research titled 'Efficacy of Vyaghrivarunadi qwatha and Kanchanaragulgulu in comparison with Thrayanthyadi qwatha and Kanchanaragulgulu in Uterine Fibroid (Anukthavyadhi) – A Randomised control trial'' is done as a part of PhD research in Ayurveda by the investigator under the guidance of Dr. Sujata Kadam, Professor & HOD, Tilak Ayurveda mahavidyalaya, Pune.

1. The study helps to know the comparative efficacy of Vyaghrivarunadi qwadha and Kanchanaragulgulu and Trayanthyadi qwatha and Kanchanaragulgulu in Uterine Fibroid.
2. There is no expense on the part of the participant, nor will any remuneration paid.
3. Laboratory investigations are needed for understanding the disease and the result will be available from specific institution.
4. The drug used in the study 'is having history of long term use with no side effects. In case of any adverse effects doctor will be responsible to do the needful.
5. In case of any discomfort doctor informed me who to consult.
6. The information collected will be strictly confidential. The result will not be analysed or presented in a way that can lead to identification of any individual.
7. The participation is voluntary and the subject is free to refuse to take part in this study or withdraw from the study at any time.
8. The signature of the person in this form indicates that he/she has understood to his/her satisfaction the information regarding participation in this research project and agree to undergo the specific clinical investigation/laboratory investigations.

Signature of the investigator Signature of the patient

Place

Date

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Authentication certificate

Name and address of Customer : Dr Prasanna V N, Professor, Dept. of Prasutitantra,
Vaidyaratnam Ayurveda College, Ollur.

Kanchanaraguggulu Tablet – Sarangadhara samhita

Kanchanara	Bauhinia variegate Blume
Harectaki	Terminalia chebula Retz
Vibheetaki	Terminalia bellerica Roxb
Amalaki	Emblica officinalis Gaertn
Nagara	Zingiber officinale Roxb
Marica	Piper nigrumLinn
Pippali	Piper longum Linn
Varuna	Crataeva religiosa
Ela	Elettaria cardamomum Linn.
Twak	Cinnamomum zeylanicum Blume.
Patra	Cinnamomum tamala
Guggulu	Commiphora mukul Engl.

This is certified that the in house preparation of Kanchanaraguggulu tablet is in adherence with GMP guidelines. Drug analysis was done in quality testing laboratory Vaidyaratnam Oushadhasala.

VAIDYAMADHAM VAIDYA SALA & NURSING HOME PALAKKAD (DIST) KERALA-679 534 MEZHATHUR, TRITHALA

Vasudevan.

Dr. V.N. VASUDEVAN, B.A.M.S
Regd. Medical Practitioner
REGD. No: 6583, Class A-ISM

VAIDYARATNAM
OUSHADHASALA PVT. LTD.

QUALITY TESTING LABORATORY

CERTIFICATE OF ANALYSIS

Reference no: Letter dated 05/09/2016 **Date: 25/10/2016**

Name and address of Customer : Dr.Prasanna.V.N,Professor Dept. Of Prasutithantra and Streeroga,Vaidyaratnam Ayurveda College,Ollur.

Sample submitted by : By party

Name of the sample : Kanchanaraguggulu tablet

Date of receipt : 06/09/2016

TEST RESULT

Parameters	Result	Reference
1. Average weight	1.3595g	API
2. Loss on drying	11.20%	API
3. Total ash	6.78%	API
4. Water soluble ash	2.01%	API
5. Acid insoluble ash	1.08%	API
6. Alcohol Soluble extractive	27.90%	API
7. Water soluble extractive	30.45%	API
8. Heavy metal analysis		
Cadmium	BDL	API
Lead	BDL	API
Mercury	BDL	API
Arsenic	BDL	API

BDL:Below Detectable Level

Remarks:

Checked by

VAIDYARATNAM OUSHADHASALA (P) LTD.
Authorized Signatory

PERSON INCHARGE
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Name and address of Customer : Dr Prasanna V N, Professor, Dept. of Prasutitantra,
Vaidyaratnam Ayurveda College, Ollur.

Trayantyadi Qwadha – Ashtangahridayam

Trayanthi	Gentiana kurroa
Harcetaki	Terminalia chebula Retz
Vibheetaki	Terminalia bellerica Roxb
Amalaki	Emblica officinalis Gaertn
Nimba	Azadirachta indica A. Juss
Katuka	Picrorhiza kurroa Royle ex Benth.
Madhuka	Glycyrrhiza glabra Linn
Trivrth	Operculina turpethum (Linn.)
Patola	Trichosanthes dioica Roxb
Masura	Lens culinarisMedic.

This is certified that the in house preparation of Trayantyadi qwadha is in adherence with GMP guidelines. Drug analysis was done in quality testing laboratory Vaidyaratnam Oushadhasala.

VAIDYAMADHAM VAIDYA SALA & NURSING HOME PALAKKAD (DIST) KERALA 679 534

Dr. V.N. VASUDEVAN, B.A.M.S
Regd. Medical Practitioner
REGD. No: 6583, Class A - ISM

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CERTIFICATE OF ANALYSIS

Reference no: Letter dated 25/11/2016 **Date: 07/01/2017**

Name and address of Customer : Dr.Prasanna.V.N,Professor Dept. Of Prasutithantra and Streeroga,Vaidyaratnam Ayurveda College,Ollur.

Sample submitted by : By party

Name of the sample : Thrayanthadi kashayam

Date of receipt : 25/11/2016

TEST RESULT

Parameters	Result	Reference
1. pH	4.93	API
2. Total solids	16.18	API
3. Specific gravity	1.069	API
4. Total phenol	14.95%	API
5. Heavy metal analysis		API
Cadmium	BDL	API
Lead	BDL	API
Mercury	BDL	API
Arsenic	BDL	API

BDL:Below Detectable Level

Remarks:

Checked by

For VAIDYARATNAM OUSHADHASALA (P) LTD.
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Reference no: Letter dated 25/11/2016 **Date: 07/01/2017**

Name and address of Customer : Dr.Prasanna.V.N,Professor Dept. Of Prasutithantra and Streeroga,Vaidyaratnam Ayurveda College,Ollur.

Sample submitted by : By party

Name of the sample : Thrnyanthadii kashayam

Date of receipt : 25/11/2016

TEST RESULT

Parameters	Result	Reference
1. Microbial Contamination		
1.Total Plate count	Nil	API
2.Total Fungal count	Nil	API
3. Test for specific pathogen		
1. E.coli	Absent	API
2. Salmonella spp.	Absent	API
3. S.aureus	Absent	API
4. Pseudomonas aeruginosa	Absent	API

Remarks:

Checked by 7/1/17

For VAIDYARATNAM OUSHADHASALA (P) LTD.

Authorized Signatory

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Name and address of Customer : Dr Prasanna V N, Professor, Dept. of Prasutitantra, Vaidyaratnam Ayurveda College, Ollur.

Vyaghrivarunadi Qwadha – Sahasrayogam

Vyaghri	Solanum xanthocarpum Schrad
Varuna	Crataeva religiosa
Tarkari	Premna integrefolia.
Sigru	Moringa oleifera Lam
Viswa	Zingiber officinale Roxb
Punarnava	Boerhaavia diffusa Linn.

This is certified that the in house preparation of Vyaghrivarunadi qwadha is in adherence with GMP guidelines. Drug analysis was done in quality testing laboratory Vaidyaratnam Oushadhasala.

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Reference no: Letter dated 05/09/2016 **Date: 25/10/2016**

Name and address of Customer : Dr.Prasanna.V.N,Professor Dept. Of Prasutithantra and Streeroga,Vaidyaratnam Ayurveda College,Ollur.

Sample submitted by : By party

Name of the sample : Vyakhreevaranadi kashayam

Date of receipt : 06/09/2016

TEST RESULT

Parameters	*Result*	*Reference*
1. Microbial Contamination		
1.Total Plate count	$25*10^2$ cfu/ml	API
2.Total Fungal count	2 cfu/ml	API
2. Test for specific pathogen		
1. E.coli	Absent	API
2. Salmonella spp.	Absent	API
3. S.aureus	Absent	API
4. Pseudomonas aeruginosa	Absent	API

Remarks:

Checked by

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Sample submitted by : By party

Name of the sample : Vyakhreevaranadi kashayam

Date of receipt : 06/09/2016

TEST RESULT

Parameters	Result	Reference
1.pH	5.28	API
2.Total solids	9.03	API
3.Specific gravity	1.034	API
4.Total phenol	4.35%	API
5.Heavy metal analysis		API
Cadmium	BDL	API
Lead	BDL	API
Mercury	BDL	API
Arsenic	BDL	API

BDL:Below Detectable Level

Remarks:

Checked by

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VAIDYARATNAM AYURVEDA COLLEGE
Thaikkattussery PO, Ollur, Thrissur

ETHICAL CLEARANCE CERTIFICATE

Ref No. IEC - 30/4/16 – 7/ECC 02.05.2016

To

Dr. VN Prasanna
PhD Scholar

Supervisor: Dr.Sujata Kadam

Dear investigator,

The Institutional Ethics Committee, in its meeting held on 30.04.2016 at this institution reviewed and discussed in detail about your research project titled:

'Efficacy of *Vyaghrivarunadi Qwadha* and *Kanchanara gulgulu* in Comparison with *Trayantyadi Qwadha* and *Kanchanara gulgulu* in Uterine fibroid (Anuktavyadhi) – A Randomised Control trial'.

The IEC suggested a few modifications related to ethical issues, and subject to your undertaking in writing that these will be incorporated; the project is now approved by the IEC for implementation at Vaidyaratnam Ayurveda College.

It will be your responsibility to keep the IEC informed of the progress of the study. Any modification in the protocol and informed consent format shall be done only after prior approval of the IEC. On completion of the project, a copy of the final report shall be submitted to the IEC. In case the project is discontinued/abandoned, the matter shall be duly reported to the Secretary in writing.

Yours sincerely

Dr. T.Sreekumar,
Secretary
Institutional Ethics Committee
Vaidyaratnam Ayurveda College,
Ollur, Thrissur

Member Secretary
Institutional Ethics Committee
VAC, Ollur, Thrissur.

Dr.K.C.Chacko
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Analysis of uterine fibroids: An Ayurvedic perspective

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Abstract

Ayurveda, a natural system of medicine, originated in India more than 3,000 years ago. The remedies mentioned in Ayurveda are based on the basic ayurvedic perspective that individuals with the same disease may differ, and hence the treatments given to individuals with the same disease can also be different. Women's gynaecological problems have increased as their lifestyle and dietary habits have changed. According to Ayurveda, the causes of Yoniroga include Ahithahara and Ahithavihara. (Abnormal dietetics and mode of life.) One of the most common non-cancerous neoplasms of the uterus is uterine fibroid, or leiomyoma. Though they are benign in character, they exhibit a wide range of symptoms like dysmenorrhoea, menorrhagia, low back pain, repeated pregnancy loss, and infertility. The majority of gynaecological disorders fall under the category of yonivyapath or yonirogas. Considering the symptoms of fibroids like menorrhagia and dysmenorrhoea, explanations of yonirogas such as asrgdara, rakthayoni, asrja, and vatiki can be available. Uterine fibroids are one of the causes of infertility and repeated abortions. While going through this, the explanation of Jathaghni and Vandhyatha is also mentioned under Yonirogas.

Key words : Ayurveda, Uterine fibroid, Dysmenorrhoea, Menorrhagia, Infertility, Asrgdara, Jathaghni, Vatiki

Introduction

Uterine fibroids are the commonest cause of enlargement of the uterus in gynaecological practice. It is a non-cancerous uterine tumour that develops from the myometrium. As many as one in four women of reproductive age are found to have at least one fibroid on ultrasound. They are also the commonest reason for hysterectomy and are seen in about 70% of uteri removed at hysterectomy. They arise from the myometrium and consist of varying proportions of smooth muscle and fibroblasts.[1]. It is a well-circumscribed tumour with a pseudocapsule. It has a firm consistency. The capsule consists of connective tissue that fixes the tumour to the myometrium.

Asymptomatic fibroids affect up to 50% of women. These fibroids are detected during a gynaecological checkup or ultrasound scanning done for unrelated symptoms[2]. Fibroids are oestrogen-sensitive and frequently grow quickly. The rate of growth seems to be semiquantitatively linked to the number of oestrogen and progesterone receptors. Rapid growth raises the possibility of malignant change within the fibroid, although this is extremely rare. Leiomyosarcoma is the most common malignant tumour of the uterus[3].

Incidence

The true fibroid incidence is unknown because many women with these tumours are asymptomatic[4]. It is estimated that nearly 20% of women of reproductive age harbour uterine myomas of different sizes, and more than 30% of women beyond the age of 30 have myomas. After menopause, the myomas shrink and reduce in size. They may become calcified at times[5].

Pathology

The consistency of the myoma is spherical, lobulated, and firm. It is surrounded by a pseudocapsule, which is formed by the compression of the myometrial tissue surrounding the myoma[5]. The capsule consists of connective tissue, which fixes the tumour to the myometrium. Because of the presence of this pseudocapsule, the myomas can be easily enucleated from the uterine wall. The cut surface of the tumour is pinkish-white and has a whorled appearance. These myomas are generally lighter in colour than the surrounding myometrium.

Symptoms

Symptoms of fibroids are generally classified into the following categories: abnormal uterine bleeding, pelvic pressure symptoms, pain, and reproductive dysfunction. Abnormal uterine bleeding occurs in the form of prolonged bleeding and excessive bleeding with clots. Bleeding abnormalities are caused by increased endometrial surface area in submucous fibroid and associated endometrial hyperplasia. Oedema of the lower limbs occurs when a large fibroid compresses lymphatics. When broad ligament fibroid presses on the sciatic nerve, it causes pain. Large fibroids in the posterior wall may cause constipation, and those in the anterior wall may cause urinary symptoms[6] As the tumours grow, pressure is exerted on adjacent organs, especially the urinary tract and rectosigmoid. The associated urinary tract manifestations include frequency, outflow obstruction, and ureteral obstruction with hydronephrosis[7].

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The mechanism by which the fibroids affect fertility is uncertain, but it is believed that the submucous fibroids distort the uterine cavity and affect the implantation of embryos. Other symptoms related to pregnancy are abortion, premature labour, malposition, malpresentation, obstructed labor, and abnormal uterine contractions.[8] Infertility may be associated with submucosal fibroids [9,10] or a markedly distorted endometrial cavity induced by big intramural myomas, which both may interfere with embryo implantation or sperm transportation. [11]

Ayurvedic description

In Ayurveda, there is no specific description of a uterine fibroid or tumour in the garbhasaya. Tumors are considered grandhis in the Ayurvedic classics, and when they appear in the garbhasaya, they are considered equivalent to grandhis. Grandhi develops due to the vitiation of dosha and dusha followed by their accumulation at one place, producing protuberance, and is relatively hard and rough in nature. [12]

Yonirogas

Yonirogas are mentioned in different Ayurvedic classics, and almost all the gynaecological diseases fall under this heading. According to the acharyas, there are a total of 20 yonirogas based on dosha vitiation[13]. A healthy yoni, or reproductive organs, is essential for the conception, growth, and delivery of a healthy child.

Coming to the Nidana: Mityachara, Mitya Vihara, Mityahara, Artavadushti and Beeja Dushti were responsible for different types of yonirogas[14].

Considering the symptoms of fibroids like Atyarthava, the treatment of Yonirogas such as Asrgdara, Rakathayoni, and Asrja can be adopted[15]. The uterine Fibroids are one of the causes of repeated abortions and infertility. So Jathaghni and Vandhyatha, which are also explained under yonirogas, are also considered while treating fibroids with these symptoms[16].Another symptom of uterine fibroid is artavasula or krichrartava, so the descriptionof Vatiki Yoniroga is also included[17].

Nidana of yonirogas

Yonirogas develop due to nidanas (causative factors) like Mithyahara, Mithyavihara, Arthavadushti, Beejadushti, and Daivatha (an unknown cause)[18].

Yonirogas having dysmenorrhea

In the Ayurvedic classics, dysmenorrhea is referred to as Kashta artava and is mentioned as a symptom rather than a disease in many gynaecological disorders. Aggravated Vata dosha is the cause of all types of pain in the body. Apana vata (a subtype of vata), which is responsible for normal regulation of menstruation, gets disturbed due to some causative factors, and vata gets vitiated. This causes painful menstruation. Many of the Yonivyapad mention Kashtaartava features as symptoms.

Some of them, along with their lakhshanas (symptoms), are as follows:

Vatiki

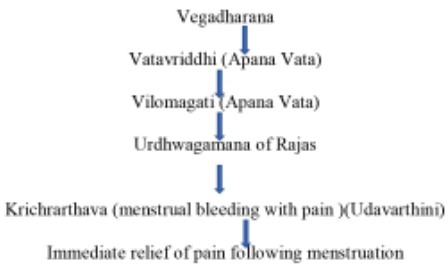
According to Carakacharya, a woman of vata prakriti consumes vata, aggravating ahara, and vihara leads to aggravation of vata. This vata, when reaching the reproductive organs, produces pricking pain, stiffness, roughness, fatigue, and the sensation of creeping ants. Because of the vitiation of Vata, menstrual bleeding occurs with sound and is painful, frothy, thin, and dry[19].

Udavartini

Caraka says that due to vegadharana, vata gets vitiated, and this aggravated vata then moves in the reverse direction and fills the yoni. So the yoni affected by pain initially pushes the artava rakta in an upward direction, then exhales it with difficulty. The woman feels relief immediately following the discharge of menstrual blood. Here the rajas or artavarakta moves upwards in the opposite direction, hence it is termed Udavartini[20].

Samprapthi

Srotodushti occurs when vitiated vata travels through the srotases. Here, the types of srotodushti are sanga and vimargagamana. Then the menstrual blood gets obstructed in the yoni and produces various symptoms along with dysmenorrhoea.[21]



Samprapti Ghataka
Doshas - Vata, Apana Vata
Dushya - Rasa, Rakta, Mamsa, Artava
Agni - Jatharagni. Dhatvagni mandya

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Strotas - Rasa, Rakta, Artava vaha srotas
Srotodushti - Vimarga gamana Roga marga - abhyantara
Sthanasamsraya - Yoni

Asrugdara or Rakthapradara

Heavy or irregular menstrual bleeding is one of the most common symptoms of a uterine fibroid. Heavy menstrual bleeding is called Asrigdara or Raktapradara in Ayurveda. Asrik, which means blood, and Dhara, which refers to excessive flow[15,22].

Nidana of Asrgdara

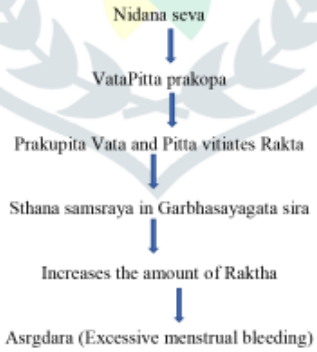
Women's vata is aggravated by the consumption of excessively salty, sour, katu, vidahi, and unctuous ahara, curd, sukta, mastu, and madya, which then vitiate raktha. Asrgdara occurs due to the aggravation of vata, especially apanavata, which is responsible for the expulsion of menstrual blood[23,15,24]

Nidana of Asrgdara

	Rasa	Guna	Virya	Vipaka	Karma
Aharaja	Amla Lavan Katu	Guru Snigdha Ushna Sara Sukshma	Ushna	Katu	Dhatvagnimandya Strotodushitikara Rakta atipravrutti Raktavikaras Daurbalyata Pandu
	Vataja	Pittaja	Kaphaja		
Viharaja	Atimaithun Ati Yana Atiadhva Atikarshan Bharvahan Garbhaprapata				Diwa Swapna
Manasika	Shoka, Krodha, Bhaya				
Others	Abhighataja Vatapurita Kshseeranadi				

Samprapti.

According to the above explanation, nidana increases rakta, and reaching the rajovaha sira of the uterus increases rajas. This extra menstrual blood is expelled in the form of heavy bleeding, both in quantity and duration. In Asrgdhara, Vata is the causative dosha, and Raktha is the affected dushya. Raktha and Pitta are similar in properties, so naturally, Rakta vitiation aggravates Pitta also. This aggravated pitta covers the apanavata, and thus Vayu gets aggravated. The symptoms and treatments are similar to those of Rakathapitha[25] .



Samprapti Ghataka
- Dosha – Vata Pitta
- Dushya – Rasa, Rakta, Artava
- Agni Dushti– Jataragni Mandya, Dhatwagni Mandya
- Srotas – Rasavaha, Raktavaha, Artavavaha
- Srotodushti – Ati Pravritti
- Udbhava Sthana & Adhisthana –Garbhashaya
- Sanchara Sthana – Garbhashaya ,Yoni Pradesha
- Vyadhimarga – Abhyantara

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Samanya lakashana

Menstrual bleeding is excessive in quantity or duration, even during periods other than the menstrual phase, and has the characteristics of specific doshas as well as symptoms such as body ache and pain [26]. Asrgdara has burning in the lower part of the abdomen, according to Dalhana (Vamkshana, Sroni, Prushta, and Vrikka)[27].

Raktayoni

The symptom of Raktayoni is excessive menstrual bleeding[28]

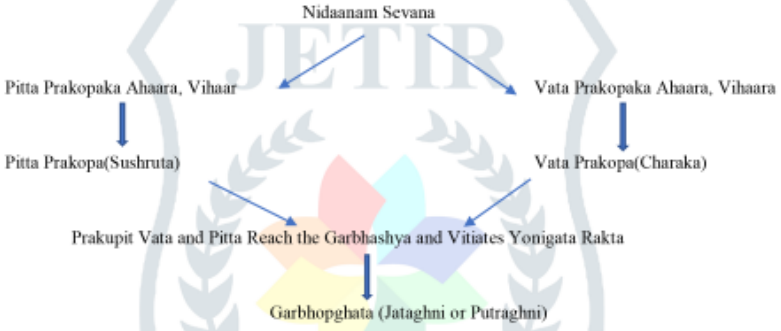
Asrja

Due to excessive use of ahara and vihara, which are capable of aggravating rakta and pitta, the rakta in the yoni gets vitiated by pitta. The vitiated rakta and pitta situated in the yoni will affect the woman even in garbhavastha and produce excessive bleeding during periods[29].

Jataghni / putraghni

It is a condition characterised by repeated abortions. Vata aggravates as a result of vata kopa nidanas, and this vata repeatedly destroys the foetuses born from vitiated rakta. Though both sexes are destroyed in this disease, the destruction of male foetuses predominates, hence the name putraghni[30]. The foetuses, after attaining stability, are repeatedly destroyed due to bleeding and other features of vitiated pitta like burning and heat. When Vata becomes aggravated due to rookshata and repeatedly kills foetuses conceived and developed from vitiated artava, the condition is known as jataghni, according to Vagbhata[31].

Vitiated Vata (Charaka) and Vitiated Pitta (Sushruta) destroys fetuses or newborn children.



Vandhyata

Infertility is defined as the inability to conceive after one year of regular, unprotected coitus[32]. In Ayurveda, for conception and development of a healthy baby, four factors are essential. They are Ritu, Kshetra, Ambu, and Beeja. Ritu is a fertile period; kshetra is a healthy yoni (internal genital organs); ambu is proper nutrition; and bija is both stribija and pumbija. All these factors are needed for the conception and development of a healthy foetus[33].

Nidana

Yonipradosha, Mansika Rogas, Sukra Dushti, Artava Dushti, Aharadosha, viahara dosha, akalayoga (absence of contact at the time of fertile period) and balakshaya (abnormality of garbhasaya) have been explained as the causes of delay in achieving conception[34]

Yonipradosha

Congenital or acquired disease of anatomic components of the reproductive system, i.e., the vagina, cervix, uterus, and fallopian tubes. All twenty Yonivyapada (gynecological disorders) that, if not treated properly, can lead to infertility, as well as Artavavaha Srotas Injury, lead to infertility.

Manasobhighata

Normal psychology of the couple is very important for the achievement of pregnancy. Fear of having sex, marital disharmony, and infrequent coitus affect fertility. Manasika Abhighata affects fertility. Due to stress, Bhaya, Shoka, Krodha, Lajja, etc., will be vitiated. So, it increases the hypothalamic activity of CRH (corticotrophin-releasing hormone), and further, it inhibits normal GnRH pulsatile secretion, and ultimately anovulatory cycles occur.

Shukra dushti: Quantitative and qualitative sperm abnormalities, as well as spermatic abnormalities Infertility is caused by fluids. Pitruja Bhavas, which are classified into six factors, are carried to the embryo by sperm.

Artava dushti: The word Artava refers to ovum, menstrual blood, and ovarian hormone abnormalities. Infertility is caused by a lack of ovum and ovarian hormones.

Healthy sperm and ovum, and normal male and female genital organs, are essential for conception and the development of a healthy child.

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Aharadosha: Dietetic abnormalities cause infertility in two ways:
1. By producing the loss of Dhatus and that of Dhatvagni, they influence hormones
2. By vitiating doshas, which cause various gynaecological disorders, leading to infertility.

Dietetic anomalies influence the nourishment of the body or cause the loss of Dhatus, which influences normal secretion of hormones.

Vihara Dosha: Abnormal modes of life and the suppression of natural urges aggravate doshas, which produce so-called yonivyapths, which lead to infertility. Other than the supine posture of the woman during coitus, the discharge of sperm on the Samirana Nadi or outside the vagina is considered a defective practice. In all these conditions Most likely, semen is not properly deposited inside the vaginal canal. Thus, sperm fail to enter the uterus. causing infertility. Abnormalities in lifestyle cause infertility in two ways:
1. By vitiating the doshas, they cause gynaecological disorders.
2. By preventing proper sperm entry due to faulty seminal ejaculation deposition.

Akala Yoga: The term "Kala" refers to both a time period and the rutukala. Conception does not occur in adolescent girls and old ladies due to the premenarche and menopause stages, respectively, or in coitus before or after Rutukala due to the absence and destruction of the ovum.

Bala Khsaya: Bala refers to the strength of garbhasaya, i.e., the uterus. A healthy pregnancy is critical for proper implantation and child development.

The classification of vandhya has not been explained by any of the acharyas except Harita. According to Harita, Vandhya can be divided into six types. Kakavandhya (inability to conceive after first childbirth), anapathya (primary infertility), garbhasravi (repeated abortions), mrtavalsa (repeated stillbirths), balakshaya, and garbhakosabhanga (injury to the uterus) [35] In the description of Asrja Yonivyapath Acharya, Caraka has mentioned the word "apraja." Vandhya has been described as "nashtartava," and it may be considered due to the abnormality of the uterus or ovaries when secondary dysmenorrhoea or anovulation occurs, which leads to a condition of infertility. Taking all of these factors into consideration, vandhyata can be divided into three types:

1. Vandhya: absolute infertility
2. Apraja: primary infertility; a woman will conceive after treatment.
3. Sapraja: secondary infertility, the inability to conceive after giving birth to one or more children[29].

Conclusion

Uterine fibroid is seen during the reproductive life of a female, irrespective of age, and may result in various menstrual problems such as dysmenorrhea, menorrhagia, and irregular periods by disturbing anatomical as well as physiological integrity. Uterine fibroid is classified as garbhasaya grandhi in Ayurveda. The treatment was aimed at reducing the fibroid. It is based on Ayurvedic principles. While considering the symptoms of fibroid, the treatment of yonirogas such as asrgdara or rakthayoni, jathaghni, vathiki, and vandhya can be adopted..

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MANAGEMENT OF UTERINE FIBROID IN AN INFERTILE WOMAN BY AYURVEDIC PROTOCOL – A CASE STUDY

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Abstract

Infertility is inability to become pregnant for a sexually active couples after one year without using any contraceptives. It causes great distress to many couples.. Uterine fibroids are benign tumours of myometrium and there are several ways the uterine fibroids will affect the fertility of woman. The size and location of fibroids determines whether it affect fertility. Small fibroids directly do not cause infertility.. But large fibroids, size more than 5cm and submucous type fibroid can cause infertility.. Submucous fibroids may prevent the proper implantation of embryo there by result either infertility or miscarriage. About 1/4th of female infertility caused due to a problem of ovulation. A woman's ability to get pregnant can be affected by age. Increasing age decreases the quality and quantity of the eggs due to poor ovarian reserve. Poor ovarian reserve occurs when a women's ovaries lose reproductive capacity, which then cause infertility. This is a case of a lady aged 38years having uterine fibroids and poor ovarian reserve complaining of irregular delayed periods and difficulty to conceive after 16years of married life, who came to the OPD *Vaidyaratnam Ayurveda College, Ollur, Thrissur* for treatment. She was advised to consume internal medicines followed by admission in IPD, *Prasutitantra* and *Striroga,* . All the *Sodhana karmas* and *Uttaravasti* was done after admission. *Uttaravasti* was done for three consecutive months after menstruation for 5days. There is great reduction to the size of the fibroid and the woman became pregnant and delivered normally to a healthy baby.

Key words : Fibroids, Infertility, poor ovarian reserve, *utharavasthi.*

Introduction

Infertility is inability to conceive after 1year of regular unprotected coitus[1]. This may be occurred as primary infertility and secondary infertility. In primary Infertility there is no previous pregnancy had occurred and in secondary the women had previously been pregnant but failure to conceive subsequently[2]. There are so many causes for infertility including factors of both male and female. The optimal age for fertilization in female is between 20 and 35. Over the age of 40 of women reduces the fertility rate as well as increases the risk of congenital malformities of fetus[3]. Uterine factors contribute 10% of female causes of infertility.

Fibroid uterus is one of the uterine cause for infertility. They are benign monoclonal tumors of the smooth muscles of uterus[4]. As it is an estrogen dependent tumor it is seen during reproductive period. Histologically Depending upon the sites it can be divided into interstitial, subserous and submucous fibroid. In 50% of women the fibroids are asymptomatic. These are detected accidentally during gynecological check up or ultra sound scan. The symptoms may include menorrhagia, polymenorrhoea, metrorrhagia, infertility, subfertility, abortion, lower abdominal pain and pressure symptoms.

There are several ways the uterine fibroids will affect the fertility of woman. Uterine fibroids changes the shape of the uterus, fallopian tubes can be blocked, impact the endometrial lining, the blood flow to the uterine cavity can be effected, all these things will decrease the ability of implantation of embryo into the uterine wall[5]. The size and location of fibroids determines whether it affect fertility. Small fibroids directly do not cause infertility.. But large fibroids, size more than 5cm and submucous type

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fibroid can cause infertility. Submucous fibroids may prevent the proper implantation of embryo there by result either infertility or miscarriage. Fibroids during pregnancy can change baby's position in the uterus . this will increase the risk of Miscarriage, Preterm labour, and Cesarean section. They also create problems such as Placental abruption, Intrauterine growth retardation[6]. Due to defective implantation of the placenta, poorly developed endometrium, reduced space for the growing fetus and placenta[7].

About 1/4th of female infertility caused due to a problem of ovulation. It occurs due to so many causes. PCOD, and corpus luteal defect are some of the important causes of infertility. Periovarian adhesion and luteinized unruptured follicle will also cause infertility. A woman's ability to get pregnant can be affected by age. Ovarian reserve is diminished when the women is in their mid to late thirties. Accelerated decline to the quality and quantity of egg occurs after the age of forty . Some genetic defects, aggressive medical treatments that harm the reproductive system , some surgeries, and injuries will also cause poor ovarian reserve[8]. Poor ovarian reserve occurs when a women's ovaries lose reproductive capacity, which then cause infertility. It is one of the factor to limit the success of treatment of infertility. Poor reserve indicates a reduction in quantity and quality of oocytes during reproductive life. Woman with poor ovarian reserve whether age related or otherwise had a lower pregnancy rate had higher pregnancy loss compared to normal ovarian reserve[9].

According to Ayurveda *Ritu, kshetra, ambu, & beeja* are the four essential elements for proper conception. *Ritu* means ideal season which indicates the fertile period of womans which is characterized with proliferation of endometrium followed by ovulation. *Kshetra* is very important factor for conception and it can be considered as female reproductive system especially uterus or *garbhasaya*. Every part of the reproductive system should be defect free. Garbhasaya provides a space for implantation and development of *garbha*. So *suddha garbhasya* is very essential for safe conception and development of a healthy progeny. *Ambu* is meant by nutritional supply to the embryo/fetus. *Beeja* , means sperm and ovum. For conception healthy ovum and healthy sperm are essential factors.. . Vitiated *yoni* in various *Yonirogas* and destruction of *beeja* due to *arthavadushties,* will effect the fertility of the woman. Normalcy of psychology has also been given importance for achieving conception[10].

Samsamana and *samsodhana cikitsa* are equally important in *Garbhasaya grandhi &* in *Vandhyata cikitsa*. Out of *Samsodhana cikitsa, vasti* is like a nectar to an infertile woman. *Snehapana* with *Tilataila* helps to normalize the functions of ovary and to produce a healthy ovum.*Vandhyatwa* due to ovum with minimal or absence of capacity of fertilization can be corrected by *vasti and uttaravastii*. By use of *vasti, yoni* becomes healthy and even a sterile woman can also conceive. Uttaravasti due to its local action and its penetrating action of drugs it will abosrb easily and there by increasing strength and vitality of reproductive organs. It rectifies female infertility along with the factors associated to it. The drugs prescribed for *pumsavana* like *vadasringa* and *lakshmana* are also give good result in infertility cases.

Case report

It is a case of lady of 38years having uterine fibroid and had the complaint of difficulty to conceive after 16years of married life. She consulted an allopathic doctor and underwent treatment for 14 years. On going through her history myomectomy was done 12years before for large submucous fibroid of size 7cm. She was continued the treatment at various systems as Allopathy, Ayurveda and Homeopathy for 8yrs. She couldn't get any result. So she stop all the treatments. Then she restart the treatment after 2years. On USG, there is a submucous fibroid of size 3.4cm and there is only few small follicles in the right ovary. She underwent treatment for 4years including IVF but couldn't get any satisfactory result . Then she came to the OPD, *Vaidyaratnam Ayurveda College* for treatment. She is complaining of absence of periods for 6months. She was advised to consume the following medicines and review after 3weeks.

1. *Kanasatahwadi qwadha*- 15ml *qwadha* mixed with 45 luke warm water – 6am and 6pm before food.
2. *Hinguvacadi curna* – 1tsp twice daily with qwadha.
3. *Kumaryasava* – 30ml twicw daily after food.
4. *Sukumaraghrta* – 1tsp at night after food.

She was advised to take USG and was noted with left lateral wall Submucous fibroid of size 3..1x3.2cm and there is no follicles in the left ovary and only few small follicles in right ovary . Endometrial thicknes was 3mm.

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After 3weeks she reported in OP and complaining of not having periods. Stop *Sukumaraghrta* and advise her to start *Palasa kshara* - 3gms with water boiled with *Tila* two times before food. Continue all other medicines. After 3weeks she reported that she is having periods but the bleeding was scanty and only for two days. Again advised her to continue all other medicines for 1month except *Palasakshara, Sukumaraghrta* and advised her to consume *Tila taila* 1tsp at night after food. After 1 month she was reported again with the complaint of not having periods and again restart the *Palasakshara.* After 2wks she started her periods. Advised her to continue the medicines except *Palasakshara* for 6 consecutive months and reported in the OPD . Every month she is having periods with 1week delay. She was directed to come to the OPD for admission and further management.

After 6months of internal medicines she was admitted in the IPD *Vaidyaratnam Ayurveda College*, Thrissur for better treatment.

Treatment given

After admission the patient was advised to consume the following medicines for two days.

1. *Sukumaram qwadha* – 15ml *qwadha* mixed with 45ml boiled lukewarm water – 6am before food.
2. *Varanadi qwadha* - 15ml *qwadha* mixed with 45ml boiled lukewarm water 6pm before food
3. *Dhanwantharam gulika* 1tab twice daily with *qwadha.*
4. *Lakshmanarishta* – 30ml twice daily after food
5. *Vaiswanarachurna* – 1tsp with lukewarm water at bed time.

The following procedures were started after admission.

1. *Udwarthana* with *Kolakulathadi churna* - for first 2days.
2. *Snehapana* started after 2days with *Tiataila* and continue for 6days. Its dosage was 30ml on first day and then increased to 60ml, 90ml, 120ml, 130ml & 150ml on the following days.

After 6days of *Snehapana*

3. Next day *Abhaynga* with *dhanwantharam taila* and *sarvangasweda* was done..
4. After *abhyanga* & *sweda* next day *Vamana was done* – emetic therapy .
5. After *Vamana, sadyasneha* was done with *Tilataila* 10ml two days.
6. Then *Virechana* (purgation therapy) was done with *Avipathy churna* 20gms mixed with hot water.
7. *Yogavasti* started after 2days.- combination of *nirooha vasti* and *anuvasana vasti* - 8days.

Shatahwadi vasti taila mixed with *Tilataila* was used as *taila* for *anuvasanavasti* and *nirooha vasthi*.

Erandamoola qwadha mixed with *sukumara qwadha* was used as qwadha for *niroohavasti.*

After *yogavasti* patient was discharged and advised her to take further admission after menstruation for doing *Uttaravasti*. She was also advised to consume *Sukumaram qwadha* morning and *Varanadi qwadha* evening at the time of discharge. She was also advised to take admission after cessation of menstrual flow. She was reported in the OPD after stoppage of menstrual bleeding and again admitted in the IPD.

Treatment done after admission.

1. *Nirooha vasti* was done for 2days.
2. After two days of Niruhavasti, *Uttaravasti* was started . First three days *Uttaravasti* was done with *TIilatailam* and last 3days with *Sukumara ghrta.*

. At the time of discharge, this time also, she was advised to take further admission after menstruation for doing *Uttaravasti*. This procedure was continued for 3 consecutive months after menstruation. Every time *utharavasti* was done for 7 days. Medicine used for *Uttaravasti* during second time of admission was same and on third month *Sukumara ghrta* was used for first 3days followed for the next 4days with *Thiktaka ghrta* .

Discharge medicine.

At the time of discharge she was advised to consume the following medicines and review after next period. She was also directed to do USG. After 1year.

1. *Sukumara qwadha* – 15ml *qwadha* mixed with 45ml boiled lukewarm water – 6am before food.
2. *Varanadi qwadha* - 15ml *qwadha* mixed with 45ml boiled lukewarm water 6pm before food
3. *Dhanwantharam gulika* 1tab with *qwadha* morning.
4. *Kanchanara guggulu tablet* – 1tab with *qwadha* evening.
5. *Lakshmanarishta* – 30ml twice daily after food
6. *Tila taila* – 1tsp at night after food.

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After next period she was reported in the OPD and was advised to consume the same medicines and directed to consume *Laksmana mula* + *Vadasriga ksheerapaka* every month from the 4th day of periods to 18th day. She continue all the medicines and reported every month. After 1year she took USG and it was revealed that there is a growing follicle in the right ovary and the size of the fibroid was reduced to 2.5cm.endometrial thickness was 8mm.

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She was advised to consume the same medicines after 1year reported that she is not having periods on the date. She was directed to do UPT and the result was positive. The pregnancy period was uneventful and she delivered normally.

Discussion

Uterine fibroids are commonest benign tumor of uterus and can effect fertility in many ways. Approximately 5-10% of infertile woman had fibroids. Most woman with fibroids will not be infertile. Infertility may be due to associated PID, endometriosis, or anovulatory cycles or due to distortion of the uterine cavity causing sperm ascent, or cornual block.Their size and site determines whether the fibroids will affect fertility power . The presence of submucous fibroids decreases fertility rate of woman. A meta - analysis of the effect of fibroids on fertility and the effect of myomectomy on fertility found that the submucous fibroid that distort the uterine cavity appear to decrease the fertility. For some women, the hormone therapy for infertility treatment can lead to fibroid growth. The treatment of fibroid is also essential to increase the fertility.

Ovarian reserve refers to the reproductive potential of woman's ovaries and it based on number and quality of eggs. Diminished ovarian reserve is loss of normal reproductive capacity of the ovaries due to lower quality and quantity of oocyte. Ovarian reserve will reduce when increasing the age. This also vary from one woman to another. Some women continue to be fertile in their 40s. Generally women will start losing their ovarian reserve before they become infertile. Infertility being a *vataja* disorder *vasti* having an important role in the treatment of infertility. *Tilataila* by its *vyavayiguna & vikashiguna* regulate the functions of hormones result in the formation and maturation of follicles. So *Snehapana* with *Tilataila* is helpful to regulate the function of ovary and then to produce a healthy ovum. *Vasti* has both local and systemic effects. It pacifies *Vata* and normalize the function of reproductive organs. *Uttaravasti* exerts local action on the reproductive tract due to its quick absorbing action of medicine entered into the uterus. *Uttaravasti* is helpful to correct the uterine tubal and factors which causes infertility. It rectifies female infertility by correcting the factors responsible for infertility. *Lakshana moola* and *vadasriga* are also helpful to normalize the ovarian reserve.

Conclusion

Infertility is a commonly increasing problem and it affects many couples mental and physical health and disturbs there family as well as social life. The causes of infertility are multifactorial involving the diseases of reproductive tract and other systemic diseases. Submucous fibroid causes infertility in so many ways.They can effect the fertilization and implantation. They can also effect whether a pregnancy can continue and effect the growth and positioning of the baby. Anovulation is considered as the major ovarian factor for fertility. . So poor ovarian reserve causes infertility by preventing ovulation. Here treatment for both fibroid and poor ovarian reserve is needed to improve the fertility. Ayurvedic treatment as *Vasti* and *Uttaravasti* is helpful to reduce the size of the fibroid and also to improve the function of ovary. There by the woman can produce a healthy ovum which is necessary to produce a healthy progeny.

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Group - 1

No.	Age	Domicile	Socio economic Status	Marital status	Religion	Treatment history	Chief Complaints	Bleeding	Pain with menstruation	Nature	Site	Time	Failure to conceive	Lower abdominal pain	Heaviness of abdomen	Feeling of lump in the abdomen	Dyspareunia	Urinary symptoms	Present	Bowel movement	Recent changes in the weight	Back pain	Loin pain	Vaginal discharge	Colour	Smell	Nature	Pruritis
1	36	1	4	1	1	0	1	6	1	2	1	1	0	1	0	0	0	1	3	5	0	0	0	1	1	1	3	1
2	50	2	1	1	1	1	1	1	1	3	5	2	0	1	0	0	0	1	3	5	0	1	1	0	4	3	5	1
3	44	2	4	1	3	0	1	6	1	2	5	2	0	0	0	0	0	1	3	5	1	1	0	0	4	3	5	1
4	41	1	4	1	1	0	1	1	1	2	1	2	0	1	1	1	1	1	5	2	0	1	0	1	1	1	1	0
5	39	1	4	1	1	1	1	1	1	1	5	2	1	1	0	0	0	1	1	5	1	1	1	1	3	2	2	1
6	34	2	3	1	1	0	0	6	0	4	6	5	1	1	1	0	0	0	8	5	0	1	1	0	4	3	5	1
7	49	1	3	1	2	1	1	5	1	3	1	4	0	0	1	0	0	0	8	5	1	1	1	0	4	3	5	0
8	25	1	3	1	3	0	1	5	1	2	1	2	0	1	0	0	0	1	2	5	1	1	0	0	4	3	5	0
9	49	1	4	1	3	0	0	6	0	4	6	5	0	0	0	0	0	0	8	5	0	0	0	0	4	3	5	0
10	47	1	3	1	1	1	1	1	1	2	5	4	0	1	1	0	0	0	8	1	1	1	1	0	4	3	5	0
11	38	1	4	1	2	0	1	1	1	2	5	2	0	1	1	1	1	0	8	2	2	1	1	1	1	2	3	0
12	48	1	4	1	1	0	1	6	1	3	5	4	0	0	1	0	0	0	8	5	1	1	0	0	4	3	5	0
13	34	1	4	1	2	1	1	1	1	2	2	2	0	1	1	0	0	0	8	5	1	1	1	1	1	2	1	0
14	43	1	4	1	3	1	0	6	0	4	6	5	0	0	0	0	0	1	5	5	2	1	1	0	4	3	5	0
15	47	1	4	1	3	1	1	1	1	2	5	2	0	0	1	1	1	1	3	5	0	1	0	0	4	3	5	0
16	42	1	4	1	3	1	1	6	1	3	1	1	0	1	0	0	0	0	8	5	0	1	0	1	1	2	2	0
17	39	1	5	1	1	1	1	1	1	3	1	4	0	1	1	0	0	0	8	5	1	0	0	0	4	3	5	0
18	38	1	5	1	1	0	0	6	0	4	6	5	0	0	0	0	0	0	8	2	0	1	0	1	1	2	1	1
19	49	2	3	1	3	1	1	6	1	3	1	1	0	1	1	1	1	1	3	2	1	1	1	1	1	1	2	0
20	41	1	4	1	2	1	1	2	1	3	1	2	0	1	0	0	0	0	8	5	1	1	0	1	1	2	3	0
21	36	1	4	1	1	1	1	6	1	3	1	2	0	1	0	0	0	0	8	5	1	1	0	0	4	3	5	0
22	46	1	2	1	1	1	1	1	1	3	5	4	0	1	1	1	0	1	5	5	1	1	1	1	2	2	2	1
23	45	1	2	1	2	0	0	8	2	5	7	6	0	0	0	0	0	1	7	2	0	1	0	1	1	2	2	0
24	35	1	4	1	3	0	1	6	1	3	5	1	0	1	1	0	0	1	3	5	0	1	1	0	4	3	5	0
25	46	1	4	1	1	0	0	6	0	4	6	5	0	0	0	0	0	0	8	5	1	1	0	1	1	2	3	0
26	43	1	4	1	3	1	1	2	1	3	1	2	0	0	1	1	0	0	8	3	2	1	1	1	3	2	2	1
27	48	2	4	2	1	0	1	1	1	1	1	1	2	0	0	0	2	0	8	5	0	1	0	1	1	2	3	0
28	50	2	2	1	1	1	1	1	1	1	5	4	1	0	1	0	0	1	7	3	0	1	0	1	1	2	3	1
29	46	1	4	1	3	1	1	6	1	3	1	4	0	0	0	0	1	0	8	5	2	1	0	0	4	3	5	0
30	38	1	4	1	1	1	0	6	0	4	6	5	1	0	0	0	0	1	7	4	1	1	1	1	3	2	2	1
31	39	1	4	1	2	1	1	1	1	1	5	4	0	1	0	0	0	1	7	5	0	1	1	0	4	3	5	0
32	49	1	4	1	3	0	0	6	0	4	6	5	0	0	0	0	0	0	8	2	0	1	1	1	1	2	1	0
33	49	1	4	1	3	0	0	8	2	5	7	6	0	0	0	0	0	0	8	5	0	1	0	0	4	3	5	0

No.	Duration	Onset	Nature	History of gynaecological disease	History of general illness	Treatment	Disease still continuing or not	H/O surgical intervention	History	History of similar illness in the family members	Appetite	Bowel	Diet	Sleep	Duration	Interval	Amount	No of pads changed per day	Colour	Odour	Clots	Pain
1	6yr	3	2	0	1	1	0	0	6	1	2	1	3	2	2	3	3	2	1	2	0	1
2	2yr	3	1	0	0	5	2	0	0	0	3	1	3	3	3	5	4	3	4	2	1	1
3	3mth	3	1	0	0	5	2	0	6	1	3	1	3	3	2	4	4	4	1	2	1	1
4	2yr	3	1	1	4	2	1	0	2	1	3	2	3	3	2	1	4	3	2	2	0	1
5	6mth	3	2	0	0	5	2	0	3	0	3	1	3	3	2	1	3	2	1	2	1	1
6	nil	4	3	0	0	5	2	0	6	0	3	1	1	3	2	3	3	4	2	2	1	0
7	2yr	3	1	0	4	4	1	1	6	0	2	1	3	3	5	3	3	3	2	2	0	1
8	6mth	1	1	1	1	0	0	0	0	0	3	1	3	3	1	3	1	2	2	2	1	1
9	nil	4	3	1	1	2	0	1	2	1	3	1	3	3	2	3	3	3	2	2	0	0
10	1yr	3	1	0	3	2	1	0	0	0	2	3	3	3	5	3	4	4	2	2	1	1
11	5yr	3	1	1	7	2	1	1	2	0	2	2	2	3	5	1	4	4	1	2	1	1
12	4yr	3	1	1	0	5	2	0	0	0	3	1	3	3	3	3	3	3	2	2	1	1
13	6yr	1	1	0	3	4	1	1	2	1	3	1	3	2	2	3	4	4	1	1	1	1
14	nil	4	3	1	3	2	1	0	0	1	3	1	3	1	2	3	2	1	2	2	1	0
15	2yr	2	1	0	4	4	1	0	0	0	1	1	3	1	2	2	4	4	1	2	1	1
16	6mth	3	2	1	0	5	2	1	3	1	3	1	3	1	2	2	3	2	2	2	1	1
17	6yr	3	2	0	0	5	2	0	6	1	3	1	1	3	3	2	4	4	1	2	0	1
18	nil	4	3	1	7	1	1	1	0	1	3	2	1	3	3	3	3	2	2	2	0	0
19	2yr	3	2	0	4	4	1	0	6	0	1	2	3	3	1	3	3	1	2	2	1	1
20	3yr	3	2	0	4	2	1	0	0	0	3	1	1	3	5	3	4	3	1	2	1	1
21	1yr	2	1	0	0	5	2	0	6	0	2	1	3	3	1	3	3	2	2	2	1	1
22	4yr	3	2	0	7	4	1	1	0	1	3	1	3	3	2	3	4	3	2	2	1	1
23	nil	4	3	1	0	5	2	1	6	0	1	2	3	2	6	6	5	5	5	3	2	2
24	6mth	3	1	1	8	2	0	0	0	0	2	1	3	2	2	3	4	4	1	2	1	1
25	nil	4	3	0	1	4	0	0	2	1	2	1	1	3	1	3	2	1	1	2	0	0
26	6yr	3	2	1	1	1	0	1	0	1	3	3	3	3	5	2	4	3	1	1	1	1
27	4mth	1	1	0	8	2	0	0	5	1	2	1	3	2	1	3	4	3	2	1	1	1
28	2mth	3	2	1	0	5	2	0	5	1	3	3	1	3	2	1	4	3	1	2	1	1
29	2yr	2	1	0	0	5	2	0	0	0	3	1	3	3	2	5	3	2	2	2	1	1
30	nil	4	3	0	0	5	2	0	0	0	2	3	3	2	3	3	2	2	2	2	0	0
31	6yr	3	1	1	7	4	1	1	0	0	3	1	3	3	2	2	4	3	2	2	1	1
32	nil	4	3	0	8	4	1	0	5	2	3	2	1	3	1	4	3	1	2	2	0	0
33	nil	4	3	0	8	0	0	0	3	1	3	1	3	3	6	6	5	5	5	3	2	2

No.	Present				Present										General examination							Ashtasthana pareeksha								Dasa vidha pareeksha																	Vagina					
	Onset	Degree	Site	Inter menstrual bleeding	Duration	Amount	Clots	Consanguineous	Contraceptive history	Duration of pregnancy	Abnormalities in antenatal period	Nature of labour	Puerperal period	Condition of the baby	BP	Pulse rate	Body built	Ht.	Wt.	Breast examination	Systemic examination	Nadi	Mutra	Mala	Jihwa	Sabda	Sparsa	Drik	Akriti	Dushya	Desa	Bala	Kala	Anala	Prakrithi	Vaya	Satwam	Satmya	Ahara	Urethra	Vulva	Labia	Cystocele	Rectocele	Prolapsed of uterus	If present, the degree	Discharge	If present- colour	Amount	Consistency	Vaginitis	Abnormal growth
1	1	2	1	0	4	5	2	0	1	1	0	1	1	1	110/70	72	1	152cm	47kg	1	1	4	2	2	1	2	2	2	2	2	3	2	2	3	4	1	2	3	2	1	0	1	0	0	0	5	1	1	1	3	0	3
2	2	3	5	0	4	5	2	0	2	1	0	2	1	1	130/80	78	2	158	58	1	1	5	2	2	3	1	1	2	5	2	3	3	1	3	5	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	3
3	2	2	5	0	4	5	2	0	0	1	0	1	1	1	120/78	70	3	160	73	1	1	5	2	2	3	1	2	3	3	3	1	1	3	3	5	1	3	3	2	1	0	1	0	0	0	5	0	7	5	8	0	3
4	2	2	1	0	4	5	2	0	0	1	0	2	1	1	140/90	76	3	161	71	1	1	2	3	2	1	1	1	2	6	2	3	2	4	3	2	1	3	3	2	1	0	1	0	0	0	5	1	1	2	2	0	3
5	2	1	5	0	4	5	2	0	0	6	3	5	4	4	90/70	72	2	160	58	1	1	4	1	2	2	3	2	2	4	3	2	3	1	3	4	1	1	3	2	1	0	1	0	0	0	5	1	2	2	5	0	3
6	5	4	6	0	4	5	2	0	1	2	0	2	1	1	110/70	82	2	162	60	1	1	4	1	2	3	1	2	2	1	2	3	1	5	3	1	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	3
7	4	3	1	0	4	5	2	0	1	1	0	1	1	1	170/100	78	2	164	62	1	1	5	2	1	3	2	3	2	5	3	3	3	3	3	5	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	3
8	2	2	1	0	4	5	2	0	1	1	0	1	1	1	90/60	80	2	150	57	1	1	4	3	2	2	1	2	4	4	3	3	1	2	3	4	1	2	3	2	1	0	1	0	0	0	5	1	1	1	2	0	3
9	5	4	6	0	4	5	2	0	2	4	1	3	1	1	100/60	72	2	165	62	1	1	6	2	2	1	2	2	2	3	2	3	3	2	3	6	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	3
10	4	2	5	0	4	5	2	0	2	1	0	1	1	1	100/70	78	3	165	75	1	1	6	3	2	3	2	2	2	3	3	3	2	6	3	6	1	3	3	2	1	0	1	0	0	0	5	0	7	5	8	0	3
11	2	2	5	1	1	1	0	0	1	1	0	1	1	1	120/80	68	2	157	62	1	1	4	2	3	3	2	2	3	4	3	3	1	2	3	4	1	3	3	2	1	0	1	0	0	0	5	1	1	1	5	0	2
12	4	3	5	0	4	5	2	0	2	1	0	1	1	1	110/70	82	3	160	78	1	1	5	3	2	3	1	2	2	3	2	3	1	3	1	5	1	3	2	2	1	1	1	0	0	0	5	0	7	5	8	0	2
13	2	2	2	0	4	5	2	0	0	1	1	2	1	1	120/80	72	2	158	60	1	1	4	2	3	2	2	3	2	4	3	2	3	4	1	4	1	1	1	2	1	0	1	0	0	0	5	1	1	2	2	1	2
14	5	4	6	0	4	5	2	0	2	1	0	2	1	1	140/80	72	2	162	62	1	1	4	2	1	2	2	4	2	6	2	3	1	1	2	4	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	3
15	2	2	5	0	4	5	2	0	2	1	0	2	1	1	132/94	70	1	152	37	1	1	4	3	1	2	2	1	1	4	3	1	1	2	2	4	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	2
16	1	3	1	0	4	5	2	0	2	1	0	1	1	1	120/70	86	3	157	65	1	1	5	1	3	2	2	2	2	5	2	2	1	6	3	5	1	3	1	2	1	0	1	0	0	0	5	1	1	2	5	0	3
17	4	3	1	0	4	5	2	0	2	1	1	1	2	1	120/80	82	2	165	68	1	1	4	2	1	3	2	1	2	4	3	3	3	3	3	4	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	3
18	5	4	6	0	4	5	2	0	2	1	0	1	1	1	120/70	78	1	160	48	1	1	4	1	3	2	2	1	2	6	2	3	2	4	3	4	1	1	1	2	1	0	1	0	0	0	5	1	1	2	2	1	3
19	1	3	1	0	4	5	2	0	1	1	0	2	1	1	130/90	73	3	162	78	1	1	3	2	1	3	5	3	2	3	3	2	3	1	2	3	1	3	1	2	1	0	1	0	0	0	5	1	2	2	5	0	3
20	2	3	1	0	4	5	2	0	2	1	0	2	1	1	130/70	82	2	156	58	1	1	4	3	2	1	3	2	2	4	3	3	1	2	3	4	1	2	3	2	1	0	1	0	0	0	5	1	1	2	3	1	3
21	2	3	1	0	4	5	2	0	2	1	0	1	1	1	120/70	72	1	153	37	1	1	1	1	2	1	1	3	1	1	2	3	1	4	1	1	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	2
22	4	3	5	0	4	5	2	0	2	1	0	1	1	1	120/80	72	2	157	60	1	1	4	2	1	2	2	3	2	4	3	1	3	5	3	4	1	1	3	2	1	0	1	0	0	0	5	1	3	2	5	0	3
23	6	5	7	0	4	5	2	0	0	1	0	1	1	1	120/80	80	2	150	42	1	1	5	3	1	2	3	2	1	5	2	1	1	1	2	5	1	2	1	2	1	0	1	0	0	0	5	1	1	2	5	0	3
24	1	3	5	1	1	2	0	0	0	2	1	2	1	2	94/70	70	2	142	50	1	1	4	2	3	1	2	3	2	4	3	3	3	3	1	4	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	3
25	5	4	6	0	4	5	2	0	0	1	0	2	1	1	120/80	72	3	150	55	1	1	3	2	3	1	2	2	1	3	2	1	3	5	1	3	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	2
26	2	3	1	0	4	5	2	0	0	1	0	1	1	1	120/70	68	2	155	60	1	1	5	3	1	2	3	2	1	5	3	2	1	2	3	5	1	3	1	2	4	0	1	0	0	0	5	1	2	2	5	0	1
27	1	1	1	0	4	5	2	2	3	5	2	4	3	3	110/70	70	1	150	35	1	1	1	3	2	1	2	2	1	1	3	1	3	2	1	1	1	2	1	2	5	2	3	2	2	2	4	2	6	4	7	2	4
28	4	1	5	1	1	3	1	0	2	1	0	2	1	1	130/80	72	2	162	60	1	1	1	3	2	1	2	3	2	6	3	2	1	1	3	5	1	1	1	2	1	0	1	0	0	0	5	1	1	3	3	0	1
29	4	3	1	1	1	1	0	0	0	1	1	2	1	1	120/80	72	1	150	42	1	1	2	2	1	2	1	3	2	2	3	3	1	6	3	4	1	3	3	2	1	0	1	0	0	0	5	0	7	5	8	0	3
30	5	4	6	0	4	5	2	0	1	1	0	2	1	1	110/80	72	2	152	48	1	1	1	3	2	1	2	1	3	3	2	1	3	4	1	5	1	1	3	2	1	0	1	0	0	0	5	1	2	1	5	1	1
31	4	1	5	0	4	5	2	0	0	1	0	1	1	1	130/90	78	2	154	64	1	1	3	2	1	3	1	2	3	5	3	1	3	5	3	5	1	1	1	2	1	0	1	0	0	0	5	1	1	2	3	1	3
32	5	4	6	0	4	5	2	0	2	1	0	2	1	1	110/70	82	2	158	65	1	1	2	1	3	2	3	2	3	3	2	3	1	3	3	5	1	3	1	2	1	0	1	0	0	0	5	1	1	1	2	1	2
33	6	5	7	0	4	5	2	0	2	1	0	2	1	1	80/50	68	2	152	68	1	1	2	1	2	3	2	1	2	6	2	3	1	4	3	5	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	3

No.	Cervix								Uterus				Treatment given	Bleeding	Amount	Duration	Interval	Pain with menstruation	Lower abdominal pain	Heaviness of abdomen	Feeling of lump	Dyspareunia	Vaginal discharge	Low back ache	Associated symptoms, if any	USG				Blod test					
	Position	Size	Cervical os	Cervicitis	If present	Erosion	If present	Degree	Presence of abnormal growth	Size	Direction	Mobility	Consistency	Any abnormal growth												BT				AT				
																										Size	Number	Size	Number	Hb%	BT	CT	Hb%	BT	CT
1	1	2	0	4	0	6	4	0	1	1	1	1	0	1	7	3	3	2	1	0	0	0	0	0	0	1.06cm, 1.27cm	2	1.5x1cm	3	12	3	7	10	2	7
2	1	1	0	4	0	6	4	0	1	1	1	1	0	1	7	3	3	2	1	0	0	0	0	0	0	1.5cm, 2.1cm, 2.8cm	3	1.8cm, 2.1cm, 3cm	3	12	3	5	12	3	6
3	1	2	0	4	0	6	4	0	1	1	1	1	0	1	7	3	3	4	2	0	0	0	0	0	0	4cm, 2cm, 1.5cm	3	4.2cm, 1.4cm, 1.2cm	3	11	2	7	10	2	7
4	1	1	0	4	0	6	4	0	1	1	1	1	0	1	4	3	2	1	2	0	1	1	0	0	0	1.1x1cm	1	nil	0	10	2	7	10	2	7
5	1	1	1	1	0	6	4	0	1	1	1	1	0	1	4	3	2	1	0	0	0	0	0	0	0	1.2x1cm	1	0.9x0.6cm	1	12	1	6	12	3	6
6	1	1	0	4	0	6	4	0	1	1	1	1	0	1	7	3	2	3	2	0	0	0	0	0	0	2.2cm	1	1.4cm	1	12	2	7	11	2	7
7	1	2	0	4	0	6	4	0	1	1	1	1	0	1	7	3	3	2	1	0	0	0	0	0	0	2.8x2cm, 3.5x2.3cm, 2.4x1.4cm	3	6x2.1cm, 3.2x2cm, 2.4x1.8cm	3	13	5	7	12	2	7
8	1	2	0	4	0	6	4	0	1	1	1	1	0	1	7	3	2	3	0	0	0	0	0	0	0	2.8x2.3cm	1	2.1x2cm	1	12	3	7	12	3	7
9	1	2	0	4	0	6	4	0	1	1	1	1	0	1	7	3	2	3	1	0	0	0	0	0	0	1.4x1cm, 1.1x0.8cm	2	1x0.9cm, 0.7cm	2	12	3	7	12	3	6
10	1	2	0	1	0	6	4	0	1	1	1	1	0	1	7	3	3	3	0	0	0	0	1	1	0	4x4cm, 2x1cm	2	3.2x3cm, 1x1.2cm	2	12	3	6	12	3	7
11	3	2	1	2	1	3	2	0	1	2	1	1	0	1	1	1	4	5	4	1	0	0	1	0	0	1.8x1.5cm, 1.7x2cm, 2x2.3cm	3	6x1.1cm, 1.4x1cm, 2.1x2.1c	3	9	3	6	10	3	7
12	1	2	0	4	1	2	1	0	2	2	1	1	0	1	7	3	3	2	2	0	0	0	1	0	0	4x3.5cm	1	3.3x3.5	1	11	2	6	10	2	6
13	1	1	0	4	0	6	4	0	1	2	1	1	0	1	7	3	2	3	0	0	0	0	0	0	0	2.9x2.6cm, 0.6cm	2	3.2x2.5cm, 1.1cm	2	11	2	6	11	3	7
14	1	2	0	4	0	6	4	0	1	1	1	1	0	1	7	3	2	3	1	1	0	0	0	0	0	2.4cm, 1.5cm, 2.5cm	3	2.5cm, 1.5cm, 3.2cm	3	9	2	7	8	1	7
15	1	1	0	4	0	6	4	0	1	2	1	1	0	1	1	4	2	3	1	0	1	0	0	0	0	1.8x1.7	1	1.6x1.7cm	1	10	3	6	10	2	6
16	1	2	0	4	1	1	2	0	1	1	1	1	0	1	7	3	2	2	1	0	0	0	0	0	0	3x2.9cm	1	2.5x2.8cm	1	10	2	7	9	2	7
17	1	1	0	4	0	6	4	0	1	1	1	1	0	1	2	3	5	4	1	0	0	0	1	0	0	2.8x3.2cm, 3.1x3.4cm	2	2.5x 2.2cm, 2.9x3.2cm,	2	12	3	6	12	2	7
18	1	2	0	4	0	6	4	0	1	1	1	1	0	1	7	3	2	2	1	0	0	0	0	0	0	2.4cm	1	1.8cm	1	11	4	6	10	2	7
19	1	1	1	1	0	6	4	0	1	1	1	1	0	1	6	3	2	3	1	1	0	0	0	0	0	4cm, 1.8cm, 1.38cm	3	4.1cm, 1.8cm, 1cm	1	8	3	7	8	3	7
20	1	1	0	4	0	6	4	0	1	1	1	1	0	1	5	1	4	3	3	1	0	0	0	0	0	0.6cmm, 0.6cm, 0.9cm, 0.9cm	4	0.6cm, 0.6cm, 1.1x1.1cm	3	10	1	7	10	1	7
21	1	2	0	4	0	6	4	0	1	2	1	1	0	1	6	3	2	3	1	1	0	0	0	0	0	1.3cm	1	0.9cm	3	10	2	8	10	2	7
22	1	2	1	1	0	6	4	0	1	2	1	1	0	1	2	3	5	4	0	0	0	0	1	0	0	1.5x1.9cm	1	1cm	1	12	2	8	12	2	8
23	3	2	1	2	0	6	4	0	2	1	1	1	0	1	8	6	6	4	0	0	0	0	1	1	0	2.6cm	1	2.8cm	1	10	3	7	10	3	8
24	1	1	0	4	0	6	4	0	1	1	1	1	0	1	7	3	2	3	0	0	0	0	1	0	0	2.8x2.9cm	1	2.2x2.1	1	11	3	7	11	3	8
25	1	1	0	4	0	6	4	0	1	2	1	1	0	1	6	3	1	3	3	1	0	0	0	0	0	1.6x1.8cm, 2.2x2.5cm, 2.8x3.5cm	3	1.7cm, 2.2x3cm, 2.5cm	3	12	3	6	9	3	9
26	1	2	0	4	0	6	4	0	1	1	1	2	0	1	2	3	5	3	1	0	0	0	0	0	0	2x1.9cm, 1.3x1.4cm, 1.2x1.3cm	3	2.3x1cm, 1x1.1cm, 1.1x1.4cm	3	10	4	6	11	4	6
27	4	3	2	3	2	5	5	5	3	3	4	2	1	1	7	3	2	3	0	0	0	0	2	0	0	1.5cm, 9mm	2	2.1x1.2cm, 1.3cm	2	11	3	6	11	3	7
28	1	1	0	4	0	6	4	0	1	2	1	1	0	1	7	3	2	2	1	0	1	0	0	0	0	1cm	1	0.8cm	1	9	2	5	11	2	7
29	3	2	0	4	0	6	4	0	1	1	1	1	0	1	5	1	1	4	0	0	0	0	0	0	0	2.8x2.3cm	1	1cm	1	11	4	8	12	4	6
30	1	1	0	4	0	6	4	0	1	1	1	1	0	1	7	3	1	2	0	0	0	0	0	0	0	2.2x1.7cm, 2.7x2.1cm, 1.4x1.8cm	3	2.2x3.1cm, 1.7x1cm, 2x1.6cm	3	10	2	7	11	2	4
31	3	2	0	4	0	6	4	0	1	1	1	1	0	1	7	3	2	2	0	0	0	0	0	0	0	3.5x2.9cm	1	2.2x2.4cm	1	10	3	6	11	3	7
32	2	2	0	4	0	6	4	0	2	1	1	1	0	1	7	3	2	2	0	0	0	0	0	0	0	2.2cm	1	3.6x3.2cm	1	10	2	7	9	2	6
33	3	2	0	4	0	6	4	0	1	1	1	1	0	1	8	6	6	6	4	0	0	0	0	0	0	0.8cm	1	1cm	1	9	2	7	11	2	7

Group - 2

No.	Age	Domicile	Socio economic Status	Marital status	Religion	Treatment history	Chief Complaints	Bleeding	Pain with menstruation	Nature	Site	Time	Failure to conceive	Lower abdominal pain	Heaviness of abdomen	Feeling of lump in the abdomen
1	49	1	4	1	1	0	1	1	1	1	1	3	0	0	1	0
2	49	1	4	1	1	1	1	1	1	3	5	4	0	1	1	0
3	46	1	3	1	1	1	1	1	1	1	1	2	0	1	0	1
4	41	1	4	1	1	1	1	1	0	4	6	5	0	0	0	0
5	32	1	3	1	1	1	1	1	1	3	5	4	0	0	0	0
6	45	1	4	1	1	0	1	6	1	3	1	2	0	0	1	0
7	38	1	4	1	1	0	1	6	1	2	5	4	1	1	1	0
8	39	1	4	1	1	0	1	6	1	2	1	1	0	1	1	1
9	46	2	4	1	1	1	1	1	1	3	5	2	1	1	0	0
10	44	1	4	1	2	0	1	1	1	3	2	1	0	1	1	0
11	30	1	3	1	1	1	1	1	1	2	1	2	1	1	0	0
12	45	2	4	1	2	1	1	2	0	4	6	5	0	0	1	1
13	37	1	4	1	2	1	1	6	1	2	2	1	1	1	1	0
14	46	2	3	1	3	1	1	8	0	4	6	5	0	0	0	1
15	45	1	4	1	1	1	1	2	1	1	5	2	0	1	1	0
16	46	1	3	1	1	0	0	6	0	4	6	5	0	0	0	0
17	32	2	2	1	1	0	0	6	0	4	6	5	0	0	0	0
18	43	1	4	1	1	1	1	4	1	2	1	2	0	1	0	0
19	46	1	4	1	2	1	1	7	1	3	5	4	0	0	0	0
20	46	1	4	1	3	1	1	1	1	3	1	1	0	1	1	0
21	46	1	3	1	3	0	0	6	0	4	6	5	0	0	1	1
22	39	2	1	1	3	1	1	7	1	2	5	4	0	1	0	0
23	42	1	3	1	1	1	1	7	0	4	6	5	0	0	0	1
24	34	1	2	1	2	0	1	6	1	3	5	2	0	1	1	0
25	45	2	2	1	1	0	0	6	0	4	6	5	0	0	0	0
26	49	1	3	1	1	0	0	6	0	4	6	5	0	0	0	0
27	43	1	4	1	1	1	1	6	1	3	1	4	0	1	1	0
28	41	2	3	1	1	1	0	0	0	4	6	5	0	0	0	0
29	49	1	3	1	1	1	1	1	0	4	6	5	0	0	1	1
30	48	1	4	1	1	0	0	6	0	4	6	5	0	0	0	0
31	49	1	3	1	1	1	1	1	1	2	5	4	0	1	0	0
32	40	1	4	1	1	0	1	7	0	4	6	5	0	0	1	1
33	47	1	5	1	1	0	0	6	0	4	6	5	0	0	1	0

No.	Dyspareunia	Urinary symptoms	Present	Bowel movement	Recent changes in the weight	Back pain	Loin pain	Vaginal discharge	Colour	Smell	Nature	Pruritis	Duration	Onset	Nature	History of gynaecological disease	History of general illness
1	0	1	7	5	1	1	0	0	4	3	5	1	6mth	1	2	1	8
2	1	0	8	2	1	1	0	1	1	2	3	0	4yr	3	2	1	4
3	1	1	5	5	1	1	1	1	1	2	3	0	4mth	3	2	1	7
4	0	1	1	4	2	1	1	0	4	3	5	1	3yr	3	2	0	7
5	0	0	8	5	0	0	0	1	1	2	1	1	7mth	3	1	1	8
6	1	1	5	5	0	1	0	0	4	3	5	0	2yr	3	2	0	0
7	0	1	3	5	1	1	0	1	3	2	2	0	1½ yr	2	1	0	1
8	0	0	8	5	1	1	0	1	1	2	3	0	2yr	3	1	1	0
9	0	0	8	5	2	0	0	0	4	3	5	0	2yr	3	2	1	1
10	1	0	8	1	2	1	1	1	1	2	3	0	1yr	1	1	0	3
11	0	0	8	3	1	0	0	1	1	2	3	0	1yr	3	1	1	1
12	0	0	8	1	1	0	0	1	3	2	3	0	2yr	3	1	1	0
13	1	1	5	2	1	1	0	1	1	2	2	1	3yr	3	1	0	1
14	0	0	8	5	2	0	1	0	4	3	5	1	4mth	3	2	1	7
15	0	0	8	5	1	1	0	1	1	2	1	1	2yr	3	1	0	1
16	0	1	2	5	1	1	0	0	4	3	5	0	nil	4	3	1	4
17	0	0	8	5	1	0	0	0	4	3	5	0	nil	4	3	1	8
18	0	0	8	5	1	0	0	0	4	3	5	0	2yr	3	2	0	8
19	0	0	8	5	1	0	0	0	4	3	5	0	2yr	3	2	0	0
20	0	1	5	1	2	1	0	0	4	3	5	0	1½ yr	3	2	1	4
21	0	0	8	1	2	0	0	1	1	2	3	0	nil	4	3	0	0
22	0	0	8	5	2	1	0	1	1	2	1	1	4yr	3	2	0	0
23	1	0	8	5	1	1	0	0	4	3	5	0	3yr	3	1	1	7
24	1	1	6	5	2	1	0	1	1	2	2	0	2yr	3	2	1	7
25	0	0	8	5	1	0	0	1	1	2	1	1	nil	4	3	0	3
26	0	1	7	5	1	0	0	1	1	2	2	0	nil	4	3	1	4
27	0	0	8	5	1	1	0	0	4	3	5	0	1yr	3	2	0	7
28	0	0	8	5	1	0	0	0	4	3	5	0	nil	4	3	0	4
29	0	0	8	2	2	1	0	1	1	2	3	0	2yr	3	2	1	7
30	0	1	7	1	1	1	1	1	1	1	2	1	nil	4	3	1	4
31	0	0	8	1	1	0	0	0	4	3	5	0	3yr	3	2	0	3
32	0	0	8	5	1	1	0	1	1	2	2	0	4yr	3	2	1	7
33	0	1	1	5	1	0	0	0	4	3	5	0	nil	4	3	0	4

No.	Treatment	Disease still continuing or not	H/O surgical intervention	History	History of similar illness in the family members	Appetite	Bowel	Diet	Sleep	Duration	Interval	Amount	No of pads changed per day	Colour	Odour	Clots	Pain
1	1	1	1	0	1	3	1	3	3	3	2	4	3	2	2	1	1
2	4	1	0	3	5	1	2	3	2	2	3	4	3	2	2	1	1
3	4	1	1	6	1	2	1	3	2	5	3	4	4	1	1	1	1
4	1	1	0	0	1	1	3	3	1	2	1	4	4	2	2	0	0
5	2	1	1	6	1	3	1	3	3	2	2	4	4	1	2	1	1
6	5	2	0	0	0	3	1	3	3	1	1	3	2	1	2	1	1
7	1	0	0	0	0	3	1	3	3	2	3	3	3	2	2	1	1
8	5	2	0	0	1	3	1	3	3	2	3	3	2	2	2	1	1
9	1	0	1	5	2	3	1	3	3	2	2	4	3	2	2	1	1
10	1	1	0	2	1	3	3	3	2	5	5	4	4	2	2	0	1
11	2	0	1	5	1	3	3	3	3	2	3	4	3	2	2	1	1
12	5	2	0	0	1	3	3	3	3	5	3	3	2	2	2	1	0
13	1	0	0	0	0	1	2	3	2	1	3	2	2	1	2	1	1
14	2	1	1	2	1	1	1	3	3	5	4	4	4	2	2	1	0
15	0	0	1	5	5	2	1	1	2	5	3	2	1	1	2	0	1
16	2	1	0	2	1	3	1	3	3	2	3	3	1	2	2	0	0
17	1	1	0	0	2	3	1	1	2	2	3	3	2	1	2	0	0
18	2	1	0	6	2	3	1	1	3	2	1	2	1	2	1	1	1
19	5	2	1	2	0	3	1	3	3	2	1	3	2	1	2	0	1
20	2	1	1	3	5	3	3	3	3	4	2	4	4	1	2	1	1
21	5	2	0	0	0	1	3	3	3	2	3	3	2	1	2	1	0
22	5	2	0	0	1	3	1	3	3	4	3	4	4	1	2	1	1
23	2	1	1	6	5	2	1	3	2	1	3	1	1	2	2	0	0
24	1	1	1	0	1	3	1	3	3	1	3	3	1	1	2	0	1
25	2	1	0	2	1	3	1	3	3	2	3	3	2	2	2	0	0
26	2	1	1	3	5	2	1	3	3	1	4	2	3	3	2	0	0
27	4	0	1	2	5	3	1	3	3	2	3	3	1	2	2	0	1
28	2	1	0	2	2	3	1	3	2	2	3	2	1	2	2	0	0
29	2	0	1	2	5	3	2	3	2	5	3	4	4	1	2	1	0
30	4	1	1	3	5	2	3	1	3	2	3	3	2	2	2	0	0
31	2	1	0	6	5	3	3	1	3	2	4	3	2	2	2	1	1
32	2	1	1	5	1	2	1	3	2	5	1	4	3	1	2	1	0
33	2	1	1	3	5	3	1	3	3	2	3	3	2	2	2	0	0

No.	Present				Present										General examination							Ashtasthana pareeksha								Dasa vidha pareeksha																		Vagina					
	Onset	Degree	Site	Inter menstrual bleeding	Duration	Amount	Clots	Consanguineous	Contraceptive history	Duration of pregnancy	Abnormalities in antenatal period	Nature of labour	Puerperal period	Condition of the baby	BP	Pulse rate	Body built	Ht.	Wt.	Breast examination	Systemic examination	Nadi	Mutra	Mala	Jihwa	Sabda	Sparsa	Drik	Akriti	Dushya	Desa	Bala	Kala	Anala	Prakrithi	Vaya	Satwam	Satmya	Ahara	Urethra	Vulva	Labia	Cystocele	Rectocele	Prolapsed of uterus	If present, the degree	Discharge	If present- colour	Amount	Consistency	Vaginitis	Abnormal growth
1	3	1	1	0	4	5	2	0	2	1	0	1	1	1	140/90	72	2	157	57	0	0	4	3	1	2	2	3	1	2	3	3	1	2	3	4	1	3	1	2	1	0	1	1	0	0	5	0	7	5	8	0	0
2	2	3	5	0	4	5	2	0	0	1	0	2	1	1	130/90	82	2	162	58	0	0	2	1	3	2	1	4	3	2	3	3	2	4	2	6	1	3	3	2	1	0	1	0	0	0	5	1	1	1	3	0	0
3	2	1	1	0	4	5	2	0	2	2	1	1	1	2	120/80	72	2	160	68	0	0	3	1	2	3	1	1	3	3	3	3	3	3	1	5	1	3	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
4	5	4	6	0	4	5	2	0	1	1	0	1	1	1	110/70	82	2	160	68	0	0	1	1	2	1	1	2	3	1	3	3	1	3	2	1	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
5	1	3	5	0	4	5	2	0	2	4	0	2	1	1	120/90	78	2	155	55	0	0	5	2	3	1	1	2	3	5	3	3	3	5	3	5	1	1	1	2	1	0	1	0	0	0	5	1	1	2	2	1	0
6	2	3	1	0	4	5	2	0	2	1	0	1	1	1	120/80	72	2	154	56	1	0	5	3	2	1	1	1	2	5	2	3	1	1	3	5	1	2	2	2	1	0	1	1	0	0	5	0	7	5	8	0	0
7	4	2	5	0	4	5	2	0	0	1	0	1	1	1	100/70	78	3	152	64	0	0	2	1	3	2	2	1	2	2	2	3	2	6	3	2	1	1	3	2	1	0	1	0	0	0	5	1	2	2	5	0	0
8	1	2	1	0	4	5	2	0	0	4	0	1	1	1	110/70	70	2	150	54	0	0	1	3	1	1	1	2	1	1	2	3	1	6	3	1	1	1	3	2	1	0	1	0	0	0	5	1	1	2	5	0	0
9	2	3	5	0	4	5	2	0	0	1	0	2	1	1	100/60	78	1	158	48	0	0	1	1	3	1	3	2	1	1	3	3	1	5	3	1	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
10	1	3	2	0	4	5	2	0	2	2	1	1	1	2	110/80	80	1	154	47	0	0	4	1	1	2	1	3	2	1	3	3	1	3	3	4	1	3	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
11	2	2	1	1	1	2	0	0	0	6	3	5	4	4	98/68	72	2	160	61	0	0	5	3	2	3	1	2	1	3	3	2	3	1	3	5	1	1	3	2	1	0	1	0	0	0	5	1	1	1	3	1	0
12	5	4	6	0	4	5	2	0	0	1	0	1	1	1	110/70	74	1	158	45	0	0	5	1	3	2	2	1	2	2	3	1	3	3	3	5	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
13	1	2	2	0	4	5	2	0	2	1	0	2	1	1	130/80	72	2	160	64	0	0	3	1	3	2	2	1	3	1	2	1	3	6	4	3	1	2	1	2	1	0	1	0	0	0	5	1	2	2	5	0	0
14	5	4	6	1	3	1	0	0	2	1	0	2	1	1	110/80	76	2	160	62	0	0	4	2	1	3	2	2	2	1	3	2	1	2	3	4	1	3	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
15	3	1	5	0	4	5	2	0	2	1	0	1	1	1	120/70	78	2	162	62	0	0	3	1	3	2	1	1	1	3	3	1	3	2	1	3	1	1	2	2	1	0	1	0	0	0	5	1	1	2	2	1	0
16	5	4	6	0	4	5	2	0	0	6	3	5	4	4	136/90	72	2	154	63	0	0	4	1	1	2	3	1	1	4	2	2	1	5	1	4	1	2	1	2	1	0	0	0	0	0	5	0	7	5	8	0	0
17	5	4	6	0	4	5	2	0	0	1	0	2	1	1	100/70	74	2	163	58	0	0	5	1	3	3	3	1	2	1	2	2	1	4	3	5	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
18	2	2	1	0	4	5	2	0	2	1	0	1	1	1	120/70	72	2	166	67	1	0	4	1	1	3	1	1	3	3	3	2	3	5	1	4	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
19	4	3	5	1	1	1	0	0	0	1	0	2	1	1	110/70	70	2	152	52	0	0	4	2	2	1	2	1	1	1	3	3	1	6	3	4	1	3	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
20	1	3	1	0	4	5	2	0	1	1	0	1	1	1	150/96	68	2	160	59	1	0	3	2	3	3	1	2	3	1	3	2	3	2	3	3	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
21	5	4	6	0	4	5	2	0	2	1	0	1	1	1	120/78	72	3	162	75	0	0	4	3	2	1	3	1	2	2	2	3	1	2	3	4	1	3	3	2	1	0	1	0	0	0	5	1	1	2	3	1	0
22	4	3	5	1	1	2	0	0	2	1	0	1	1	1	100/60	72	2	154	59	0	0	4	1	3	2	1	1	2	2	3	2	1	6	3	4	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
23	5	4	6	1	2	2	0	0	1	1	0	1	1	1	116/78	72	1	154	42	0	0	6	2	2	2	1	3	1	3	3	1	3	3	1	6	1	2	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
24	2	3	3	0	4	5	2	0	2	1	0	1	1	1	110/60	72	2	158	60	1	0	4	3	1	2	2	2	3	3	3	2	3	2	3	4	1	2	1	2	1	0	1	0	0	0	5	1	1	2	5	0	0
25	5	4	6	0	4	5	2	0	0	1	0	2	1	1	100/80	76	1	162	56	0	0	3	2	2	1	3	3	2	1	2	3	3	6	3	3	1	3	1	2	1	0	1	0	0	0	5	1	1	2	2	1	0
26	5	4	6	0	4	5	2	0	0	1	1	3	1	1	130/90	74	3	154	62	0	0	3	1	3	3	2	3	1	3	2	1	3	5	1	3	1	2	1	2	1	0	1	0	0	0	5	1	1	1	5	0	0
27	4	3	3	0	4	5	2	0	2	4	1	1	1	1	120/80	76	2	146	55	0	0	1	2	1	3	1	1	3	3	2	2	1	6	1	5	1	3	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
28	5	4	6	0	4	5	2	0	2	1	0	1	1	1	120/90	68	2	166	69	0	0	3	2	2	3	2	3	3	2	2	3	3	2	3	3	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
29	5	4	6	0	4	5	2	0	1	1	0	1	1	1	130/80	74	1	154	50	0	0	2	3	1	1	2	1	1	2	3	2	2	5	3	2	1	3	3	2	1	0	1	0	0	0	5	1	1	2	3	1	0
30	5	4	6	0	4	5	2	0	0	1	0	2	1	1	120/80	72	3	154	68	0	0	4	3	1	1	2	2	1	2	2	2	3	5	1	4	1	2	1	2	1	0	1	1	0	1	1	1	1	2	5	0	0
31	2	2	2	0	4	5	2	0	0	1	0	2	1	1	120/80	78	2	164	69	0	0	1	3	3	1	2	3	1	3	3	3	1	4	3	5	1	3	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
32	5	4	6	1	1	1	0	0	0	1	0	1	1	1	130/70	78	2	150	55	0	0	4	1	2	2	2	1	3	2	3	1	1	2	1	4	1	2	1	2	1	0	1	0	0	0	5	1	1	2	5	0	0
33	5	4	6	0	4	5	2	0	2	1	0	1	1	1	130/90	68	2	158	56	0	0	3	2	1	3	3	3	2	1	3	2	2	5	1	3	1	3	1	2	1	0	1	1	1	1	1	0	7	5	8	0	0

No.	Cervix								Uterus								Treatment given	Bleeding	Amount	Duration	Interval	Pain with menstruation	Lower abdominal pain	Heaviness of abdomen	Feeling of lump	Dyspareunia	Vaginal discharge	Low back ache	Associated symptoms, if any	USG				Blod test						
	Position	Size	Cervical os	Cervicitis	If present	Erosion	If present	Degree	Presence of abnormal growth	Size	Direction	Mobility	Consistency	Any abnormal growth																BT				BT					
																														Size		AT		Size		AT			
																															Number		Number		Hb%		BT		CT	
1	3	1	2	0	4	0	6	4	0	1	1	1	0	2	2	3	5	3	2	3	2	1	0	0	0	0	0	3.1x3.4cm	2	2.5x3.2cm	1	12	3	7	10	2	7
2	2	1	2	0	4	1	1	1	0	2	2	1	1	0	2	1	4	2	2	3	1	0	0	0	1	0	0	2.8cm	1	1.8cm	3	12	3	5	12	3	6
3	3	1	2	0	4	0	6	4	0	1	1	1	1	0	2	1	4	5	3	1	0	0	1	1	0	0	0	1.38cm	3	1cm	3	11	2	7	10	2	7
4	3	1	2	0	4	0	6	4	0	1	1	1	1	0	2	7	3	2	2	0	0	0	0	0	0	0	0	0.6cm, 1.3cm	4	0,7cm, 0.6cm	0	10	2	7	10	2	7
5	3	1	1	0	4	0	6	4	0	1	1	1	1	0	2	7	3	2	3	1	1	0	0	0	0	0	0	1.2x1cm	1	0.9x0.6cm	1	12	1	6	12	3	6
6	3	1	2	0	4	0	6	4	0	1	1	1	1	0	2	6	3	2	3	1	0	0	0	0	0	0	1	2.2cm	1	1.4cm	1	12	2	7	11	2	7
7	3	1	2	1	1	1	1	2	0	1	1	1	1	0	2	7	3	4	3	0	0	0	0	0	0	0	0	2.8x2cm, 3.5x2.3cm, 2.4x1.4cm	3	6x2.1cm, 3.2x2cm, 2.4x1.8cm	3	13	5	7	12	2	7
8	3	3	2	1	2	1	2	2	0	1	1	1	1	0	2	7	3	3	3	2	1	0	0	0	1	0	0	2.8x2.3cm	1	2.1x2cm	1	12	3	7	12	3	7
9	3	1	1	0	4	0	6	4	0	1	1	1	1	0	2	1	4	2	3	3	1	0	0	0	1	0	0	1.4x1cm, 1.1x0.8cm	2	1x0.9cm, 0.7cm	2	12	3	7	12	3	6
10	3	1	2	0	4	0	6	4	0	1	1	1	1	0	2	6	3	4	4	1	1	0	0	0	0	0	0	4x4cm, 2x1cm	2	3.2x3cm, 1x1.2cm	2	12	3	6	12	3	7
11	3	1	1	0	4	0	6	4	0	1	1	1	1	0	2	7	3	3	3	0	0	0	0	0	0	0	0	1.8x1.5cm, 1.7x2cm, 2x2.3cm	3	6x1.1cm, 1.4x1cm, 2.1x2.1cm	3	9	3	6	10	3	7
12	3	1	2	0	4	0	6	4	0	1	1	1	1	0	2	7	3	3	3	0	0	1	0	0	0	0	0	4x3.5cm	1	3.3x3.5	1	11	2	6	10	2	6
13	2	1	2	1	1	1	1	1	0	1	1	1	1	0	2	7	3	1	3	0	0	0	0	0	0	0	0	2.9x2.6cm, 0.6cm	2	3.2x2.5cm, 1.1cm	2	11	2	6	11	3	7
14	3	1	1	0	4	0	6	4	0	1	1	1	1	0	2	1	4	4	4	0	0	0	0	0	0	0	0	2.4cm, 1.5cm, 2.5cm	3	2.5cm, 1.5cm, 3.2cm	3	9	2	7	8	1	7
15	3	1	2	0	4	0	6	4	0	1	1	1	1	0	2	5	1	1	3	1	0	1	0	0	0	0	0	1.8x1.7	1	1.6x1.7cm	1	10	3	6	10	2	6
16	2	1	1	0	4	0	6	4	0	1	1	2	1	1	0	2	6	3	3	3	0	0	0	0	0	0	0	3x2.9cm	1	2.5x2.8cm	1	10	2	7	9	2	7
17	3	1	1	0	4	1	1	1	0	1	1	1	1	0	2	7	3	3	3	0	0	0	0	0	0	0	0	2.8x3.2cm, 3.1x3.4cm	2	2.5x 2.2cm, 2.9x3.2cm,	2	12	3	6	12	2	7
18	3	1	2	0	4	0	6	4	0	1	1	1	1	0	2	7	3	3	2	0	0	0	0	0	0	0	0	2.4cm	1	1.8cm	1	11	4	6	10	2	7
19	3	1	1	0	4	0	6	4	0	1	1	1	1	0	2	7	3	2	3	0	0	0	0	0	0	0	0	4cm, 1.8cm, 1.38cm	3	4.1cm, 1.8cm, 1cm	1	8	3	7	8	3	7
20	2	1	1	0	4	0	6	4	0	1	1	1	1	0	2	1	4	4	3	2	1	1	0	0	0	0	0	0.6cmm, 0.6cm, 0.9cm, 0.9cm	4	0,6cm, 0.6cm, 1.1x1.1cm	3	10	1	7	10	1	7
21	3	1	2	0	4	0	6	4	4	1	1	1	1	0	2	7	3	2	3	0	0	0	0	0	0	0	0	1.3cm	1	0.9cm	1	10	2	8	10	2	7
22	3	1	2	0	4	0	6	4	0	1	1	1	1	0	2	6	3	2	3	0	0	0	0	0	0	0	0	1.5x1.9cm	1	1cm	1	12	2	8	12	2	8
23	2	1	2	0	4	0	6	4	0	1	2	1	1	0	2	5	1	1	3	0	0	0	0	0	1	0	0	2.6cm	1	2.8cm	1	10	3	7	10	3	8
24	3	1	2	1	2	0	6	4	4	1	1	1	1	0	2	7	3	3	3	1	0	0	0	0	0	0	0	2.8x2.9cm	1	2.2x2.1	1	11	3	7	11	3	8
25	3	1	1	0	4	0	6	4	0	1	1	1	1	0	2	6	3	2	3	0	0	0	0	0	0	0	0	1.6x1.8cm, 2.2x2.5cm, 2.8x3.5cm	3	1.7cm, 2.2x3cm, 2.5cm	3	12	3	6	9	3	9
26	3	1	2	0	4	1	3	1	4	2	1	1	1	0	2	7	3	2	3	0	0	0	0	0	0	0	0	2x1.9cm, 1.3x1.4cm, 1.2x1.3cm	3	2.3x1cm, 1x1.1cm, 1.1x1.4cm	3	10	4	6	11	4	6
27	3	1	2	0	4	0	6	4	0	2	1	1	1	0	2	7	3	2	3	0	0	0	0	0	0	0	0	1.5cm, 9mm	2	2.1x1.2cm, 1.3cm	2	11	3	6	11	3	7
28	2	1	2	0	4	0	6	4	0	1	1	1	1	0	2	6	3	2	3	1	1	0	0	0	0	0	0	1cm	1	0.8cm	1	9	2	5	11	2	7
29	2	1	2	0	4	0	6	4	4	1	2	1	1	0	2	1	4	4	4	1	0	0	0	0	1	0	0	2.8x2.3cm	1	1cm	1	11	4	8	12	4	6
30	2	1	1	1	2	1	3	2	0	2	2	1	1	0	2	7	3	2	3	0	0	0	0	0	0	0	0	2.2x1.7cm, 2.7x2.1cm, 1.4x1.8cm	3	2.2x3.1cm, 1.7x1cm, 2x1.6cm	3	10	2	7	11	2	4
31	1	1	1	0	4	0	6	4	0	1	2	1	1	0	2	2	3	5	4	1	0	0	0	0	0	0	0	3.5x2.9cm	1	2.2x2.4cm	1	10	3	6	11	3	7
32	3	1	2	1	2	1	1	2	0	1	1	1	1	0	2	7	3	3	3	0	0	0	0	0	0	0	0	2.2cm	1	3.6x3.2cm	1	10	2	7	9	2	6
33	3	1	2	0	4	0	6	4	0	2	1	1	1	0	2	7	3	2	3	1	0	0	0	0	0	1	0	0.8cm	1	1cm	1	9	2	7	11	2	7

Group - 3

No.	Age	Domicile	Socio economic Status	Marital status	Religion	Treatment history	Chief Complaints	Bleeding	Pain with menstruation	Nature	Site	Time	Failure to conceive	Lower abdominal pain	Heaviness of abdomen	Feeling of lump in the abdomen	Dysparunia	Urinary symptoms	Present	Bowel movement	Recent changes in the weight	Back pain	Loin pain	Vaginal discharge	Colour	Smell	Nature	Pruritis	Duration	Onset	Nature	History of gynaecological disease	History of general illness	Treatment	Disease still continuing or not	H/O surgical intervention	History	History of similar illness in the family members	Appetite	Bowel	Diet	Sleep	Duration	Interval	Amount	No of pads changed per day	Colour	Odour	Clots	Pain
1	48	1	4	1	1	1	0	6	0	4	6	5	0	0	1	0	0	1	5	2	0	1	0	1	2	1	2	1	nil	4	3	1	7	2	1	0	4	1	3	2	1	2	2	3	3	2	4	2	0	0
2	39	1	2	1	1	1	0	6	0	4	6	5	0	0	0	0	0	0	8	5	0	0	0	0	4	3	5	0	nil	4	3	0	0	5	2	1	3	1	3	1	3	3	2	3	3	1	2	2	0	0
3	48	2	2	1	1	0	1	6	1	2	5	2	0	1	0	0	0	1	7	2	0	1	0	1	1	2	3	1	6yr	3	1	0	1	1	0	0	0	2	3	2	1	3	3	3	3	2	2	1	1	1
4	38	1	4	1	1	0	1	1	1	3	5	2	0	1	1	0	0	0	8	2	1	1	1	0	4	3	5	0	2yr	3	2	0	3	2	1	1	6	1	3	2	3	3	3	3	4	4	2	2	1	1
5	38	1	3	1	1	0	1	5	1	3	5	2	0	1	1	1	1	0	8	5	2	1	0	0	4	3	5	1	4mth	3	2	1	1	2	1	0	2	2	2	1	3	2	2	3	3	3	1	2	1	1
6	41	1	3	1	1	0	1	6	1	3	1	4	1	1	1	0	0	0	8	5	0	1	0	1	1	1	2	1	1yr	3	2	0	8	0	0	0	0	1	3	1	1	3	2	3	3	1	2	1	1	1
7	33	2	2	1	1	0	0	6	0	4	6	5	0	0	0	0	0	0	8	5	0	0	0	0	4	3	5	0	nil	4	3	1	4	4	1	1	2	5	3	1	1	3	2	3	3	3	2	2	1	0
8	45	2	3	1	3	1	1	1	0	4	6	5	0	0	1	0	0	0	8	5	0	0	0	0	4	3	5	0	1yr	3	2	0	1	1	0	1	3	1	3	1	3	3	3	3	4	4	1	2	1	1
9	47	1	4	1	1	1	1	1	1	3	5	4	0	1	1	1	0	1	5	2	0	0	0	0	4	3	5	0	4mth	1	1	1	4	2	1	1	6	5	1	2	3	2	3	3	4	4	2	2	1	1
10	49	1	4	1	1	1	1	1	0	4	6	5	0	1	1	1	0	1	3	2	0	1	0	1	1	2	2	0	1yr	3	1	0	3	2	1	0	0	1	1	2	3	3	2	4	4	4	1	1	1	0
11	40	1	4	1	2	0	1	2	1	2	2	2	1	1	0	0	0	1	7	5	0	1	0	1	1	2	3	1	4mth	1	1	1	7	2	0	1	6	5	3	1	3	3	5	3	3	2	1	2	0	1
12	43	2	2	1	1	0	1	6	1	2	5	4	0	1	1	0	0	0	8	5	0	1	0	0	4	3	5	0	6mth	3	1	1	0	5	2	0	0	1	2	1	3	2	2	3	3	2	1	2	0	1
13	38	1	4	1	1	0	0	6	0	4	6	5	0	0	0	0	0	0	8	4	2	1	0	0	4	3	5	0	nil	4	3	0	1	3	0	1	2	2	1	3	1	3	3	3	3	2	2	2	0	1
14	49	1	4	1	3	1	1	7	1	1	5	2	0	1	0	0	0	0	8	2	1	1	0	0	4	3	5	0	2½yr	3	1	1	7	2	1	1	6	1	3	2	3	2	5	4	4	4	2	1	1	1
15	30	1	4	1	1	1	1	6	1	2	1	1	1	1	0	0	0	0	8	5	0	0	0	0	4	3	5	0	4mth	1	1	1	8	4	1	0	0	2	3	1	3	3	2	3	3	2	2	2	0	1
16	43	2	2	1	1	1	1	7	1	1	1	1	0	1	1	0	0	0	8	1	1	1	0	0	4	3	5	0	1yr	3	2	1	4	2	1	1	3	5	3	3	3	3	5	3	4	4	1	2	1	1
17	38	1	3	1	1	0	1	1	1	3	5	4	0	1	1	0	0	0	8	2	0	1	0	1	1	2	2	1	4mth	1	1	1	7	1	1	1	0	3	3	2	3	3	3	3	4	4	2	2	1	1
18	42	1	4	1	1	1	1	2	1	2	1	2	1	1	0	0	1	0	8	5	1	1	0	0	4	3	5	0	2yr	3	2	0	0	5	2	0	6	5	3	1	3	3	5	3	3	3	2	2	1	1
19	47	2	3	1	1	0	1	1	1	2	5	2	0	1	1	0	1	0	8	5	1	1	0	0	4	3	5	0	6mth	3	1	1	8	4	1	1	6	5	3	1	3	3	3	3	4	3	2	2	0	1
20	48	1	4	1	1	1	1	1	1	3	5	2	0	0	0	0	0	0	8	2	0	1	0	0	4	3	5	0	3yr	3	2	0	0	5	2	0	6	2	3	2	3	2	2	5	4	4	1	2	1	1
21	41	1	4	1	2	0	1	7	1	3	1	2	0	1	1	0	0	0	8	4	0	1	0	1	1	2	3	1	1yr	3	2	1	8	4	1	1	6	1	3	3	3	3	5	3	4	4	1	2	1	1
22	49	1	4	1	1	0	0	6	0	4	6	5	0	0	0	0	1	0	8	5	0	1	0	0	4	3	5	0	nil	4	3	1	7	2	1	1	2	1	3	1	3	3	2	3	3	2	2	2	0	1
23	45	2	4	1	1	1	1	7	0	4	6	5	0	0	0	0	0	0	8	3	2	1	0	1	1	2	2	0	3yr	3	1	1	4	2	1	0	0	0	3	3	3	3	1	3	4	3	4	2	1	0
24	48	1	3	1	3	0	1	5	1	3	5	2	1	1	1	0	0	0	8	5	0	0	0	1	1	2	3	1	2mth	1	1	1	1	1	1	0	0	5	3	1	3	3	1	3	1	1	1	2	0	1
25	43	1	3	1	1	0	1	7	1	1	1	2	0	1	0	0	0	1	4	2	1	1	1	1	3	1	2	0	1½yr	3	2	1	1	1	1	1	0	0	3	2	3	3	5	3	4	4	4	2	1	1
26	34	1	2	1	1	0	0	6	0	4	6	5	0	0	0	0	0	0	8	5	0	0	0	0	4	3	5	0	nil	4	3	1	0	5	2	1	2	2	3	1	3	3	2	4	3	3	2	2	1	0
27	32	1	3	1	1	0	1	1	1	2	5	2	0	1	0	0	0	1	3	5	0	1	0	0	4	3	5	0	6mth	3	2	0	0	5	2	1	2	2	3	1	1	3	3	4	4	1	2	1	1	1
28	32	1	3	1	2	1	1	7	0	4	6	5	0	0	0	0	0	0	8	5	1	0	0	0	4	3	5	0	6yr	3	1	1	0	5	2	1	0	2	3	1	3	2	1	3	4	4	1	2	1	0
29	48	1	4	1	3	0	1	6	1	2	5	1	0	1	1	1	0	1	6	2	0	1	1	1	1	2	2	0	3mth	3	1	1	8	4	1	1	0	0	1	2	3	2	1	3	3	2	4	2	1	1
30	45	2	3	1	3	1	1	7	1	3	5	4	0	1	0	0	0	0	8	5	1	1	1	1	1	2	2	0	1yr	3	2	1	8	4	0	1	0	0	2	1	3	3	2	3	4	4	1	1	1	1
31	38	1	4	1	1	1	1	7	1	3	1	1	0	1	0	0	1	1	5	5	0	1	1	0	4	3	5	0	1yr	1	1	1	0	5	2	1	6	5	2	1	1	3	5	3	4	4	1	2	1	1
32	49	2	3	1	1	0	0	6	0	4	6	5	0	0	0	0	0	1	6	5	1	0	0	0	4	3	5	0	nil	4	3	1	8	4	1	0	0	0	2	1	1	2	2	3	3	2	2	2	0	0
33	46	2	2	1	3	0	1	1	1	3	1	2	0	1	0	0	0	0	8	5	0	1	1	0	4	3	5	1	1mth	1	1	0	8	2	1	1	2	2	1	1	3	1	3	3	4	4	1	2	1	1

No.	Present				Present										General examination							Ashtasthana pareeksha								Dasa vidha pareeksha																	Vagina					
	Onset	Degree	Site	Inter menstrual bleeding	Duration	Amount	Clots	Consanguineous	Contraceptive history	Duration of pregnancy	Abnormalities in antenatal period	Nature of labour	Puerperal period	Condition of the baby	BP	Pulse rate	Body built	Ht.	Wt.	Breast examination	Systemic examination	Nadi	Mutra	Mala	Jihwa	Sabda	Sparsa	Drik	Akriti	Dushya	Desa	Bala	Kala	Anala	Prakrithi	Vaya	Satwam	Satmya	Ahara	Urethra	Vulva	Labia	Cystocele	Rectocele	Prolapsed of uterus	If present, the degree	Discharge	If present- colour	Amount	Consistency	Vaginitis	Abnormal growth
1	5	4	6	0	4	5	2	0	0	4	0	1	2	1	120/70	72	2	162	61	0	0	5	3	3	1	2	3	2	3	2	2	1	1	3	5	1	2	3	2	1	0	1	0	0	0	5	1	3	2	5	0	0
2	5	4	6	0	4	5	2	0	2	1	0	2	2	2	110/60	70	2	170	68	0	0	4	2	1	1	2	1	3	2	2	3	3	4	3	4	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
3	2	2	5	0	4	5	2	0	2	1	0	1	1	1	120/80	72	2	155	55	0	0	5	2	3	1	2	2	1	3	2	1	1	3	3	5	1	2	1	2	1	0	1	1	1	1	1	1	1	1	3	1	0
4	2	3	5	0	4	5	2	0	0	1	0	1	1	1	130/80	74	2	162	63	0	0	4	1	1	2	1	3	1	1	3	2	3	2	3	4	1	2	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
5	2	3	5	0	4	5	2	0	2	1	0	2	1	1	110/70	72	3	160	84	0	0	6	3	2	1	2	3	3	2	2	2	1	3	1	6	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
6	1	3	5	0	4	5	2	0	0	1	0	2	1	1	110/70	78	2	152	54	0	0	1	3	2	3	1	1	1	3	2	2	1	4	3	1	1	2	1	2	1	0	1	0	0	0	5	1	2	2	5	0	0
7	5	4	6	0	4	5	2	0	1	1	0	2	1	1	120/82	68	2	164	65	1	0	6	3	2	1	3	2	3	3	2	1	1	6	3	6	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
8	1	1	1	0	4	5	2	0	0	1	0	3	1	1	100/70	80	2	164	62	0	0	2	2	1	3	2	2	2	1	3	3	2	2	3	2	1	2	3	2	1	0	1	0	0	0	5	1	1	1	3	0	0
9	4	3	5	0	4	5	2	0	1	1	0	2	1	1	130/80	70	2	162	51	0	0	1	1	3	2	1	1	1	2	3	1	1	2	1	1	1	1	3	2	1	0	1	0	0	0	5	1	1	1	2	1	0
10	5	4	6	0	4	5	2	0	0	1	0	1	1	1	118/80	72	2	148	50	1	0	2	2	3	2	2	1	2	2	3	2	2	6	3	2	1	2	1	2	1	0	1	1	1	1	1	1	1	1	5	1	0
11	2	2	2	0	4	5	2	0	1	1	0	1	1	1	120/70	80	3	158	73	0	0	2	2	1	2	2	1	2	2	3	3	2	4	3	2	1	2	3	2	1	0	1	0	0	0	5	1	1	1	5	1	0
12	2	2	5	0	4	5	2	0	2	1	0	1	1	1	110/80	72	2	160	59	0	0	6	3	2	1	2	2	3	3	2	2	1	5	1	6	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
13	1	1	1	0	4	5	2	0	2	1	1	3	1	1	100/70	82	2	162	60	0	0	5	1	3	3	1	2	3	1	2	1	1	3	2	5	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
14	4	3	5	0	4	5	2	0	2	1	1	2	1	1	100/70	72	1	152	45	0	0	4	3	2	1	4	2	4	3	3	3	3	1	3	4	1	2	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
15	1	1	1	0	4	5	2	0	0	6	3	5	4	4	130/90	84	3	164	75	0	0	3	2	3	3	1	2	3	3	2	2	3	5	3	3	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
16	1	1	1	0	4	5	2	0	2	1	0	2	1	1	130/90	70	2	162	53	0	0	6	3	2	4	6	5	2	1	3	2	3	1	2	6	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
17	1	3	5	0	4	5	2	0	2	1	0	1	1	1	130/78	72	3	157	86	0	0	1	2	1	3	4	3	1	1	3	1	1	2	3	1	1	1	1	2	1	0	1	0	0	0	5	1	1	1	5	1	1
18	2	2	1	0	4	5	2	0	0	6	3	5	4	4	120/80	72	2	145	55	0	0	2	2	3	2	1	2	2	1	3	1	2	5	3	2	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
19	2	2	5	0	4	5	2	0	0	2	1	2	1	2	120/70	74	2	148	50	0	0	4	3	4	2	1	1	2	1	3	2	2	2	3	4	1	1	1	2	1	0	1	0	0	0	5	1	1	2	3	1	0
20	2	3	5	0	4	5	2	0	1	1	0	1	1	2	120/80	72	2	152	61	0	0	4	2	3	1	3	2	1	4	3	1	1	1	3	4	1	3	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
21	2	3	5	0	4	5	2	0	2	1	0	1	1	1	110/60	72	2	156	60	0	0	2	2	4	2	2	3	2	4	3	2	2	6	3	2	1	1	3	2	1	0	1	0	0	0	5	1	1	2	5	0	0
22	1	1	2	0	4	5	2	0	1	1	0	2	1	1	130/80	70	2	152	54	0	0	5	3	2	4	5	3	2	1	2	1	2	2	3	5	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
23	5	4	6	0	4	5	2	0	0	1	0	1	1	1	138/92	72	2	145	46	0	0	1	4	1	1	1	4	5	1	3	3	1	3	3	1	1	3	1	2	1	0	1	0	0	0	5	1	1	3	5	0	0
24	2	2	1	0	4	5	2	0	0	4	0	1	1	2	100/60	70	2	160	63	0	0	6	3	2	3	4	2	3	4	3	2	2	2	3	6	1	2	2	2	1	0	1	1	0	0	5	1	1	1	3	1	0
25	2	1	5	1	1	2	0	0	2	1	0	2	1	1	120/80	74	3	148	70	0	0	5	1	3	4	3	2	1	3	3	3	2	3	3	5	1	1	2	2	1	0	1	1	1	0	5	1	1	2	5	0	0
26	5	4	6	0	4	5	2	0	2	1	1	2	1	1	110/68	72	1	155	37	0	0	5	3	2	1	4	3	1	5	2	3	3	6	3	5	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
27	2	3	1	0	4	5	2	0	0	1	1	2	1	1	120/80	74	2	156	58	0	0	5	3	1	4	2	3	1	4	3	2	2	6	3	5	1	1	1	2	1	0	1	0	0	0	5	1	1	2	5	0	0
28	5	4	6	0	4	5	2	0	2	1	0	2	1	1	110/60	68	2	152	55	0	0	4	1	3	5	4	2	1	4	3	2	1	2	3	4	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
29	1	2	5	0	4	5	2	0	2	1	0	1	1	1	140/80	78	3	162	80	0	0	6	4	3	5	2	4	1	2	2	3	3	5	2	6	1	3	2	2	1	0	1	1	1	0	5	1	1	1	3	1	0
30	4	3	5	1	2	3	1	0	1	1	0	1	1	1	120/70	70	2	152	62	0	0	3	2	1	3	3	4	5	4	3	2	1	2	1	3	1	3	1	2	1	0	1	1	0	0	5	1	1	2	3	1	0
31	2	3	2	0	4	5	2	0	1	1	0	2	1	1	120/80	74	2	148	54	0	0	4	3	5	4	2	3	4	1	3	3	2	4	1	4	1	2	2	2	1	0	1	0	0	0	5	1	1	1	1	1	0
32	5	4	6	0	4	5	2	0	2	1	0	3	1	1	130/90	68	3	162	80	0	0	5	4	2	3	5	6	4	3	2	2	3	2	1	5	1	3	2	2	1	0	1	0	0	0	5	0	7	5	8	0	0
33	2	3	1	0	4	5	2	0	2	4	1	1	1	1	140/80	78	2	164	66	0	0	3	3	2	4	6	3	2	1	3	1	3	4	1	3	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0

No.	Cervix								Uterus					Treatment given	Bleeding	Amount	Duration	Interval	Pain with menstruation	Lower abdominal pain	Heaviness of abdomen	Feeling of lump	Dyspareunia	Vaginal discharge	Low back ache	Associated symptoms, if any	USG				Blod test					
	Position	Size	Cervical os	Cervicitis	If present	Erosion	If present	Degree	Presence of abnormal growth	Size	Direction	Mobility	Consistency	Any abnormal growth													BT			AT				
																											Size	Number	Size	Number	Hb%	BT	CT	Hb%	BT	CT
1	3	3	2	1	2	1	3	2	0	1	1	1	1	0	3	7	3	3	3	0	0	0	0	0	0	0	1.9x1.7cm	1	1.2x1.3cm	1	13	4	7	11	2	7
2	3	1	1	0	4	0	6	4	0	1	1	1	1	0	3	7	3	3	2	0	0	0	0	0	0	0	2.9x2.4cm	1	2.9x1.7cm	1	10	2	6	11	2	6
3	2	1	2	0	4	0	6	4	0	2	1	1	1	0	3	5	1	1	3	0	0	0	0	0	0	0	0.8x0.6cm	1	nil	0	11	3	5	12	3	5
4	2	1	2	0	4	0	6	4	0	1	1	1	1	0	3	1	4	3	3	2	1	1	0	0	0	0	4x4cm, 1.4x0.8cm	2	5.7x4.2cm, 2.2x1.6cm	2	11	2	7	11	2	7
5	3	1	1	0	4	0	6	4	0	1	1	1	1	0	3	7	3	3	2	1	1	0	1	0	0	0	2.2x2.1cm, 2.1x1.4cm	2	2x1.9cm, 2.2x1.5cm	2	11	1	6	11	2	7
6	3	1	1	1	1	1	1	1	0	1	1	1	1	0	3	7	3	3	3	1	0	0	0	0	0	0	1.8x1cm	1	nil	0	12	3	4	11	2	7
7	3	1	1	0	4	0	6	4	0	1	1	1	1	0	3	7	3	3	2	0	0	0	0	0	0	0	0.7x0.6cm	1	0.5x0.4cm	1	11	2	7	8	2	6
8	3	1	2	0	4	0	6	4	4	1	1	1	1	0	3	1	4	3	3	0	0	0	0	0	0	1	2.3x2cm, 1.5x1.2cm	2	2x2.1cm, 1.6x1.1cm	2	11	2	6	11	2	7
9	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	1	4	3	3	0	2	0	0	0	0	0	3.4cm , 2.1x3.1cm , 1.9cm	3	2.4cm, 2.4cm, 1.5cm	3	10	2	7	7	2	7
10	3	1	1	1	0	4	0	6	4	0	1	2	1	1	0	3	1	4	3	3	0	0	0	0	0	0	3.6x3.8cm	1	4x4.6cm	1	12	2	7	12	2	7
11	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	7	3	4	3	1	1	1	0	0	0	0	1.4x1cm	1	1.5x1cm	1	12	1	6	10	3	7
12	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	7	3	3	2	0	0	0	0	0	0	0	1.5cm	1	0.8cm	1	12	3	7	11	3	8
13	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	7	3	3	3	0	0	0	0	0	0	0	1.3x1cm	1	1.1cm	1	10	1	6	11	2	7
14	2	1	2	0	4	0	6	4	0	1	2	1	1	0	3	1	4	4	4	3	1	0	0	0	1	0	1cm, 1.2cm, 1.4cm	3	0.9cm, 2.7x2.6cm, 1.4x1cm	3	11	2	7	11	2	8
15	3	1	1	0	4	0	6	4	0	1	1	1	1	0	3	7	3	3	3	0	0	0	0	0	0	0	0.6x0.6cm	1	0.6cm	1	12	2	7	11	2	6
16	3	1	1	0	4	0	6	4	0	1	1	1	1	0	3	6	4	5	4	1	0	0	0	0	0	0	2.1x2.2, 3.3x2.9, 2.3x2.2, 2.9x2.4cm	4	k2.1, 3.4x3, 2.4x2.1, 2.9x2.2c	4	8	2	7	9	3	6
17	2	1	2	1	1	0	6	4	0	1	2	1	1	0	3	6	3	5	4	1	0	0	0	0	0	0	2.8x2.3cm	1	2.5x2.5cm		9	2	6	10	2	7
18	3	1	1	1	0	4	0	6	4	0	1	1	1	0	3	6	3	4	4	0	0	0	1	0	0	0	1.5X1.4CM, 1.4CM	2	1.2X1.3cm, 1.4cm	2	10	4	5	9	3	7
19	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	2	3	4	3	1	0	1	0	0	0	0	4X3.8CM, 1.3X1.9CM	2	4.1X4.2CM, 1.7X1.5CM	2	8	2	8	12	2	4
20	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	1	4	5	4	1	0	0	0	0	1	0	2.5CM, 1.6X2.8CM, 2.4CM	3	2.5CM, 1.4CM, 2.3CM	3	10	2	6	8	2	7
21	3	3	2	1	1	0	6	4	0	1	1	1	1	0	3	6	3	3	3	1	0	0	0	0	1	0	1.5CM	1	0.7CM	1	11	3	7	10	3	6
22	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	6	3	1	3	0	0	0	1	0	0	0	0.8X1CM, 0.8X1CM	2	0.8X0.9CM, 0.6CM	2	11	2	6	11	3	7
23	2	1	2	1	2	1	1	1	0	1	2	1	1	0	3	6	3	3	3	0	0	0	0	0	0	0	1.4X2.4CM, 2.9X3.5CM	2	1.4X1.2CM, 2.3X1.7	2	9	1	6	10	2	7
24	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	6	3	3	2	0	0	0	0	0	0	0	3.8X3.2	1	3.1X2.5	1	12	2	7	10	2	7
25	3	1	2	1	1	0	6	4	0	1	1	1	1	0	3	2	3	4	4	0	0	0	0	0	0	0	2CM	1	NIL	0	8	1	8	10	2	7
26	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	6	3	3	4	0	0	0	0	0	0	0	1.5X1.4CM	1	NIL	0	11	2	7	11	2	6
27	3	1	2	1	1	1	1	1	0	1	1	1	1	0	3	6	3	3	3	1	0	0	0	0	0	0	3.3X3.6CM	1	3X3.5CM	1	11	3	8	11	3	8
28	2	1	1	0	4	0	6	4	0	1	2	1	1	0	3	2	3	5	3	0	0	0	0	0	0	0	0.9CM, 0.9CM, 0.8CM, 0.6CM	4	1.3CM, 1.5CM, 0.5CM	3	11	2	7	11	2	6
29	2	1	2	0	4	1	2	2	0	1	2	1	1	0	3	6	3	3	3	1	0	0	0	0	1	0	2.8X2.9CM	1	2.6X2.8	1	8	3	7	11	3	6
30	2	1	2	0	4	0	6	4	0	1	2	1	1	0	3	1	4	2	3	2	1	0	0	0	1	0	1.5X1.4CM, 1.4CM	2	1.2X1.3cm, 1.4cm	2	10	4	5	9	3	7
31	2	1	2	0	4	0	6	4	0	1	2	1	1	0	3	1	4	4	3	2	1	0	0	0	1	0	2.5X2.2CM, 2.3X2.4CM	2	2.5x2.1cm, 2.1x2.4	2	10	1	6	8	2	7
32	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	6	3	3	3	0	0	0	0	0	0	0	1.7CM	1	1cm	1	12	2	7	12	2	6
33	3	1	2	0	4	0	6	4	0	1	1	1	1	0	3	6	3	3	3	1	0	0	0	0	0	0	0.8X0.6CM, 1X1.2CM	2	1x0.8cm, 1.1x1.4cm		9	2	7	10	3	7

Group - 4

No.	Age	Domicile	Socio economic Status	Marital status	Religion	Treatment history	Chief Complaints	Bleeding	Pain with menstruation	Nature	Site	Time	Failure to conceive	Lower abdominal pain	Heaviness of abdomen	Feeling of lump in the abdomen	Dysparunia	Urinary symptoms	Present	Bowel movement	Recent changes in the weight	Back pain	Loin pain	Vaginal discharge	Colour	Smell	Nature	Pruritis	Duration	Onset	Nature	History of gynaecological disease	History of general illness	Treatment	Disease still continuing or not	H/O surgical intervention	History	History of similar illness in the family members	Appetite	Bowel	Diet	Sleep	Duration	Interval	Amount	No of pads changed per day	Colour	Odour	Clots	Pain
1	37	2	4	1	1	0	0	6	0	4	6	5	0	0	0	0	0	1	3	5	1	1	1	0	4	3	5	1	nil	4	3	1	1	1	0	1	2	1	3	1	3	3	2	3	3	2	2	2	0	0
2	40	2	3	1	1	1	1	7	0	4	6	5	0	0	1	0	1	1	6	1	0	1	0	1	1	2	1	1	1yr	3	2	1	4	2	1	1	0	2	1	3	3	2	5	4	4	3	1	2	1	0
3	48	1	4	1	1	0	0	6	0	4	6	5	0	0	1	0	0	0	8	5	1	0	0	0	4	3	5	0	nil	4	3	1	0	5	2	1	0	0	3	1	3	3	2	3	3	1	2	2	0	0
4	39	2	2	1	3	1	1	6	1	3	1	2	0	1	1	0	0	0	8	5	0	1	0	1	1	2	1	1	2mth	2	1	0	7	2	1	0	6	1	3	1	1	2	2	3	3	2	1	2	1	1
5	49	1	2	1	3	0	0	6	0	4	6	5	0	0	0	0	0	0	8	2	0	1	0	1	1	2	1	0	nil	4	3	1	4	2	1	1	3	0	1	2	3	2	3	3	3	1	4	2	0	0
6	36	1	4	1	1	1	1	7	1	3	5	2	0	1	1	0	0	0	8	5	0	1	0	0	4	3	5	1	4mth	3	2	0	7	2	1	0	0	0	3	1	3	2	4	4	4	3	2	2	1	1
7	30	1	4	2	1	0	0	6	1	1	1	1	2	1	0	0	2	0	8	5	1	1	1	1	1	2	3	0	1yr	4	3	0	0	4	2	0	6	1	2	1	3	3	3	2	3	2	1	2	0	1
8	40	1	4	1	3	1	1	1	1	3	1	4	0	1	0	0	0	1	6	2	0	1	0	1	1	1	1	1	3yr	3	1	1	1	1	0	1	6	5	3	2	3	3	3	3	4	4	2	2	1	1
9	46	2	3	1	1	0	1	1	1	2	4	1	0	1	0	0	0	1	3	2	0	1	0	0	4	3	5	0	3mth	1	1	0	2	1	1	1	6	2	2	2	3	3	3	3	4	4	2	2	1	1
10	37	1	4	1	2	1	1	6	1	3	5	4	0	1	0	0	0	0	8	4	1	1	0	1	1	2	1	1	6mth	3	1	0	0	5	2	1	6	5	3	3	3	3	2	3	3	2	1	2	1	1
11	33	1	4	1	1	1	1	7	1	3	1	2	0	1	1	1	0	1	2	2	0	1	1	0	4	3	5	0	2yr	3	2	0	0	5	2	0	0	1	3	2	1	3	5	1	3	2	1	2	1	1
12	46	1	3	1	3	1	1	6	1	3	5	4	0	1	0	0	0	0	8	1	0	1	0	1	1	2	3	1	4yr	3	2	1	1	2	0	1	0	0	3	3	3	3	5	3	4	3	1	2	1	1
13	43	2	2	1	3	0	1	1	1	2	5	2	0	1	0	0	0	0	8	1	1	1	0	1	1	2	3	1	3mth	1	2	1	7	2	0	1	0	0	3	3	1	2	2	3	4	2	1	2	1	1
14	33	1	3	1	1	1	1	7	0	4	6	5	0	0	1	1	1	1	5	2	0	1	1	1	1	2	2	0	5mth	3	1	1	1	2	0	1	0	1	2	2	3	2	1	3	4	3	1	2	1	0
15	34	1	2	1	1	0	1	7	1	3	1	2	1	1	1	0	0	0	8	2	0	0	0	0	4	3	5	0	5mth	3	1	1	1	4	0	0	2	0	1	2	3	2	2	2	3	2	2	1	1	1
16	42	1	4	1	1	0	1	6	1	2	5	4	1	1	1	1	1	0	8	5	0	1	0	0	4	3	5	0	3yr	1	1	1	1	2	0	0	3	2	1	1	3	3	2	3	3	1	4	2	0	1
17	28	2	2	1	1	1	1	6	1	3	5	1	0	1	1	0	0	0	8	5	1	0	0	0	4	3	5	0	6mth	3	1	0	0	5	2	1	0	2	1	1	3	3	1	1	1	2	2	2	0	1
18	49	1	2	1	1	1	1	1	1	2	1	2	0	1	1	0	0	0	8	1	0	0	0	1	2	2	2	0	1yr	3	1	0	4	2	1	1	3	1	2	3	3	3	2	5	4	3	1	2	0	1
19	40	2	4	3	1	1	1	1	0	4	6	5	0	0	1	0	2	1	1	2	2	1	1	0	4	3	5	0	2yr	3	2	1	7	2	0	0	0	2	1	2	3	1	2	2	4	4	1	2	1	0
20	44	1	4	1	2	0	1	6	1	3	5	1	0	0	0	0	1	0	8	4	0	1	1	1	1	2	1	1	3mth	1	1	0	1	4	0	1	0	1	3	3	3	2	2	2	3	2	1	2	1	1
21	45	1	4	1	1	0	1	1	1	3	1	1	0	1	0	0	0	0	8	1	0	1	0	1	1	2	4	0	1mth	3	1	1	8	4	1	1	6	2	3	3	3	3	5	3	4	4	2	2	1	1
22	39	1	4	1	3	0	1	6	1	2	1	1	1	1	0	0	1	0	8	5	0	0	0	0	4	3	5	1	1yr	3	1	0	1	1	0	1	0	0	3	1	3	3	2	2	3	1	2	2	1	1
23	49	1	4	2	1	0	0	6	0	4	6	5	2	0	1	0	2	0	8	5	1	1	0	1	1	2	3	0	nil	4	3	1	4	4	1	0	0	1	1	1	3	2	2	4	3	1	2	2	0	0
24	45	1	3	1	1	0	1	6	1	2	2	1	0	1	1	0	0	1	5	2	0	1	0	0	4	3	5	0	5mth	3	1	0	1	1	0	1	6	2	2	2	3	3	2	3	3	1	2	2	1	1
25	43	1	4	1	1	1	1	1	1	1	1	4	0	1	1	1	0	0	8	5	2	1	1	1	3	2	2	0	3mth	1	1	1	0	5	2	1	0	0	3	1	3	3	5	3	3	3	2	1	1	1
26	26	1	4	2	1	0	0	6	0	4	6	5	2	0	1	0	2	1	3	1	2	1	1	0	4	3	5	0	nil	4	3	0	0	5	2	0	3	1	3	3	3	2	3	3	3	1	1	2	1	0
27	49	1	4	1	1	1	1	1	1	3	1	2	0	1	1	0	0	0	8	4	0	1	1	1	1	2	1	0	6yr	3	2	1	8	2	1	1	0	0	3	3	1	3	4	3	4	4	1	2	1	1
28	36	1	3	1	1	0	1	6	1	2	1	2	0	1	1	0	0	0	8	5	0	1	0	1	3	2	2	0	6mth	3	2	0	0	5	2	1	2	1	3	1	3	3	3	4	3	2	1	2	1	1
29	42	1	2	1	1	0	0	6	0	4	6	5	0	0	0	0	0	0	8	5	1	0	0	0	4	3	5	0	nil	4	3	1	3	4	1	1	3	1	3	1	3	3	2	3	3	1	2	2	0	0
30	35	1	3	1	1	0	0	6	0	4	6	5	0	0	0	0	0	0	8	5	1	0	0	0	4	3	5	0	nil	4	3	0	7	2	0	1	0	0	3	1	3	2	2	3	3	2	2	2	0	0
31	41	1	4	1	1	1	1	7	0	4	6	5	0	0	1	0	0	1	5	2	0	1	0	1	1	2	2	0	8yr	3	1	1	7	1	1	1	3	2	3	2	1	2	2	3	3	1	1	2	1	0
32	33	1	4	1	1	1	1	7	1	3	1	2	0	1	1	0	0	0	8	5	0	1	0	0	4	3	5	0	4yr	3	1	1	1	1	0	1	0	2	3	1	3	2	1	3	1	1	1	2	0	1
33	38	1	3	1	1	0	0	6	0	4	6	5	0	0	1	0	0	0	8	5	2	1	0	1	1	2	1	1	nil	4	3	1	0	5	2	1	3	1	3	1	3	3	2	3	3	2	1	2	0	0

No.	Present			Inter menstrual bleeding	Present			Consanguineous	Contraceptive history	Duration of pregnancy	Abnormalities in antenatal period	Nature of labour	Puerperal period	Condition of the baby	General examination					Breast examination	Systemic examination
	Onset	Degree	Site		Duration	Amount	Clots								BP	Pulse rate	Body built	Ht.	Wt.		
1	5	4	6	0	4	5	2	0	2	1	0	2	1	1	120/80	72	2	164	60	1	0
2	5	4	6	0	4	5	2	0	2	1	0	2	1	1	110/70	70	2	162	62	0	0
3	5	4	6	0	4	5	2	0	2	1	0	1	1	1	130/80	72	2	148	58	0	0
4	4	3	1	0	4	5	2	0	1	1	0	1	1	1	120/70	72	2	167	62	0	0
5	5	4	6	0	4	5	2	0	1	1	0	1	1	1	130/90	82	2	160	50	0	0
6	2	3	5	0	4	5	2	0	1	1	0	1	1	1	112/70	72	3	155	70	0	0
7	1	1	1	0	4	5	2	2	3	5	2	4	3	3	110/68	78	2	160	58	0	0
8	4	2	5	1	1	2	1	0	2	1	0	1	1	1	118/72	82	2	160	58	0	0
9	1	2	1	0	4	5	2	0	2	1	0	1	1	1	110/70	70	1	158	48	0	0
10	4	3	5	0	4	5	2	0	0	1	0	1	1	1	110/80-	82	2	165	70	0	0
11	4	3	5	1	1	2	1	0	1	1	0	1	1	1	120/90	80	2	154	60	0	0
12	3	3	5	0	4	5	2	0	2	1	0	1	1	1	126/82	68	3	146	70	0	0
13	2	2	5	0	4	5	2	0	2	1	0	2	2	1	130/84	78	2	156	54	0	0
14	5	4	6	1	2	1	0	0	2	1	0	1	1	1	112/68	60	1	164	47	0	0
15	4	3	1	0	4	5	2	0	1	1	0	2	1	1	120/92	72	2	154	59	0	0
16	2	2	5	0	4	5	2	0	0	6	3	5	4	4	130/72	78	2	162	64	0	0
17	1	3	1	0	4	5	2	0	0	1	0	1	1	1	120/80	72	3	157	68	0	0
18	1	3	1	0	4	5	2	0	1	1	0	1	1	1	110/72	70	2	165	68	0	0
19	5	4	6	0	4	5	2	0	0	1	0	1	1	1	100/60	70	2	155	59	0	0
20	1	3	5	0	4	5	2	0	2	1	0	1	1	1	134/82	68	2	150	57	0	0
21	2	3	5	0	4	5	2	0	2	1	0	2	1	1	160/100	70	2	153	59	0	0
22	1	2	5	0	4	5	2	0	0	6	3	5	4	4	110/80	70	2	141	48	0	0
23	5	4	6	0	4	5	2	2	3	5	2	4	3	3	130/90	74	2	162	60	0	0
24	1	2	2	0	4	5	2	0	2	1	1	1	1	1	130/82	72	3	162	75	0	0
25	1	2	2	0	4	5	2	0	1	6	3	5	4	4	110/70	72	2	165	68	0	0
26	5	4	6	0	4	5	2	2	3	5	2	4	3	3	120/80	72	3	158	70	0	0
27	1	3	2	0	4	5	2	0	2	1	0	1	1	1	124/84	74	2	158	52	0	0
28	2	2	1	0	4	5	2	0	2	1	0	1	1	1	130/80	72	3	144	71	0	0
29	5	4	6	0	4	5	2	0	0	1	0	2	1	1	120/70	72	1	160	45	0	0
30	5	4	6	0	4	5	2	0	0	1	0	2	1	1	122/82	74	2	160	59	0	0
31	5	4	6	0	4	5	2	0	2	1	1	1	1	1	110/80	72	2	150	55	0	0
32	1	1	1	0	4	5	2	0	1	1	0	2	1	1	100/70	74	2	152	55	0	0
33	5	4	6	0	4	5	2	0	2	1	0	1	1	1	108/72	72	2	156	58	0	0

No.	Ashtasthana pareeksha								Dasa vidha pareeksha										Urethra	Vulva	Labia	Cystocele	Rectocele	Prolapsed of uterus	If present, the degree	Vagina					
	Nadi	Mutra	Mala	Jihwa	Sabda	Sparsa	Drik	Akriti	Dushya	Desa	Bala	Kala	Anala	Prakrithi	Vaya	Satwam	Satmya	Ahara								Discharge	If present- colour	Amount	Consistency	Vaginitis	Abnormal growth
1	4	4	2	3	5	6	4	1	2	3	1	2	3	4	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
2	6	2	1	3	2	4	3	2	3	2	3	1	1	6	1	3	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
3	5	3	5	1	2	3	5	5	2	2	1	2	3	5	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
4	3	2	1	3	4	5	3	2	2	2	3	3	3	3	1	3	3	2	1	0	1	0	0	0	5	1	1	1	2	1	0
5	4	3	1	2	5	3	2	1	2	3	1	5	1	4	1	1	3	2	1	0	1	0	0	0	5	1	1	2	2	1	0
6	2	1	3	5	2	1	4	2	3	1	2	4	3	2	1	3	1	2	1	0	1	0	0	0	5	1	1	1	5	0	0
7	5	4	5	3	2	5	1	1	2	1	1	5	1	5	1	1	3	2	5	2	3	2	2	2	4	2	6	4	7	2	2
8	1	4	4	5	3	6	2	1	3	2	1	4	3	1	1	3	1	2	1	0	1	0	0	0	5	1	1	2	2	1	0
9	2	4	3	4	2	1	3	2	3	3	3	2	1	2	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
10	1	4	2	3	1	5	4	1	2	2	1	3	3	1	1	2	1	2	1	0	1	0	0	0	5	1	1	2	2	1	0
11	6	2	1	4	3	1	2	2	3	1	1	2	3	6	1	3	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
12	3	4	2	3	2	1	4	6	3	3	3	4	3	3	1	2	1	2	1	0	1	1	0	0	5	1	1	2	3	1	0
13	5	2	4	3	5	2	3	1	3	2	1	2	2	5	1	1	2	2	1	0	1	0	0	0	5	1	1	1	3	0	0
14	5	3	2	1	4	2	1	3	3	2	1	3	1	5	1	2	3	2	1	0	1	0	0	0	5	1	1	2	5	0	0
15	3	2	4	4	6	2	3	2	2	1	3	4	2	3	1	1	2	2	1	0	1	0	0	0	5	0	7	5	8	0	0
16	4	2	3	2	4	3	3	4	2	3	2	5	3	4	1	2	2	2	1	0	1	0	0	0	5	0	7	5	8	0	0
17	1	4	3	5	1	2	5	4	3	3	1	2	3	1	1	2	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
18	2	4	3	4	2	3	5	4	3	2	2	2	1	2	1	1	3	2	1	0	1	0	0	0	5	1	2	2	5	0	0
19	5	3	1	4	1	3	2	1	3	3	2	2	3	5	1	3	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
20	1	4	2	5	1	4	4	1	2	2	1	2	3	1	1	1	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
21	2	4	3	4	2	5	2	2	3	1	2	6	3	2	1	2	3	2	1	0	1	0	0	0	5	0	7	5	8	1	0
22	6	2	4	5	3	2	1	1	2	2	3	3	3	6	1	3	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
23	2	4	5	4	2	6	2	1	2	2	2	2	3	2	1	2	1	2	5	2	3	2	2	2	4	2	6	4	7	2	2
24	3	2	5	4	2	2	3	3	2	3	2	1	1	3	1	3	2	2	1	0	1	0	0	0	5	1	1	1	5	0	0
25	4	2	3	4	5	4	5	5	3	1	2	2	3	4	1	1	3	2	1	0	1	0	0	0	5	1	2	2	5	1	0
26	6	4	3	5	2	1	6	6	2	1	3	1	3	6	1	1	3	2	5	2	3	2	2	2	4	2	6	4	7	2	2
27	5	4	5	2	3	4	5	5	3	2	2	3	1	5	1	2	1	2	1	0	1	0	0	0	5	0	7	5	8	0	0
28	3	2	3	4	2	1	3	3	3	3	3	6	3	3	1	1	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
29	1	4	1	5	3	2	1	1	2	2	1	3	3	1	1	2	1	2	1	0	1	0	0	0	5	1	1	2	2	0	0
30	2	5	3	4	6	2	6	6	2	3	2	3	3	2	1	1	3	2	1	0	1	0	0	0	5	1	1	1	3	0	0
31	5	2	1	3	5	5	2	2	3	2	2	6	3	5	1	1	3	2	1	0	1	0	0	0	5	1	1	1	1	1	0
32	3	2	1	3	5	6	3	3	3	1	3	3	3	3	1	2	3	2	1	0	1	0	0	0	5	0	7	5	8	0	0
33	6	3	2	1	4	3	2	2	2	3	3	5	3	6	1	1	3	2	1	0	1	0	0	0	5	1	1	2	2	1	0

No.	Cervix								Uterus					Treatment given	Bleeding	Amount	Duration	Interval	Pain with menstruation	Lower abdominal pain	Heaviness of abdomen	Feeling of lump	Dyspareunia	Vaginal discharge	Low back ache	Associated symptoms, if any	USG				Blod test					
	Position	Size	Cervical os	Cervicitis	If present	Erosion	If present	Degree	Presence of abnormal growth	Size	Direction	Mobility	Consistency	Any abnormal growth														BT				AT			
																												Size		Number		Size		Number	
																												0.6cm, 0.9cm	4	0.6cm, 0.6cm	1	12	3	7	10	2	7
2	3	1	1	0	4	0	6	4	0	1	1	1	0	4	1	4	4	0	0	1	0	0	0	0	0	1.4cm	1	1cm	3	12	3	5	12	3	6
3	3	1	2	0	4	0	6	4	0	1	1	1	0	4	7	3	2	3	0	0	0	0	0	0	0	1.4x1.9cm	1	1cm	3	11	2	7	10	2	7
4	2	1	2	0	4	0	6	4	0	1	1	1	0	4	7	3	2	3	1	0	1	0	0	0	0	2.4cm	1	2.6cm	0	10	2	7	10	2	7
5	3	1	2	0	4	0	6	4	0	1	1	1	0	4	7	3	2	3	0	0	0	0	0	0	0	3.2x 2.1cm	1	2.2x2.1	1	12	1	6	12	3	6
6	3	1	1	0	4	1	2	1	0	1	1	1	0	4	2	3	4	4	2	1	0	0	0	1	0	2.2x2.5cm	3	2.2x3cm	1	12	2	7	12	2	7
7	4	4	3	2	3	2	5	5	5	3	3	4	4	2	4	7	3	2	3	0	0	0	2	0	0	2.8x2cm, 3.5x2.3cm, 2.4x1.4cm	3	6x2.1cm, 3.2x2cm, 2.4x1.8cm	3	13	5	7	12	2	7
8	3	1	2	0	4	0	6	4	0	1	1	1	0	4	1	4	2	3	2	1	0	0	0	0	1	2.8x2.3cm	1	2.1x2cm	1	12	3	7	12	3	7
9	3	1	2	0	4	0	6	4	0	1	1	1	0	4	1	4	3	3	1	0	0	0	0	0	0	1.4x1cm, 1.1x0.8cm	2	1x0.9cm, 0.7cm	2	12	3	7	12	3	6
10	3	1	2	0	4	0	6	4	0	1	1	1	0	4	7	3	2	3	1	0	1	0	0	0	0	4x4cm, 2x1cm	2	3.2x3cm, 1x1.2cm	2	12	3	6	12	3	7
11	3	1	2	0	4	0	6	4	0	1	1	1	0	4	6	3	5	1	1	0	0	1	0	0	0	1.8x1.5cm, 1.7x2cm, 2x2.3cm	3	6x1.1cm, 1.4x1cm, 2.1x2.1cm	3	9	3	6	10	3	7
12	2	1	2	0	4	0	6	4	0	1	2	1	0	4	2	3	5	4	1	0	0	0	0	0	1	4x3.5cm	1	3.3x3.5	1	11	2	6	10	2	6
13	2	1	2	0	4	0	6	4	0	1	2	1	0	4	2	3	3	3	0	0	0	0	0	0	0	2.9x2.6cm, 0.6cm	2	3.2x2.5cm, 1.1cm	2	11	2	6	11	3	7
14	3	3	2	0	4	0	6	4	0	1	1	1	0	4	1	4	2	3	1	0	0	1	0	0	0	2.4cm, 1.5cm, 2.5cm	3	2.5cm, 1.5cm, 3.2cm	3	9	2	7	8	1	7
15	2	1	2	0	4	0	6	4	0	1	2	1	0	4	5	1	2	3	1	0	0	1	0	0	0	1.8x1.7	1	1.6x1.7cm	1	10	3	6	10	2	6
16	3	1	1	0	4	0	6	4	0	1	1	1	0	4	6	3	2	3	0	0	0	1	0	0	0	3x2.9cm	1	2.5x2.8cm	1	10	2	7	9	2	7
17	3	1	1	0	4	0	6	4	0	1	1	1	0	4	5	1	1	3	0	0	0	0	0	0	0	2.8x3.2cm, 3.1x3.4cm	2	2.5x 2.2cm, 2.9x3.2cm,	2	12	3	6	12	2	7
18	3	1	2	1	1	1	1	3	0	1	1	1	0	4	4	3	2	1	2	0	0	0	0	0	0	2.4cm	1	1.8cm	1	11	4	6	10	2	7
19	3	1	2	0	4	0	6	4	0	1	1	1	0	4	7	3	2	3	0	0	0	0	2	0	0	4cm, 1.8cm, 1.38cm	3	4.1cm, 1.8cm, 1cm	1	8	3	7	8	3	7
20	3	1	2	0	0	0	6	4	0	1	1	1	0	4	7	3	2	3	1	0	0	0	0	0	0	0.6cmm, 0.6cm, 0.9cm, 0.9cm	4	0,6cm, 0.6cm, 1.1x1.1cm	3	10	1	7	10	1	7
21	3	1	1	0	4	0	6	4	0	1	1	1	0	4	6	3	2	4	2	0	0	0	0	0	1	1.3cm	1	0.9cm	3	10	2	8	10	2	7
22	3	1	2	0	4	0	6	4	0	1	1	1	0	4	7	3	2	3	1	0	0	1	0	0	0	1.5x1.9cm	1	1cm	1	12	2	8	12	2	8
23	4	4	3	2	3	2	5	5	5	3	3	4	4	2	4	7	3	2	3	0	0	0	2	0	0	2.6cm	1	2.8cm	1	10	3	7	10	3	8
24	3	1	2	0	4	0	6	4	0	1	1	1	0	4	7	3	2	3	0	0	0	0	0	0	0	2.8x2.9cm	1	2.2x2.1	1	11	3	7	11	3	8
25	1	1	1	0	4	0	6	4	0	1	2	1	0	4	2	3	2	3	0	0	0	0	0	0	0	1.6x1.8cm, 2.2x2.5cm, 2.8x3.5cm	3	1.7cm, 2.2x3cm, 2.5cm	3	12	3	6	9	3	9
26	4	4	3	2	3	2	5	5	5	3	3	4	4	2	4	7	3	2	3	0	0	0	2	0	0	2x1.9cm, 1.3x1.4cm, 1.2x1.3cm	3	2.3x1cm, 1x1.1cm, 1.1x1.4cm	3	10	4	6	11	4	6
27	3	1	2	0	4	0	6	4	0	1	1	1	0	4	1	3	2	4	1	0	0	0	0	0	1	1.5cm, 9mm	2	2.1x1.2cm, 1.3cm	2	11	3	6	11	3	7
28	2	1	2	0	4	0	6	4	0	1	1	1	0	4	5	3	2	1	1	0	0	0	0	0	1	1cm	1	0.8cm	1	9	2	5	11	2	7
29	3	1	1	0	4	0	6	4	0	1	1	1	0	4	7	3	2	3	0	0	0	0	0	0	0	2.8x2.3cm	1	1cm	1	11	4	8	12	4	6
30	2	1	2	1	1	0	6	4	0	1	2	1	1	0	4	7	3	2	3	0	0	0	0	0	0	2.2x1.7cm, 2.7x2.1cm, 1.4x1.8cm	3	2.2x3.1cm, 1.7x1cm, 2x1.6cm	3	10	2	7	11	2	4
31	2	1	2	0	4	0	6	4	0	1	2	1	1	0	4	6	3	2	1	0	0	0	0	0	0	3.5x2.9cm	1	2.2x2.4cm	1	10	3	6	11	3	7
32	3	1	1	0	4	0	6	4	0	1	1	1	1	0	4	6	3	2	3	2	0	0	0	1	0	2.2cm	1	3.6x3.2cm	1	10	2	7	9	2	6
33	2	1	2	0	4	0	6	4	0	1	2	1	1	0	4	7	3	2	3	0	0	0	0	0	0	0.8cm	1	1cm	1	9	2	7	11	2	7

Group - 5

No.	Age	Domicile	Socio economic Status	Marital status	Religion	Treatment history	Chief Complaints	Bleeding	Pain with menstruation	Nature	Site	Time	Failure to conceive	Lower abdominal pain	Heaviness of abdomen	Feeling of lump in the abdomen	Dysparunia	Urinary symptoms	Present	Bowel movement	Recent changes in the weight	Back pain	Loin pain	Vaginal discharge	Colour	Smell	Nature	Pruritis	Duration	Onset	Nature	History of gynaecological disease	History of general illness	Treatment	Disease still continuing or not	H/O surgical intervention	History	History of similar illness in the family members	Appetite	Bowel	Diet	Sleep	Duration	Interval	Amount	No of pads changed per day	Colour	Odour	Clots	Pain
1	43	1	4	1	2	1	1	1	1	2	1	1	0	1	1	0	1	1	5	5	0	1	1	1	1	2	3	0	6yr	3	2	1	0	5	2	1	0	2	1	1	3	3	4	3	4	4	1	2	0	1
2	46	1	4	1	1	0	0	6	0	4	6	5	0	0	1	0	0	1	3	2	1	0	0	0	4	3	5	0	nil	4	3	1	3	2	1	1	6	2	1	2	1	3	2	3	3	1	1	2	0	0
3	44	1	3	1	3	1	1	7	1	3	5	1	0	1	1	1	1	0	8	2	0	1	1	1	2	1	2	1	3yr	3	2	0	0	5	2	1	0	1	3	2	3	3	5	3	4	4	1	2	1	1
4	40	1	4	1	1	0	1	6	1	2	1	2	0	1	1	0	0	1	7	5	0	0	0	0	4	3	5	0	1yr	3	1	0	7	2	1	0	0	0	3	1	3	2	2	1	3	2	2	2	0	1
5	48	1	3	1	1	1	1	7	1	1	5	2	0	1	0	0	1	1	7	2	2	1	1	0	4	3	5	0	6mth	3	2	0	1	1	0	1	0	0	3	2	3	3	1	3	4	4	2	2	1	1
6	49	1	3	1	1	1	1	6	1	1	1	4	0	1	0	0	0	0	8	5	0	0	0	0	4	3	5	0	2yr	3	2	1	1	2	0	0	6	2	3	1	3	3	2	2	3	2	2	2	1	1
7	32	1	4	1	1	0	1	6	1	1	1	2	0	1	0	0	0	0	8	2	2	1	1	1	1	2	1	0	6mth	3	1	0	1	2	0	1	2	1	1	2	3	3	2	3	3	2	1	2	0	1
8	44	1	4	1	1	0	0	6	0	4	6	5	0	0	1	0	1	1	7	4	1	0	0	0	4	3	5	1	nil	4	3	1	7	2	1	1	3	5	3	3	1	1	2	3	3	1	2	2	1	0
9	40	2	2	2	1	0	1	7	1	2	5	1	2	1	0	0	2	0	0	5	0	0	0	0	4	3	5	1	2mth	1	1	1	0	5	2	0	6	1	3	1	3	3	2	5	1	1	1	2	1	1
10	47	1	3	1	1	0	1	6	1	1	2	2	0	1	1	1	0	1	3	2	0	0	0	0	4	3	5	0	3yr	3	1	0	7	2	1	0	0	0	3	2	1	2	2	2	3	1	2	2	0	1
11	42	1	4	2	1	1	1	7	1	2	5	2	2	0	1	0	2	0	8	5	1	0	0	1	3	2	2	1	2yr	3	2	1	7	2	0	1	0	1	3	1	3	2	1	3	4	4	2	2	1	1
12	28	2	2	1	3	1	1	1	1	3	5	4	0	1	1	0	0	0	8	2	0	0	0	0	4	3	5	0	1yr	3	2	0	0	5	2	0	3	1	2	2	3	3	4	3	4	4	1	2	1	1
13	49	1	4	1	1	0	1	7	0	4	6	5	0	1	1	0	0	1	2	2	1	0	0	0	4	3	5	1	2mth	1	1	1	4	2	1	0	0	5	3	2	1	3	2	5	4	4	2	2	1	0
14	49	1	4	1	1	0	0	6	0	4	6	5	0	0	0	0	1	1	7	5	0	0	0	0	4	3	5	0	nil	4	3	1	1	2	0	1	0	0	3	1	1	3	2	3	3	2	2	2	0	0
15	47	1	4	1	1	1	1	7	1	1	1	2	0	1	0	0	0	0	8	5	0	0	0	1	1	2	1	0	2yr	3	1	1	0	5	2	1	o	2	3	1	3	2	5	5	4	3	1	2	1	1
16	32	2	2	1	1	0	0	6	0	4	6	5	0	0	0	0	0	0	8	2	2	0	0	0	4	3	5	0	nil	4	3	0	0	5	2	1	6	1	2	2	1	3	2	3	3	2	1	2	0	0
17	37	1	4	1	1	1	1	5	1	3	1	1	1	1	1	0	0	0	8	2	0	0	0	1	1	2	1	1	2yr	3	1	0	1	1	0	0	0	1	3	2	1	3	1	1	1	1	2	2	0	1
18	48	1	4	1	1	1	1	7	1	1	1	1	0	1	0	0	0	0	8	5	0	0	0	0	4	3	5	1	2yr	3	1	0	0	5	2	1	6	0	2	1	1	3	5	3	4	3	2	2	0	1
19	40	1	2	1	1	0	1	6	1	3	5	4	0	1	0	0	0	0	8	5	0	1	1	1	1	2	3	0	2mth	1	1	1	0	5	2	1	0	1	1	1	3	3	3	3	3	2	1	2	0	1
20	48	1	4	1	1	0	1	6	1	3	5	2	1	1	1	0	0	0	8	5	1	0	0	0	4	3	5	0	1yr	3	2	1	4	3	1	1	3	2	3	1	3	3	3	3	3	2	2	2	0	1
21	38	1	2	1	1	1	1	7	1	2	5	4	0	1	1	0	1	0	8	2	0	1	1	1	2	1	2	1	3yr	3	2	0	4	4	1	0	2	1	1	2	3	3	3	3	3	2	2	2	1	1
22	44	1	4	1	1	1	1	5	1	1	5	1	0	0	0	1	1	0	8	5	2	1	0	0	4	3	5	0	4yr	3	1	0	7	7	1	1	0	0	3	1	3	3	2	2	1	2	1	2	1	1
23	45	2	4	1	3	1	1	1	1	3	5	2	0	1	1	0	1	0	8	3	0	1	0	1	2	1	2	0	8mth	3	2	0	1	1	0	1	0	0	3	3	3	3	5	3	4	4	1	2	1	1
24	46	1	4	1	1	0	1	6	1	2	5	4	0	1	0	0	0	0	8	2	1	1	1	0	4	3	5	1	6mth	3	2	1	3	3	1	0	3	5	2	2	1	3	1	3	3	2	1	1	1	1
25	37	1	2	1	1	1	1	1	1	3	5	2	0	1	0	0	0	0	8	5	0	1	0	0	4	3	5	0	6mth	3	2	0	1	1	0	1	2	2	1	1	3	3	3	3	4	3	1	2	1	1
26	49	1	4	1	1	1	1	1	0	4	6	5	0	0	1	1	0	0	8	2	0	1	1	0	4	3	5	0	6mth	3	1	1	8	4	1	1	6	1	3	2	3	3	3	3	4	3	1	2	1	0
27	49	2	4	1	2	1	1	1	1	3	1	4	0	1	1	0	0	1	7	5	2	1	0	0	4	3	5	0	9yr	3	2	1	4	4	1	1	0	0	3	1	3	3	3	3	4	4	2	2	0	1
28	36	1	4	1	3	1	1	7	1	3	5	4	0	1	0	0	1	1	4	2	0	1	1	1	1	2	2	1	6yr	3	1	0	0	5	2	1	3	2	3	2	3	2	2	3	4	4	1	2	1	1
29	48	2	3	1	3	1	1	1	1	3	1	4	0	1	1	0	0	0	8	3	0	0	0	0	4	3	5	0	2yr	3	1	0	0	5	2	1	0	0	1	3	3	3	2	3	4	4	2	2	1	1
30	47	1	2	1	1	0	0	6	0	4	6	5	0	0	1	0	0	1	3	5	1	0	0	1	1	2	3	0	nil	4	3	0	8	0	1	1	3	2	3	1	3	3	2	3	3	1	2	2	0	0
31	41	1	4	1	3	1	1	1	1	3	1	1	0	1	1	0	0	1	3	3	0	1	0	1	1	2	3	1	2yr	3	2	1	7	7	1	1	0	0	3	3	3	2	4	3	4	4	2	2	1	1
32	41	2	2	1	3	1	1	7	0	4	6	5	0	0	1	0	0	1	3	5	0	0	0	1	1	2	2	0	8y	3	1	1	1	1	0	1	6	1	2	1	3	3	5	3	4	4	1	2	1	0
33	38	1	3	1	1	1	1	7	1	3	5	2	0	1	1	0	0	1	3	5	0	1	0	0	4	3	5	0	2yr	3	2	0	1	1	0	1	3	2	3	1	3	1	4	3	4	3	2	2	1	1

Group	Parameter	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Present	Onset	1	5	1	2	2	4	2	5	1	2	2	4	5	5	2	5	1	1	4	2	4	1	2	4	2	5	4	4	4	5	1	5	2
	Degree	2	4	3	2	1	1	1	4	2	1	2	3	4	4	1	4	3	1	3	3	2	1	3	2	3	4	3	3	3	4	3	4	3
	Site	1	6	5	1	5	1	1	6	5	2	5	5	6	6	1	6	1	1	5	5	5	5	5	5	5	6	1	5	1	6	1	6	5
	Inter menstrual bleeding	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Present	Duration	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1	4	4	4	4	4	4	1
	Amount	5	5	5	5	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	1	5	5	5	5	5	5	1
	Clots	2	2	2	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	2	0
	Consanguineous	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Contraceptive history	2	2	2	0	1	0	2	2	3	1	3	0	2	2	2	2	1	2	2	0	1	2	0	2	1	2	2	2	2	2	2	0	2
	Duration of pregnancy	1	1	4	1	1	1	1	1	5	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	4
	Abnormalities in antenatal period	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	2	1	1	1	2
	Nature of labour	1	1	2	1	1	1	1	1	4	1	4	1	1	1	2	1	1	1	3	2	1	1	2	1	2	1	1	2	2	1	1	2	2
	Puerperal period	1	1	1	1	1	1	1	1	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Condition of the baby	1	1	1	1	1	1	1	1	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
General examination	BP	130/80	110/80-	122/72	138/80	140/70	120/70	110/70	130/80	110/82	100/70	126/84	110/70	150/90	140/90	126/70	100/60	100/68	130/90	130/90	130/80	150/100	130/78	120/80	120/80	110/70	130/80	130/70	128/80	120/90	138/90	130/80	100/70	112/78
	Pulse rate	78	68	72	74	72	78	74	88	72	70	72	74	72	82	78	72	68	70	70	82	72	72	74	72	74	72	76	72	76	74	78	72	70
	Body built	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2	1	2	2	3	3	2	2	3
	Ht.	155	150	165	162	165	158	162	160	158	156	160	160	162	158	152	160	158	160	160	162	150	152	154	155	162	158	150	160	163	144	161	152	158
	Wt.	60	50	69	75	60	60	64	65	57	55	60	58	62	62	55	58	58	45	4	60	58	59	58	59	62	48	48	60	75	60	64	57	75
	Breast examination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Systemic examination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ashtasthana pareeksha	Nadi	5	3	4	3	5	1	6	3	2	4	3	5	3	4	2	3	6	4	4	3	2	1	5	2	5	3	4	5	4	3	5	2	6
	Mutra	2	3	2	2	3	4	3	4	4	5	2	3	2	1	4	5	4	3	3	4	5	4	3	4	3	4	5	3	3	5	3	1	4
	Mala	3	4	1	3	2	5	4	2	3	2	3	4	5	2	6	6	3	1	1	3	3	3	2	3	4	5	3	4	4	2	3	2	2
	Jihwa	1	3	4	5	3	1	5	5	4	3	1	2	4	3	3	3	5	2	5	2	4	5	5	2	2	4	2	2	4	4	4	2	4
	Sabda	4	2	3	2	4	1	1	3	5	4	4	6	3	5	2	4	2	4	6	3	2	4	4	2	5	3	4	5	2	3	2	4	2
	Sparsa	3	5	5	3	2	3	2	1	1	4	5	3	3	4	4	2	6	6	4	3	2	1	2	4	2	2	4	5	2	3	5	5	6
	Drik	2	3	2	3	3	1	6	5	2	2	2	1	3	4	2	1	2	5	4	6	4	1	1	2	2	1	5	2	3	5	4	2	3
	Akriti	5	1	1	2	3	4	6	4	2	4	3	3	2	2	2	1	1	4	4	4	2	4	3	2	2	3	3	2	4	6	5	2	5
Dasa vidha pareeksha	Dushya	3	2	3	2	3	2	2	2	2	2	3	3	3	3	3	3	3	3	2	2	2	3	3	2	3	3	3	3	3	2	2	2	3
	Desa	2	1	2	3	2	3	1	3	1	2	1	3	1	2	3	2	1	1	1	2	3	1	2	3	1	2	2	3	3	1	1	3	2
	Bala	1	3	1	3	2	1	3	3	2	1	3	1	3	1	2	3	1	2	2	3	2	1	1	2	2	3	2	2	1	3	1	2	1
	Kala	3	5	2	1	3	4	2	3	6	1	2	3	5	4	1	5	6	3	2	6	1	5	3	4	2	2	6	4	1	2	4	6	4
	Anala	3	3	3	3	3	1	2	3	1	3	3	1	1	3	1	1	3	3	2	3	3	3	2	3	1	1	3	3	3	3	3	1	3
	Prakrithi	5	3	4	3	3	1	6	3	2	4	3	5	3	4	2	3	6	4	5	3	2	1	5	2	5	3	4	5	4	3	5	2	6
	Vaya	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Satwam	1	3	1	3	1	1	3	1	1	3	1	3	1	3	3	1	2	2	1	3	1	2	1	3	1	1	3	2	1	3	1	1	2
	Satmya	1	3	1	1	3	1	1	3	1	1	3	3	1	1	3	3	3	3	1	3	1	1	1	1	3	2	3	1	1	2	3	2	3
	Ahara	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Urethra	1	1	1	1	1	1	1	1	5	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Vulva	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Labia	1	1	1	1	1	1	1	1	3	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Cystocele	0	0	0	1	1	0	0	0	2	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Rectocele	0	0	0	0	0	0	0	0	2	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Prolapsed of uterus	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	If present, the degree	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vagina	Discharge	1	1	1	0	0	0	0	0	2	1	2	0	0	0	1	0	0	0	0	0	1	1	0	0	0	1	0	1	1	1	1	1	0
	If present- colour	1	1	1	7	7	7	7	7	6	1	6	7	7	7	1	7	7	7	7	7	2	1	7	7	7	1	7	1	1	1	1	1	7
	Amount	2	1	2	5	5	5	5	5	4	2	4	5	5	5	2	5	5	5	5	5	2	1	5	5	5	1	5	2	1	2	1	3	5
	Consistency	2	1	3	8	8	8	8	8	7	3	7	8	8	8	3	8	8	8	8	8	3	2	8	8	8	2	8	5	5	3	2	5	8
	Vaginitis	0	0	1	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0
	Abnormal growth	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

No.	Cervix									Uterus					Treatment given	Bleeding	Amount	Duration	Interval	Pain with menstruation	Lower abdominal pain	Heaviness of abdomen	Feeling of lump	Dyspareunia	Vaginal discharge	Low back ache	Associated symptoms, if any	USG				Blod test					
																												BT				AT				BT			AT	
	Position	Size	Cervical os	Cervicitis	If present	Erosion	If present	Degree	Presence of abnormal growth	Size	Direction	Mobility	Consistency	Any abnormal growth														Size	Number	Size	Number	Hb%	BT	CT	Hb%	BT	CT
1	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	7	4	4	3	2	0	0	0	0	0	0	0	2.9x1.1cm	2	3.2x0.6cm	1	12	3	7	10	2	7
2	2	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	3	3	0	0	0	0	0	0	0	0	1.5cm, 2.5cm	3	2.5cm, 3.2cm	3	12	3	5	12	3	6
3	3	1	1	0	4	0	6	4	0	1	1	1	1	0	5	7	4	3	3	2	0	0	0	1	1	1	0	2.9cm, 9mm	2	2.7 x1.2cm,	3	11	2	7	10	2	7
4	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	2	3	0	0	0	0	0	0	1	0	1.1x1cm	1	nil	0	10	2	7	10	2	7
5	2	1	1	0	4	0	6	4	0	1	1	1	1	0	5	7	4	3	1	2	0	0	0	0	0	1	0	1.2x1cm	1	0.9x0.6cm	1	12	1	6	12	3	6
6	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	2	3	3	1	0	0	0	0	1	0	2.2cm	1	1.4cm	1	12	2	7	11	2	7
7	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	3	3	1	0	0	0	0	0	1	0	2.8x2cm, 3.5x2.3cm, 2.4x1.4cm	3	.6x2.1cm, 3.2x2cm, 2.4x1.8cr	3	13	5	7	12	2	7
8	1	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	3	3	0	0	0	0	0	0	0	0	2.8x2.3cm	1	2.1x2cm	1	12	3	7	12	3	7
9	4	4	4	2	3	2	5	5	5	3	3	4	4	2	5	7	1	4	4	1	0	0	0	2	0	0	0	1.4x1cm, 1.1x0.8cm	2	1x0.9cm, 0.7cm	2	12	3	7	12	3	6
10	3	1	1	0	4	1	1	1	0	1	1	1	1	0	5	6	3	3	3	0	0	0	0	0	0	0	0	4x4cm, 2x1cm	2	3.2x3cm, 1x1.2cm	2	12	3	6	12	3	7
11	4	4	4	2	3	2	5	5	5	3	3	4	4	2	5	2	3	4	4	1	1	1	0	2	0	0	0	1.8x1.5cm, 1.7x2cm, 2x2.3cm	3	.6x1.1cm, 1.4x1cm, 2.1x2.1cr	3	9	3	6	10	3	7
12	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	1	4	4	3	1	0	0	0	0	0	0	0	4x3.5cm	1	3.3x3.5	1	11	2	6	10	2	6
13	3	1	2	0	4	0	6	4	0	1	2	1	1	0	5	2	3	5	4	0	0	0	1	0	0	0	0	x2.6cm, 0.6cm	2	3.2x2.5cm, 1.1cm	2	11	2	6	11	3	7
14	2	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	3	3	0	0	0	0	1	0	0	0	2.4cm, 1.5cm, 2.5cm	3	2.5cm, 1.5cm, 3.2cm	3	9	2	7	8	1	7
15	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	2	3	4	3	0	0	0	0	0	1	0	0	1.8x1.7	1	1.6x1.7cm	1	10	3	6	10	2	6
16	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	3	3	0	0	0	0	0	0	0	0	3x2.9cm	1	2.5x2.8cm	1	10	2	7	9	2	7
17	2	1	2	0	4	1	1	2	0	1	2	1	1	0	5	6	3	1	1	0	0	0	0	0	0	0	0	2.8x3.2cm, 3.1x3.4cm	2	2.5x 2.2cm, 2.9x3.2cm,	2	12	3	6	12	2	7
18	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	1	4	4	3	0	0	0	0	0	0	0	0	2.4cm	1	1.8cm	1	11	4	6	10	2	7
19	3	1	2	0	4	0	6	4	0	1	2	1	1	0	5	6	3	3	3	0	0	0	0	0	1	0	0	4cm, 1.8cm, 1.38cm	3	4.1cm, 1.8cm, 1cm	1	8	3	7	8	3	7
20	3	1	1	0	4	0	6	4	0	1	1	1	1	0	5	6	3	3	3	1	1	1	0	0	0	1	0	0.6cmm, 0.6cm, 0.9cm, 0.9cm	4	0,6cm, 0.6cm, 1.1x1.1cm	3	10	1	7	10	1	7
21	3	1	2	0	4	1	1	2	0	1	1	1	1	0	5	6	3	3	3	1	0	0	0	0	0	0	0	1.3cm	1	0.9cm	3	10	2	8	10	2	7
22	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	1	2	2	0	0	0	0	0	0	0	1.5x1.9cm	1	1cm	1	12	2	8	12	2	8
23	3	1	1	0	4	0	6	4	0	1	1	1	1	0	5	1	4	3	3	1	0	0	0	0	0	1	0	2.6cm	1	2.8cm	1	10	3	7	10	3	8
24	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	3	3	1	0	0	0	0	0	0	0	2.8x2.9cm	1	2.2x2.1	1	11	3	7	11	3	8
25	3	1	1	0	4	0	6	4	0	1	1	1	1	0	5	2	4	3	3	0	0	0	0	0	0	0	0	1.6x1.8cm, 2.2x2.5cm, 2.8x3.5cm	3	1.7cm, 2.2x3cm, 2.5cm	3	12	3	6	9	3	9
26	2	1	2	0	4	0	6	4	0	1	2	1	1	0	5	1	4	3	3	2	0	0	1	0	0	0	0	2x1.9cm, 1.3x1.4cm, 1.2x1.3cm	3	2.3x1cm, 1x1.1cm, 1.1x1.4cm	3	10	4	6	11	4	6
27	1	1	2	0	4	0	6	4	0	1	2	1	1	0	5	1	4	2	3	1	0	0	0	0	0	1	0	1.5cm, 9mm	2	2.1x1.2cm, 1.3cm	2	11	3	6	11	3	7
28	3	1	1	0	4	1	2	1	0	1	1	1	1	0	5	7	3	4	3	0	0	0	0	0	0	0	0	1cm	1	0.8cm	1	9	2	5	11	2	7
29	3	1	1	0	4	1	1	2	0	1	1	1	1	0	5	6	3	3	3	0	0	0	0	0	0	0	0	2.8x2.3cm	1	1cm	1	11	4	8	12	4	6
30	3	1	2	0	4	0	6	4	0	1	1	1	1	0	5	6	3	3	3	0	0	0	0	0	1	0	0	2.2x1.7cm, 2.7x2.1cm, 1.4x1.8cm	3	2.2x3.1cm, 1.7x1cm, 2x1.6cm	3	10	2	7	11	2	4
31	2	1	2	0	4	0	6	4	0	1	2	1	1	0	5	1	4	3	3	0	0	0	0	0	1	0	0	3.5x2.9cm	1	2.2x2.4cm	1	10	3	6	11	3	7
32	2	1	1	0	4	0	6	4	0	1	2	1	1	0	5	7	3	3	3	0	0	0	0	0	0	0	0	2.2cm	1	3.6x3.2cm	1	10	2	7	9	2	6
33	2	1	2	0	4	0	6	4	0	1	2	1	1	0	5	6	3	3	3	2	1	0	0	0	0	1	0	0.8cm	1	1cm	1	9	2	7	11	2	7

EFFICACY OF VYAGHRIVARUNADI QWADHA AND KANCHANARAGULGULU IN COMPARISON WITH TRAYANTYADI QWADHA AND KANCHANARAGULGULU IN UTERINE FIBROID (ANUKTHAVYADHI) – A RANDOMISED CONTROL TRIAL

THESIS

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Summary

In the chapter introduction comprising of a brief explanation of uterine fibroid and its Ayurvedic perspective. In Ayurveda there is no direct correlation about uterine fibroid. Tumors can be considered as Grandhi in Ayurveda. Yonirogas having the symptoms of uterine fibroids are mentioned in this chapter. Short description about Vyaghrivarunadi qwadha, Trayanthyadi qwadha, Kanchanaraguggulu and Randomized control trial were also be given. Aims and objectives of the study and chapter wise classifications are mentioned in this chapter.

Review of literature includes Ayurvedic perspective of uterine fibroid, modern aspect of uterine fibroid and drug review. Ayurvedic descriptions about Arbuda, Grandhi, Arthavadushti are also included in this chapter. Explanations about Yonirogas which are having asrgdara and arthavasula as symptoms such as Vatiki, Udavartha, Asruja, Rakthayoni and Jathaghni were also mentioned in literary review. Descriptions of uterine fibroid such as its etiology, classification, clinical features, complications and management both medical and surgical were included in the chapter Uterine fibroid. In drug review descriptions about Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanara gulgulu were included.

In the chapter methodology explanations about the study was given. Implemented study design was Randomised control trial. In this study as per the statistical calculation total number of patients were 170. After drop outs of five patients, 33 patients were allocated in each group. A combination of Vyaghrivarunadi qwadha and Kanchanaragulugulu was administered in Group A , Trayantyadi qwatha & Kanchanaraguggulu in Group B, Vyaghrivarunadi qwadha in Group C Thrayanthyadi qwadha in Group D and Kanchanara guggulu in Group E were administered respectfully for three months with follow-up every month.

Observation analysis was done and explained under two headings - descriptive statistics and inferential statistics. Descriptive statistics contains observations regarding demographic data, symptoms related to Arthava, Obstetric History, Dasavidha pareeksha, Ashtasthana pareeksha etc. Inferential statistics provides the data on study variables during the assessment period.

In the present study majority of the patients are included in the age group of 35-50. Majority of the cases included under symptomatic varieties.

Regarding arthavapravritti, 51.5% in group A, B & E had achieved normal bleeding. In group C 27.3% and in group D 45.5% had normal bleeding. Deerghakalanubandhi arthavarakthasrava persists only few patients. 9.1% in group A & C, 6.1% in group B, 12.1% in group D and E had Deerghakalanubandhi arthavarakthasrava present after treatment. On statistical analysis there was statistically significant difference observed in Group. A. The treatment in the group C does not influence the symptoms of arthavarakthasrava. In other groups such as B, D & E the

bleeding was reduced slowly during the third assessment. This indicates that the medicines in the group A ie. Vyaghrivarunadi qwadha along with Kanchanaraguggulu give better result than other groups. On group wise comparison between first and second & second and third assessments shows that all the groups got equal result during the first, second and third assessment.

Kaphavatahara property of Kanchanara guggulu and Vyaghrivarunadi qwadha help to stop the growth of garbhasayagrnadhi. Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela, help to normalize the function of apanavata and maintain the circulation there by achieved normal bleeding after treatment. Chedana property of maricha, bhedana property of varuna, bibhitaki, medohara property of guggulu help to reduce the growth of uterine fibroid or garbhasaya grandhi there by reduce the complication of arthavadushtis.

On evaluating the amount of arthavarakthasrava after treatment, moderate menstrual bleeding present for 72.8% in group A, 69.7% in group B and in group C, 81.8% in group D and 66.7% in group E. On statistical analysis, group A showed statistically significant result after treatment than other groups. Group wise comparison was done between first & second assessment and second & third assessment and showed that Kanchanaraguggulu gulika had a significant impact on menstrual bleeding in comparison with other groups during the second and third assessments.

Kaphapittahara property of Trayanthyadi qwadha help to maintain the size of Garbhasyagrandhi. Almost all drugs in Trayantyadi Kashayam have garbhasayasankocha, bhedana, lekhana, raktha prasadana properties which help in

hethu vipareetha chikitsa. These reduce pelvic congestion, reducing the stasis and dilatation of various blood vessels draining the endometrium. Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara, ela, rakthaprasadana property of madhuka help to normalize the function of apanavata and maintain the circulation there by achieved normal arthavarakthasrava after treatment. Chedana property of maricha, bhedana property of varuna, bibhitaki, kaduka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain the size of uterine fibroid or garbhasayagrandhi there by reduce the complication of arthavadushtis.

In terms of the duration of menstrual bleeding, 54.5 % reported 4-5 days duration in group A, 42.4% in group B, 60.6% in group D. In group C & in group E 60.6% had observed 5-6 days menstrual bleeding . Statistical analysis was done to find out the mean score for the symptom of duration of menstrual bleeding and difference in mean scores and found that all the groups had normal menstrual duration after treatment. On group wise comparison, no difference was found in all the five groups. This suggests that the drugs in all the five groups had an effect of normalising the duration of menstrual cycle.

On assessing the interval of arthavapravrithi most of the patients had normal 25-30day cycle before treatment. Only few patients had >35days bleeding interval. 6.1% in group A, 3% in group B,C&D, 9.1% in group E. After treatment only 3% had an interval of > 35days .

On assessing the interval of arthavapravrithi after treatment, normal 25-

30days cycle was found for 48.5% in group A, 78.8% in group B, 63.6% in group C, 72.7% in group D and 81.8% in group E. On statistical analysis, all the five groups got equal result in normalising the interval of menstrual cycle. Group wise comparison between first & second assessments and second & third assessments using one way ANOVA test and got equal result in all the five groups in all the comparisons. This indicates that the medicines used in all the five groups had equal result in normalising the interval of menstrual cycle.

Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara and ela, rakthaprasadana property of madhuka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain arthavapravritti with normal duration and interval during the treatment period in all the five groups.

Krichrartava

Artavasula present for majority of patients in all the groups before treatment. After treatment artavasula was found to be absent in 30.3% in group A, 54.5% in group B, C and D, and in group E the symptom artavasula was absent for 51.5% of cases. In the first group 9.1% were asymptomatic. That might be the reason for the result of only 30.3% reduction in the symptom artavasula. On statistical analysis . Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika, Thrayanthyadi qwadha along with Kanchanaraguggulu gulika, Vyaghrivarunadi qwadha alone, Thrayanthyadi qwadha alone and Kanchanara guggulu gulika alone produced significant change during second assessment, while there was no significant change afterwards till the third assessment.

In group wise comparison regarding krichrartava all the groups got equal result in all the comparisons.

Doshanulomana property of harithaki, nagara, deepana & pachana property of nagara, maricha, pippali, varuna, ela in Kanchanaraguggulu gulika, anulomana property of harithaki & nagara, deepana property of trayanthi & katuka, virechana (pakwasayasuddhi kara) property of trivrith & padolamula in Trayanthyadi qwadha, deepana & pachana property of vyaghri, varuna, sigru & nagara, Doshanulomana property of nagara & punarnava help to reduce avarana of apanavata. For alleviating srotho vaigunya, kaphamedohara yoga is required. All the yogas used in this study are having the property of kaphamedohara which would create srothosudhi should rectify vatavaigunya there by arthavasula reduced.

Vastisula (Lower abdominal pain)

Vastisula absent after treatment for 75.8% in group A, B, & in group C. For 93.9% in group D & 87.9% in group E had no udarasula after treatment. On statistical analysis The result shows that the Trayanthyadi qwadha alone and Kanchanara guggulu gulika alone slowly reduce vastisula during third assessment than second assessment. Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika, Vaghrivarunadi qwadha alone in group A & C help to reduce the symptom vastisula slowly. Thrayanthyadi qwadha along with Kanchanaraguggulu gulika in group B , doesnot produce any significant change during the assessment period. In group wise comparison significant change occurs to the vastisula in the group E (Kanchanara guggulu) comparing to other groups during first and second assessments.

Vatakaphahara, chedana, bhedana & medohara properties of Kanchanara guggulu may reduce garbhasayagrandhi and there by normalize the rakthachamkramana through Garbhasaya siras. It is predominantly a kaphamedohara yoga that would create srothasudhi and would rectify vata vaigunya. These functions of Kanchanaraguggulu gulika help to reduce vastisula more than that of other yogas and combinations which occurs due to garbhasayagrandhi.

Katisula

On going through the assessment of katisula after treatment, the symptom was absent for 87.9% in group A, 81.8 in group B, 78.8% in group C and 72.7% in group D & E. On statistical analysis regarding katisula Trayanthyadi qwadha along with Kanchanaraguggulu gulika, Trayanthyadi Kashaya alone and Kanchanara guggulu gulika alone doesnot produce any significant change during the assessment period. Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha alone help to reduce katisula (low back pain) slowly & both will help to reduce the katisula significantly.

Vatakaphahara, chedana, bhedana, medohara, anulomana & sodhahara properties of Kanchanara guggulu and raktaprasadana, bhedana and vatakaphahara, sodhahara, & anulomana, properties of Vyaghrivarunadi qwadha help to reduce garbhasayagrandhi there by normalize the circulation through the garbhasaya siras there by decrease the upadravas like katisula.

Udaragurutvam (Abdominal heaviness)

On going through the assessment of udaragurutvam (heaviness of abdomen)

after treatment, the symptom was absent for 90.9% in group B, C & D , in group A 84.8% and in group E 93.9% had absent the same. Vyaghrivarunadi qwadha along with Kanchanaraguggulu gulika in group A helps to maintain the symptom udaragurutvam as such. Thrayanthyadi Kashaya along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha help to reduce the udaragurutvam slowly, Thrayanthyadi qwadha alone and Kanchanara guggulu gulika alone will help to reduce the symptom udaragurutvam during second assessment than third assessment

While assessing the result of udaragrandhi (feeling of lump in the abdomen) after treatment, the symptom was absent for 90.9% cases in group A 93.9% in B, D &E and in group C for 97% . On analysing statistically Vyaghrivarunadi along with Kanchanara guggulu gulika, Thrayanthyadi qwadha along with Kanchanaraguggulu gulika, Thrayanthyadi qwadha alone and Kanchanara guggulu gulika alone does not produce significant change in the symptom udaragrandhi. Thrayanthyadi Kashaya and Kanchanara guggulu gulika in group C helps to maintain udaragrandhi (the feeling of lump) as such. When group wise comparison was conducted, there was equal result in all the five groups in all the comparisons.

Prathiloma gati of apana vayu also causes gulma in mahasrotas leading to udargurutwam and udaragrandhi. Vatakapha samana and anulomana property of drugs in all the groups might have helped in maintaining the symptoms.

Maidhunasula (Dyspareunia)

On going through the result of maidhunasula, the symptom was absent. In group maidhunasula was absent for 93.9& in A, B & C and 81.8% in group D and

87.9% in group E. On statistical analysis, This indicates that the consumption of Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha alone will helps to maintain the symptom of maidhunasula without any increase . Trayanthyadi qwadha along with Kanchanara guggulu gulika produced significant change in the symptom maidhunasula during the second comparison, while there was no significant change afterwards till the third assessment. Trayanthyadi qwadha alone and Kanchanara guggulu gulika alone also help to maintain the symptom of Maidhunasula without any increase.

In group wise comparison, all the five groups got equal result in all the comparisons.

While assessing the result of yonisrava after treatment, it was absent for 100% in group B . In group A & D yonisrava absent for 93.9% and in group C the symptom was absent for 97% and in group E 84,8%. Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha alone, Thrayanthyadi qwadha alone and Kanchanara guggulu gulika alone help to maintain the symptom of yonisrava without any increase . Thrayanthyadi qwadha along with Kanchanara guggulu gulika in group B, produced significant change in the symptom yonisrava during the second comparison, while there was no significant change afterwards till the third assessment. In group wise comparison, significant change occurs to vaginal discharge in the second group comparing to other groups during first and second assessment.

Bleeding time, Clotting time and Haemoglobin level

The effect of drugs in each group in bleeding time and clotting time was

analysed using ANOVA test and Paired sample T test. After assessment of clotting time and bleeding time by Anova test, the result indicated no significant difference before the treatment and after in all the five groups. The difference with in the same group was analysed using Paired sample T test and was not significant before and after treatment in the same group. This indicates that there was no effect on bleeding time and clotting time by using the five different types of drugs.

Haemoglobin

The effect of drugs of each five groups on Haemoglobin before and after treatment was analysed. In Paired sample T test no significant difference was observed before and after treatment in the same group. Therefore, there was no effect of all the 5 drugs on the level of Haemoglobin.

Vitiation of Vata, Pitta and Raktha are the causative factors of Asrugdara having the symptom of arthava rakthathipravritti. Medicines having rakthasthambhana property should be used for rakthapradara or asrgdara . One of the complaint of Uterine fibroid (Garbhasaya grandhi) is rakthathisrava. Pitta dushta raktha is said to be askandhi ie. does not clot easily and Kapha dushta raktha is having picchila (viscous) and tantumath(contains clot). The ingredients in all the drugs used in this study (Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanra guggulu) are having the property of Vatakaphahara rather than Pittasamana. So there is no change occurs to the bleeding time and clotting time after treatment.

Comparison and efficacy of treatment in Uterine fibroid

The size and number of fibroids were assessed after three months of

treatment in all the five groups using Kruskal-Wallis test, Anova test and Wilcoxon Signed Ranks Test.

The number of fibroids were analysed using **Kruskal- Wallis test** and it was statistically insignificant in all the five groups . This result indicates that the medicines in all the five groups maintain the number of fibroid as such without any increase.

Anova test was used to analyse the differences in the size of fibroids between the five groups and was statistically insignificant. This indicates that no significant change was observed in the size of fibroid before and after treatment in all the five groups.

Wilcoxon Signed Ranks Test was used to analyse the effect of five different combinations of drugs on the number of fibroid in each group. In all the groups except in group C, the difference in number of the fibroid was observed as statistically insignificant. In group C the difference in number of the fibroid was found to be statically significant. This indicates that the drug Vyaghrivarunadi qwadha in the third group produce good result in reducing the number of fibroid comparing to other groups.

Considering the Kapha predominant nature of granthi ie; snigdham, mahantham, anarthi, kadhinam, chirabhivridhi etc and its nature of grathanata along with the need of alleviating srotho vaigunya, a kaphavatahara yoga predominantly kaphamedohara yoga that would create srothasudhi and would rectify vata vaigunya were used. kanchanara which is kashaya rasa and samgrahi, which would reduce snigdha kathina nature of granthi along with trikatu and varuna that are katu rasa pradhana which would give srotho visudhi is selected.

Pittakaphahara yoga which is having the property of rakthaprasadana has needed. For this Trayanthyadi qwadha is used. The ingredients are Kaphapittahara dravyas predominantly *Masura* which is madhura rasa, samgrahi, sita virya and raktha prasadana.

Garbhasaya grandhi is a vatakapha predominant disease. The drug given in the C group was Vyaghrivarunadi qwadha. All the ingredients of this qwadha is having the property of Vata kapha samana. Deepana, pachana, lekhana, bhedi and shodhahara property are helpful to reduce Vata kapha. Varuna indicated for vidhradhi and sigru is having the property of medohara. Varuna is katu rasa pradhana which would produce srotho visudhi. All these properties help to reduce garbhasaya gandhi. Sigru and shundi are having the property of anuloma there by normalize the function of apana vata. The drug given in the C group was Vyaghrivarunadi qwadha only and it may act with these properties hence help to reduce the number of fibroid rather than its combination with Kanchanraguggulu, or Trayanthyadi qwadha along with Kanchanara guggulu or the consumption of Kanchanara guggulu alone.

Vyaghrivarunadi qwadha produce good result in reducing the number of uterine fibroids. On statistical evaluation, Vyaghrivarunadi qwadha, Trayanthyadi qwadha & Kanchanara guggulu gulika both in single and in combination form proved to be very effective in reducing the associated symptoms like athyarthava, yonisrava, vastisula, maidhunasula, katisula, udaragurutvam and udaragrandhi.

Conclusion

- On statistical analysis regarding the arthavapravritti, Vyaghrivarunadi qwadha and Kanchanaraguggulu had better result than other groups.
- Kaphavatahara property of Kanchanara guggulu and Vyaghrivarunadi qwadha help to stop the growth of garbhasayagrnadhi. Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela, help to normalize the function of apanavata and maintain the circulation there by achieved normal arthavapravritti after treatment.
- Kanchanaraguggulu gulika in group E, had a significant difference in amount of arthava in comparison with other groups during second and third assessments.
- Grahi property of kanchanara, doshanulomana property of hareethaki, nagara & ela, help to normalize the function of apanavata and maintain the circulation there by achieved normal amount of arthava after treatment.
- In group wise comparison regarding duration, interval of menstrual cycle and pain during menstruation, all the groups produced same result in all the comparisons.
- Grahi property of kanchanara & masura, doshanulomana property of hareethaki, nagara and ela, rakthaprasadana property of madhuka, medohara property of guggulu & sigru, sodhahara property of vyaghri, tarkari and punarnava help to maintain

arthavapravritti with normal duration and interval of artharakthasrava during the treatment period in all the five groups.

- In group wise comparison significant change occurs to the vastisula in the E group (Kanchanara guggulu) comparing to other groups during first and second assessments.
- Kanchanaraguggulu is a kaphamedohara yoga that would create srothasudhi and would rectify vata vaigunya there by reduce udarasula.
- Vyaghrivarunadi qwadha along with Kanchanara guggulu gulika and Vyaghrivarunadi qwadha alone help to reduce katisula (low back pain) slowly & both will help to reduce the katisula significantly.
- Vatakaphahara, chedana, bhedana, medohara anulomana, sodhahara properties of Kanchanara guggulu, Pittakaphasamana property of Thrayanthyadi qwadha along with rakthaprasadana, bhedana and vatakaphahara, sodhahara, & anulomana properties of Vyaghrivarunadi qwadha along with sodhahara, anulomana also help to reduce garbhasayagrandhi there by normalize the circulation through the garbhasaya siras there by decrease the upadravas like katisula. .
- On going through the assessment of udaragurutvam and udaragrandhi after treatment, all the five groups got equal result in all the comparisons.
- Prathiloma gati of apana vayu also causes gulma in mahasrotas

leading to adhmana. Vatakapha samana and anulomana property of drugs in all the groups might have helped in maintaining the symptoms.

- No change in bleeding time, clotting time and level of Haemoglobin with respect to the drugs in all the 5 groups.
- The ingredients in all the drugs used in this study (Vyaghrivarunadi qwadha, Trayantyadi qwadha and Kanchanra guggulu) are having the property of Vatakaphahara rather than Pittasamana.
- On statistical analysis all the five types of medicines had no effect on reducing the size of fibroids.
- As in group C (Vyaghrivarunadi qwadha) the difference in size of fibroid was statistically significant, the Null Hypothesis is rejected and the Alternate Hypothesis "There is significant difference in the efficacy of Vyaghri varunadi qwadha, Trayantyadi qwadh, or Kanchanaraguggulu either in single drug or in combination in uterine fibroid" is accepted.
- Garbhasaya grandhi is a vatakapha predominant disease. The drug given in the C group was Vyaghrivarunadi qwadha. All the ingredients of this qwadha is having the property of Vata kapha samana. Deepana, pachana, lekhana, bhedi and shodhahara property are helpful to reduce Vata kapha. Varuna indicated for vidhradhi and sigru is having the property of medohara. Varuna is katu rasa pradhana which would produce srotho visudhi. All these properties help to reduce garbhasaya Gandhi.

- Hence, this study proved that internal administration of Vyaghrivarunadi qwadha for three months in a dose of 20ml two times daily before food alone is effective in reducing the size of uterine fibroid.

Limitation and reccomendations

1. Usually medication for longer duration is provided in uterine fibroid treatment. In this study duration of treatment is 3months. If the duration of medication had been for 6months or one year it might have had a different impact on uterine fibroid reduction in size and number.

2. There are many limitations in sample collection due to un willingness to consume only the study medicine due to their associated symptoms like heavy bleeding.

3. Internal medicines, along with shodhana karmas such as vasthi, may help to reduce fibroid.