A clinical study on the concept of Anupana

w.s.r. to *snigdhoshnam maarute shastam* in *vataja kasa*

A thesis submitted to

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Under the Board of Ph.D. Studies

Submitted by

Dr. Rajesh Bhat

Under the Guidance of

Dr. Abhijit H. Joshi

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C E R T I F I C A T E

This is to certify that the thesis entitled *"*<u>A clinical study on the concept</u> <u>of Anupana w.s.r. to</u> '*snigdhoshnam maarute shastam*' in *vataja kasa"* which is being submitted herewith for the award of the Degree of Vidyavachaspati (Ph.D.) in <u>Samhita Siddhanta</u> of Tilak Maharashtra Vidyapeeth, Pune is the result of original research work completed by *<u>Dr. Rajesh Bhat</u>* under my supervision and guidance. To the best of my knowledge and belief the work incorporated in this thesis has not formed the basis for the award of any Degree or similar title of this or any other University or examining body upon him.

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I have signed the above undertaking after reading carefully and knowing all the aspects therein.

Signature :

Address : # 3305, Kristal Dolomite, Narayana Nagar,

   Gubbalala, Kanakapura main road, Bengaluru - 62

   Ph. No. : 9900794916

   e-mail : bhatrajeshm@rediffmail.com

Date :

Place : Pune

DECLARATION

I hereby declare that the thesis entitled *"*A clinical study on the concept of Anupana w.s.r. to '*snigdhoshnam maarute shastam*' in *vataja kasa"* completed and written by me has not previously been formed as the basis for the award of any Degree or other similar title upon me of this or any other Vidyapeeth or examining body.

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Signature of the Research Student

Place: Pune

Date:

ACKNOWLEDGEMENT

ABSTRACT

Background of the Study :-

       Anupana is a substance, which is taken along with or after the intake of *oushadha* or *aahaara dravya*. It helps not only for the palatability but mainly for carrying the *oushadha dravya* to the target place by which it increases its bioavailability and facilitates easy absorption. In present era, majority of the doctors do not follow the specific Anupana which is mentioned in the classics. Hence this research is undertaken to study the concept of Anupana and to emphasize its role in *chikitsaa* w.s.r. to *taila* as Anupana in *vataja kasa.*

Aim of the Study :-

- To study the role of *snigdhoshna* Anupana in *vataja kasa.*

Objective of the study :-

- To study on the concept of Anupana

Research design :-

A Comparative Single Blind Clinical Study with pre and post design.

Clinical study -

       All the diagnosed patients of *vataja kasa* were made into three groups consisting of 100 patients in each group. They are administered *Duraalabhaadi yoga* along with *tila taila, ushna jala* and *jala* as Anupana respectively to evaluate the efficacy of the Anupana and the drug clinically.

Sources of the patients -

       Patients who fulfill the diagnostic criteria were taken from OPD, IPD and special camps conducted in and around SDM college of Ayurveda and Hospital, Hassan were selected for the study.

Method of collection of data -

- Patients suffering from *vataja kasa* belonging to either sex were selected by lottery method and made into three groups.
- Informed consent was obtained before study.
- Patients were studied with a detailed case-sheet proforma prepared for the study.

Diagnostic criteria -

- *Shushka kasa* more than one day

- *Kapha shushkata* more than one day

- *Alpa kaphata* which comes out with *krucchrata* more than one day

- *Ura shoola/Hrut shoola* due to excess *kasa* more than one day

- *Parshwashoola* more than one day

- Raised Absolute Eosinophil Count (AEC) above 400 cells/mm^3

Inclusion Criteria -

- Individuals coming under diagnostic criteria were selected

- Individuals of either sex between the age group of 31-60 years were selected

Exclusion criteria -

- Individuals with other systemic disorders like cardiac disorders etc that interfere the course of study were excluded

- Eosinophilia with other respiratory problems like Bronchial asthma etc. were excluded

Sampling method -

- Patients of *vataja kasa* were selected randomly by lottery method and made in to three groups.

Investigations -

- Absolute Eosinophil Count

- Blood Routine wherever necessary

- Erythrocyte Sedimentation Rate wherever necessary

- Chest X-ray wherever necessary

Intervention –

Patients of *vataja kasa* were made into 3 groups named as group A, B and C, consisting of 100 patients each and administered with 4 gms of *Duraalabhaadi yoga*

after food along with 8ml of *tila taila*, 30ml of *ushna jala and jala as* Anupana respectively.

Results :-

The study showed that both group A and B showed statistically highly significant in *shushka kasa vega, hrutshoola, paarshwashoola, shirashoola, shankhashoola,* AEC, *nirghosha, swarabheda, deenata* and *mahavega.* Apart from these symtoms, group A also showed statistically highly significant in *kaphashushkkata, alpa kaphata, kaphakrucchrata,shushka kanta* and *dourbalya.* Clinically group A showed good results when compared to other two groups.

Interpretation and Conclusion :-

Based on literary aspect of the present study, Anupana denotes both *Pashchaatpana* and *Sahapana* and based on clinical study, *snigdhoshna* Anupana helps to cure the *Vataja kasa*.

Keywords :-

- Anupana

- *Tila taila*

- *Vataja kasa*

- Eosinophilia

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Abbreviations

Sl. No.	Abbreviations	Long form
1.	Sl. No	Serial Number
2.	Vol	Volume
3.	C.S	*Charaka Samhitaa*
4.	S.S	*Sushruta Samhitaa*
5.	A.Hr	*Ashtaanga Hrudaya*
6.	A.S	*Ashtaanga Sangraha*
7.	B.S	*Bhela Samhitaa*
8.	K.S	*Kaashyapa Samhitaa*
9.	H.S	*Haareeta Samhitaa*
10.	Y.R	*Yoga Ratnaakara*
11.	B.P	*Bhaava Prakaasha*
12.	Sha.S	*Shaarangadhara Samhitaa*
13.	M.N	*Maadhava Nidaana*
14.	D.G.S	*Dravya Guna Sangraha*
15.	M.V	*Madana Vinoda*
16.	G.N	*Gada Nigraha*
17.	V.S	*Vanga Sena*
18.	M.D.G	*Maadhava Dravya Guna*
19.	K.D.N	*Kaiyyadeva Nighantu*
20.	D.N	*Dhanwantari Nighantu*
21.	R.N	*Raja Nighantu*
22.	B.P.N	*Bhaava Prakaasha Nighantu*
23.	D.G.H	*Dravya Guna Hastaamalaka*
24.	M.P.N	*Madanapaala Nighantu*

25.	A.K	*Aananda Kanda*
26.	A.D	*Anupana Darpana*
27.	A.M	*Anupana Manjari*
28.	A.P	*Ayurveda Prakaasha*
29.	A.Ko	*Amara Kosha*
30.	S.K.D	*Shabda Kalpa Druma*
31.	Vacha	*Vaachaspatyam*
32.	V.S.S	*Vaidyaka Shabda Sindhu*
33.	S.K	*Shbdaartha Koustubha*
34.	C.C.V.K	*Choukambha Chikitsa Vijnana Kosha*
35.	S.Ou.S.Sa	*Shaaligraama Oushadha Shabda Saagara*
36.	B.R	*Bhaishajya Ratnaavali*
37.	AEC	Absolute Eosinophil Count
38.	w.s.r.	With special reference

Abbreviations for Sanskrit words :

च – Charaka

सु – Sushruta

अ.सं. – Ashtaanga Sangraha

अ.हृ. – Ashtaanga Hrudaya

भे – Bhela

का – Kaashyapa

हा – Haareeta

यो.र. – Yoga Ratnaakara

भा.प्र. – Bhaava Prakaasha

शा – Shaarangadhara

मा.नि. – Maadhava Nidaana

भै.र. – Bhaishajya Ratnaavali

श.कौ. – Shabdaartha Koustubha

श.क.द्रू. – Shabda Kalpa Druma

रस.तरं. – Rasa Tarangini

मा.द्र.गु. – Maadhava Dravya Guna

रा.नि. – Raja Nighantu

द्र.गु.सं. – Dravya Guna Sangraha

म.वि. – Madana Vinoda

कै.नि. – Kaiyadeva Nighantu

आ. प्र. – Ayurveda Prakaasha

भा.प्र.नि.– Bhaava Prakaasha Nighantu

वं.से.– Vanga Sena

सू – Sootra Sthaana

नि – Nidaana Sthaana

वि – Vimaana Sthaana

चि –Chikitsaa Sthaana

Key to transliterate :-

a – अ   aa – आ   i - इ

ee - ई   u - उ   oo   - ऊ

INTRODUCTION

"औषधी जाह्नवी तोयं वैद्यो नारायणो हरिः ।"

Ayurveda the indigenous system of medicine is an integral part of Indian culture. Several drugs have been in use for centuries by the ancient *aachaaryaas* for preventing and curing various ailments. The war between health and diseases starts with the onset of Life. Therefore every person needs to be protected from diseases which are manifested by the vitiated *doshaas*, to grow up as a healthy citizen, for which the *doshaas* should be kept in normal conditions.

For the equilibrium of these, Ayurveda explains *dvividhopakramaas* i.e., *oorjaskara* and *roganut*. *Roganut* includes *shodhana* and *shamana chikitsaa*. *shamana chikitsaa* is the one in which the *doshaas* are pacified but will not be expelled from the body, here the *oushadha dravya* is administered with proper Anupana.

Anupana is a substance, which is taken along with or after the intake of *oushadha* or *aahaara dravya*. It enhances the action of *dravya* with which it is administered and thereby achieves the desired effect quickly by carrying the *oushadha dravya* to the target site and thereby increases its bioavailability and facilitates easy absorption. Though the Anupana is administered along with *oushadha* to improve the taste and to mask the bad odour of the *dravya*, mainly given for carrying the essential substance to the target place.

योगमासां तु यो विद्याद्देशकालोपपादितम् ।

पुरुषं पुरुषं वीक्ष्य स ज्ञेयो भिषगुत्तमः ॥ (च.सू.1/123)

By the *yukti* of a *vaidya*, a specific Anupana with specific *dravya* gives specific effect in specific *doshaas* and *rogaas* of a *rogi*. With different Anupana a single *oushadha dravya* can be given in different *rogaas* like *kasa*, *shwasa* and *hikka* to get beneficial effects which emphasize the importance of Anupana.

Uchhwaasa and *nishwaasa* or to say breathing out and breathing in are the continuous phenomenon of life. To and fro movement of air through the *praanavaha srotas* is the vital sign of life, the normalcy of which suggests health. The abnormality in respiration indicates disease, and its cessation marks death. This unique sign of life is affected by the disease *kasa*.

Kasa or Cough is one of the commonest complaints in day to day practice and is also a symptom of various systemic diseases. *kasa*, in Ayurveda is of 5 types. Among them *vataja kasa* though it is not a life threatening, it troubles the person as it hinders the day to day activities. For the same reasons many treatment modalities have been mentioned in Ayurveda in the context of *vataja kasa* to get rid from the problems. *Duralabhaadi yoga* with *tila taila* is one such *yoga* which is administered in this condition as a *shamanoushadha*. By looking in to each constituent of *Duralabhaadi yoga* and the specific Anupana (*tila taila*), it appears that this combination is likely to be very effective in combating the signs & symptoms *vataja kasa*.

Therefore, the present research work entitled "A clinical study on the concept of Anupana w.s.r. to '*snigdhoshnam maarute shastam*' in *vataja kasa*" is planned to evaluate the relative merit of the oral administration of the *Duralabhaadi yoga* with *tila taila* as Anupana based on *Aaptopadesha* and *ushna jala* and *jala* as Anupana to find the role of Anupana.

Review on Anupana

Introduction :-

Ayurveda the science of life explains about the different varieties of treatments. Among them *shamana* is the one, here *oushadha* is administered along with the specific Anupana. The concept of Anupana in Ayurveda is considered to both for the intake of *uoshadha* as well as for *aahaara*. In the classics detailed expaination is given to the concept of Anupana. In this chapter detailed explaination on Anupana is given.

Historical Review :-

A brief review of earlier idea would help in understanding not only the concepts of the Anupana as a whole but also the changing perspective about Anupana in modern times.

Hence it would in a nutshell, give an idea about the long path mankind has traversed in finding benefit of the usage of Anupana.

References of Anupana from various literatures are described in chronological order;

1. *Veda kaala*
2. *Upanishat kaala*
3. *Puraana kaala*
4. *Raamaayana kaala*
5. *Mahaabhaarata kaala*
6. *Samhitaa kaala*
7. *Sangraha kaala*
8. *Madhya kaala*
9. *Aadhunika kaala*

1. Veda kaala :-

The *Vedaa*s are the source of mankind's knowledge and provides comprehensive details of various scientific knowledge.

The reference of the word Anupana is not directly available in Vedic period. But can be traced with the help of different aspects like *aachamana*, the *paana* which is taken for some of the regimens to cure the diseases etc.

The concept of *aachamana* i.e, by making the palm in the form of *gokarnaakaara* and the *jala* is taken till the black gram sinks in it which has to be drink by chanting the *mantra*. In Ayurvedic *granthaas* the concept of *aachamana* is explained in the context of *Dinacharya* that explains *aachamana* should be performed after bath, beginning and at the end of meals etc. so this concept can be equated to the concept of Anupana.

2. Upanishat kaala :-

In the commentary on *Chaandogyopanishat* the word Anupana is available.

3. Puraana kaala:-

In *Agni puraana*, in the context of *Danta swaasthya*, *aahaara dravyaas* is to be consumed along with *sheeta jala*. *Vishnu puraana*, it is mentioned that while consuming *aahaara*, the *jala* has to be taken in between and after the food. In *Garuda puraana*, it has been mentioned that the *shaali tandula choorna* along with *ksheera*. Some other references are tabulated below ;

Table No. 1 - Showing references of Anupana in different *puraana* ;

Sl.No	Oushadha/Aahaara	Anupana/Sahapana	Vyaadhi	Reference
1.	Ashwagandha paaka	Ghrita	Vandhyatwa	Garuda Puraana
2.	Vyosha + Keshara	Ghrita	Vandhyatwa	Garuda Puraana
3.	Shaali tandula choorna	Dugdha	Stanyaalpata	Garuda Puraana
4.	Aamalaki swarasa	Madhu	Pradara	Garuda Puraana
5.	Kaarpaasa moola	Tandulodaka	Pradara	Garuda Puraana

6.	Sharkaraa	Dhaanyodaka	Pitta vruddhi	Brahma Vaivarta Puraana
7.	Aahaara dravya	Sheeta jala	Danta roga	Agni Puraana

4. Raamaayana kaala :-

In *Raavanakruta Madhusheelaa* book there is mentioning of 84 types of *aasavaas*. Same numbers of *aasavaas* which are mentioned in *Charaka Samhitaa* are being used as Anupana *dravya* till today.

5. Mahaabhaarata kaala :-

There is reference in *Mahaabhaarata* which quotes that, when a *raakshasa* by the name *Baataapi* was troubling the people in the form of a *mesha*, that time *Agastya muni* swallowed that *Raakshasa* along with food. After eating, *Agastya muni* felt to take Anupana.

6. Samhitaa kaala :-

i). Charaka Samhitaa -

Aachaarya Charaka has dealt about Anupana in the context of *Annapanavidhi* in *Sutrasthana*. After *krutaanna varga*, in *Aahaaropayogee varga* the detail description of Anupana i.e qualities, mode of action, and selection of specific Anupanaas according to different conditions has been dealt. The action of Anupana is related in accordance with the *Aahaara upayogita*. In another context, *Aachaarya* described Anupana for different diseased conditions like *sthoulya*, *tandraa* and *alpaagni* etc. If specific Anupana is not mentioned for a particular *dravya* or a *roga* then, one should choose Anupana according to *desha* and *kaala.* From the lists of 84 *Aasavaas* and other *Peyaas* like *Jala* are advised to be evaluated and then considered for administration.

ii). Sushruta Samhitaa-

Aachaarya Sushruta has described Anupana in Anupana *varga* after the description of *Manda-Peyaadi Pathya kalpanaas* i.e after *krutaanna varga* and before *aahaara vidhi* in *Annapaana vidhi adhyaaya*. Here detailed description of Anupana i.e, different Anupana *dravyaas*, superiority of the *jala* as Anupana, properties, contraindications, rules and regulations for Anupana *sevana* are given.

iii). Bhela Samhitaa –

Aachaarya Bhela, described Anupana in *Annapaanavidheeya adhyaaya* of *Sootrasthaana*. Here explanation about different Anupana *dravyaas* in detail and the properties of Anupana are given.

iv). Kashyapa Samhitaa –

Aachaarya Kaashyapa has not explained about Anupana in detail. But explained some of the applications of Anupana like; in *Snehaadhyaaya* he explained specific Anupana *dravya* for *ghritapaana*, tailapaana, *vasaapaana* and *majjaapaana*.

7. Sangraha kaala :-

i). Ashtaanga Sangraha –

In Ashtaanga Sangraha Anupana is explained in detail in *Annapaanavidhi adhyaaya.* Here in this text the references of Anupana regarding, different Anupana *dravyaas* for different *Doshaas*, *rogaas* and *aahaara dravyaas*, properties of Anupana, contraindications for *jala* as Anupana, rules and regulations while consuming Anupana are available in detail.

ii). Ashtaanga Hrudaya –

In Ashtaanga Hrudaya concept of Anupana is explained in *Maatraashiteeya adhyaaya.* Here in this text the references of Anupana regarding, different Anupana *dravya* for different *rogaas* and *aahaaraas*, *lakshanas* of Anupana, properties and contraindication for *jala* as Anupana are explained.

8. Madhya kaala :-

In some of the *madhyakaaleena granthaas* like *Maadhava Dravyaguna* explains Anupana in *Anupanavidhi*, *Dravyaguna Sangraha* in Anupana *varga*, *Kaiyyadeva Nighantu* in *Vihaara varga*, *Madanapaala Nighantu* in *Mishraka varga*, *Kalyaanakaaraka* in *anupanaadhikaara*, *Shaarangadhara* in *madhyama khanda*, *Bhaavaprakaasha* in *prathama khanda*, *Yogaratnaakara* in *Rasaayanaadhikaara*, *Madana Vinoda* in *Mishra varga* and in *Raaja Nighantu* in *rogaadi varga* we get references of Anupana in detail. Only in *Raaja Nighantu* there is a clear explanation of classification of Anupana into *kraamana* and *paachana* are available. *Aachaarya Shaarangadhara* explains about Anupana mainly for the consumption of medicines.

9. Aadhunika kaala :-

In some of the *Rasashaastra* texts like, *Rasa Tarangini*, *Rasa Jala Nidhi, Aananda Kanda* and *Ayurveda Prakaasha* etc. have given clear explanation of Anupana which has been followed while administering medicines. Some of the later texts like *Anupana Manjari*, *Anupana Darpana*, *Anupana Taranginee* and *Anupana Kalpataru* have given elaborative explanation about Anupana.

Derivation :-

The word Anupana is derived out of two words ;

❖ अनु + पान (*Anu + Paana*)

Anu -

❖ अनु, व्य, उपसर्ग विशेषः । अस्याथाः । पश्चात् । सदृश्यम् । लक्षणं । वोस्मा । इत्यम्भावः । भागः । हीनः । सहार्थः । आयामः । समीपं । परिपाटी । (S.K.D Vol. I)

The word "*anu*" is an "*avyaya*" and "*upasarga vishesha*." The word *anu* indicates the meanings like *asyaathaha, pashchaat, sadrushyam, lakshanam, bhaagaha, heenaha, sahaarthaha, aayaamaha, sameepam* and *paripaatee*.

The different English meanings of the word *anu* are ; after, afterwards, thereupon, again, further, behind, then, next, along, alongside, lengthwise, over, through, to, towards, at, according to, in order, near to, under, subordinate to, with, along with and connected with etc.[1]

Paana -

❖ पा पाने + भावे ल्युट् । (S.K.D Vol. III)

❖ पीयते यदिति । कर्मणि ल्युट् । (S.K.D Vol. III)

Paanam is "*Kleeba*" linga i.e, "*napumsaka*" *linga* which is derived out of "*paa*" *dhatu* and "*lyut*" *pratyaya*. Different English meanings of the word *paana* are; drinking, quaffing, kissing, drinking, spirituous liquors, a drinking vessel, sharpening and protection.[2]

Anupana -

❖ अनु + पा + कर्मणि ल्युट् । (S.K.D Vol. I)

❖ अनुभेषजेन सह पश्चाद्वा पीयते कर्मणि ल्युट् । (Vacha)

❖ अनु सह पश्चाद्वा पीयते – अनु + पा (पाने) "ल्युट्" | (S.K Vol. I)

The one which is consumed along with or after the *bheshaja* (medicine) is Anupana. The term Anupana is formed by "*anu*" *upasarga* and "*paa*" *dhatu* added by the suffix "*lyut*" *pratyaya*.

The dictionary meanings of Anupana are "a drink taken with or after medicine, a fluid vehicle in medicine. [3]

Definition :-

1. Anupana is defined as the one which is consumed along with or after the *bheshaja*.[4,5,6,7]

2. The *vishesha peya* (specific liquid) that has to be consumed for the intake of *oushadha* is called Anupana.[8]

3. The *paana* which is taken after the intake of food is Anupana.[9,10]

4. The *paana* which is taken in between and before is also considered as Anupana.[11]

5. The one which is taken in prescribed time and in proper method is called Anupana.[12]

6. The *paana* which is consumed after *oushadha* and *bhakshana* is Anupana.[13, 14]

Lakshana :-

Anupana should possess the properties opposite to those of the *aahaaraas*, but at the same time should not contradict the qualities of the *dhatus*.[15, 16]

Synonyms :-

The different terms implying the meanings of Anupana have been mentioned in different contexts and those are enlisted as the synonyms of Anupana, which are tabulated below ;

Table No. 2 - Showing synonyms of Anupana in different classics ;

Sl.No	Synonyms	C.S	S.S	A.S	A.H	Sh.S	C.C.V.K	S.K	S.Ou.S.Sa	S.K.D
1.	*Anupana*	✓	✓	✓	✓	✓	✓	✓	✓	✓
2.	*Vaahana*	X	X	X	X	X	✓	X	X	X
3.	*Sahayogi*	X	X	X	X	X	✓	X	X	X
4.	*Maadhyama*	X	X	X	X	X	✓	X	X	X
5.	*Anutarsha*	✓	X	X	X	X	X	X	X	X
6.	*Anupeya*	✓	X	X	X	X	X	X	X	X
7.	*Anupaaneeya*	X	X	X	X	X	X	✓	X	X
8.	*Oushadhaanga peya*	X	X	X	X	X	X	X	✓	✓

- Anupana - Means the one which is consumed along with or after the *bheshaja*.

- *Vaahana* - Means the one which carries

- *Sahayogi* - Means the one which brings together

- *Maadhyama* - Means the one which acts as media or the one which is taken in the middle

- *Anutarsha* - Means the one which is beneficial in thirst.[17]

- *Anupeya* - Means the one thing which is taken along with or after food.

- *Anupaaneeya* - Means the one which is taken along with medicine.[18]

- *Oushadhanga peya* - Means the *peya* which is used along with medicine. [19,20]

Types :-

In Ayurvedic texts there is no direct mentioning of different types of Anupana except in Raja Nighantu[21], but it can be classified based on the time of administration, form and the usage. The classification made by *Raja Nighantukaara* is;

I. Classification made by Raja Nighantu –

1. *Kraamana* :- That which is administered in delay i.e, by surpassing the actual time or after a gap of actual time.

2. *Paachana* :– That which is given in the night.

Flow chart No. 1 – Showing classifications of Anupana;

```
                                Anupana


I.Raja Nighantu ref.  II.Based on time of administration  III.Based on the form  IV.Based on usage

                                                              1. Drava Anupana      1. Aahaaropayogi

                                                              2. Shushka Anupana    2. Oushadhopayogi


1. Kraamana    2. Paachana


              A. 1. Aadipana              B. 1. Pashchaatpana

                 2. Madhyapana               2. Sahapana

                 3. Antahpana
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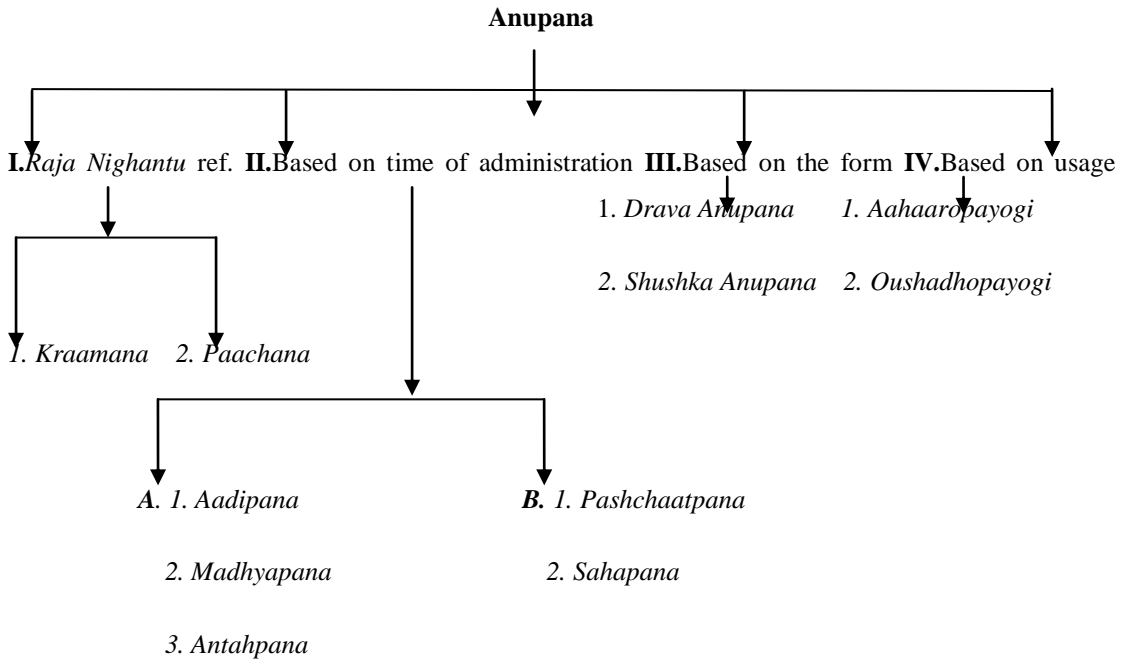
II. Based on the time of administration -

A. 1. *Aadipana* :- The Anupana to be taken prior to *bhojana* is known as Aadipana.

Importance - It causes *krushata.*

Indication - *Sthoulya*

2. *Madhyapana* :- The Anupana to be taken during or in between the *bhojana* is Madhyapana.

Importance - It helps in maintenance of the body.

Indications – *Swaasthya*

3. *Antahpana* :- If the pana is taken after the *bhojana* is called Antahpana.

Importance - It causes *Brumhana.*

Indications - *Kaarshya*

B. 1. *Pashchaatpana* :- The *paana* which is taken after the consumption of any substance either for food or medicine is known as *pashchatpana.*

2. *Sahapana* :- The *paana* which is consumed along with some substances is known as *Sahapana*.

III. Based on the form -

 A. 1. *Drava* Anupana :- The Anupana in the liquid form.

   Eg - *Jala*, *ushnajala*, *ksheera* etc.

  2. *Shushka* Anupana :- The Anupana in the solid form.

   Eg - *Sharkaraa*, *sitaa* etc.

IV. Based on the usage-

  1. *Aharopayogi* :- The Anupana in the context of *aahaara sevana*.

   Eg – For *pishtaanna, sukhodaka* as Anupana.

  2. *Oushadhopayogi* :- The Anupana in the context of *oushadha sevana*.

   Eg – For *snehapana, ushnajala* as Anupana.

Other classifications on the basis of different *rasa, guna, veerya* etc., are given below;

Based on Rasa ; [22, 23]

Table No. 3 – Showing classification of Anupana based on rasa;

Sl.No	Rasa	Anupana
1.	*Madhura*	*Katu, Trikatuka + Khandaasava*
2.	*Aamla*	*Lavana , Padmotpala kandaasava*
3.	*Lavana*	*Aamla rasa, Suraasava, Aranaala*
4.	*Katu*	*Tikta, Doorvaanalaveraasava*
5.	*Tikta*	*Katu, Aamla* and *Kashaaya*
6.	*Kashaaya*	*Madhuara, Daadimavetraasava*
7.	*Sarva rasa*	*Ksheera*

Based on Guna/Veerya ; [24, 25]

Table No. 4 – Showing classification of Anupana based on guna/veerya ;

Sl.No	*Guna*	Anupana
1.	*Ushna, Pittaja vikaara, Raktaja vikaara and Vidaaha*	*Sheeta jala*
2.	*Sheeta, Vata and Kapha vikaara*	*Ushna jala*

Maatraa :- [26,27,28,29]

Maatraa or dose is the amount of a substance to be taken. Proper dose should be followed to get beneficial effects. The *maatraa* of Anupana for different *Doshaas* are not mentioned in any of the *brihatrayees* but mentioned in later *granthaas*. The *maatraas* that are mentioned in *Dravya Guna Sangraha, Sharangadhara Samhitaa, Goodhartha Deepika, Deepika, Madana Vinoda* and *Madhava Dravyaguna* are tabulated below ;

Table No. 5 – Showing maatraa of Anupana for doshaas in *pala pramaana* ;

Sl.No	Dosha	D.G.S	Sha.S	Deepika	Goodhartha Deepika	M.V	M.D.G
1.	Vata	2	3	3	2	2	2
2.	Pitta	3	2	2	3	3	3
3.	Kapha	1	1	1	1	1	1

In *Govinda Sena*'s text book *Vaidyaka paribhaashaa pradeepa*, it is said that the Anupana should be consumed in *jyeshta maatraa* till 8 *pala*.

Anupana Kaala :-

Anupana *kaala* and *oushadha sevana kaala* influences the body both in physiological and pathological level. The time of administration depends upon the variations of *Doshaas* at different time in a day.

- As mentioned in the definition of Anupana, it is clear that Anupana is to be taken after or along with *bhojana* or *oushadha*.

- Some other reference says it can be taken before food also.

- The Anupana can be administered in delay i.e, by surpassing the actual time of administration.

- It can be given in the night.

Guna Karma :-

Guna and *karma* resides in the *dravya* in inherent form. By the knowledge of *guna* and *karma*, the *dravya* can be administered appropriately. Therefore to understand the effect of Anupana, the knowledge of its *Guna karma* is most essential.

The general *guna karma* of Anupana *dravyaas* are tabulated as belows –

Table No. 6 – Showing gunakarma of Anupana;

Sl.No	Guna Karma	C.S	S.S	A.S	A.H	B.S	Y.R	D.G.S	K.D.N	A.K	M.D.G
1.	तर्पयति	✓	✓	✓	X	X	X	✓	✓	X	✓
2.	प्रीणयति	✓	X	✓	X	X	X	X	X	X	X
3.	ऊर्जयति	✓	X	✓	✓	X	X	X	✓	X	X
4.	बृंहयति	✓	✓	✓	X	X	X	✓	✓	X	✓
5.	पर्याप्तिं अभिनिर्वर्तयति	✓	X	✓	X	X	X	X	X	X	X
6.	भुक्तमवसादयति	✓	X	✓	X	X	X	X	X	X	X
7.	अन्नसंघातं भिनत्ति	✓	X	✓	✓	X	X	X	✓	✓	✓
8.	मार्दवमापादयति	✓	✓	✓	X	X	X	✓	✓	X	✓
9.	क्लेदयति	✓	X	✓	X	X	X	X	X	X	X

10.	जरयति	✓	X	X	X	X	X	X	X	X	X
11.	सुखपरिणामिता	✓	✓	✓	X	✓	X	✓	X	X	X
12.	आशुव्यवायिता	✓	X	✓	X	X	X	X	X	X	X
13.	बलकर	✓	✓	X	X	X	X	✓	✓	X	✓
14.	आहारस्य उपजनयति	X	X	✓	X	X	X	X	X	X	X
15.	रोचन	X	✓	X	X	✓	X	✓	✓	X	✓
16.	वृष्य	X	✓	X	X	X	X	✓	✓	X	✓
17.	दोषसङ्घात भेदन	X	✓	X	X	X	X	✓	✓	X	✓
18.	श्रम हर	X	✓	X	X	X	X	✓	✓	X	✓
19.	क्लम हर	X	✓	X	X	X	X	✓	✓	X	✓
20.	सुख	X	✓	X	X	X	X	✓	✓	X	✓
21.	दीपन	X	✓	X	X	X	X	✓	✓	X	✓
22.	दोष शमन	X	✓	X	X	X	X	✓	✓	X	✓
23	पिपासाच्छेदन	X	✓	X	X	X	X	✓	✓	X	✓
24.	वर्ण कर	X	✓	X	✓	X	X	✓	✓	X	✓
25.	तृप्ति कर	X	X	X	✓	X	X	X	✓	✓	X
26.	व्याप्ति कर	X	X	X	✓	X	X	X	✓	✓	X
27.	दृढाङ्गता	X	X	X	✓	X	X	X	✓	✓	X
28.	विक्लिन्ति जरण	X	X	X	✓	X	X	X	✓	✓	X
29.	दोषवद्रू वा भुक्तमतिमात्रं सुखमन्नं प्रजीर्यति	X	✓	X	X	X	X	✓	X	X	✓
30.	सात्म्यतां	X	X	X	X	✓	X	X	X	X	X

	प्रयच्छति										
31.	अपकर्षति	X	X	X	X	✓	X	X	X	X	X
32.	मनोज्ञ	X	X	X	X	X	X	X	X	✓	X
33.	रोग नाशन	X	X	X	X	X	✓	X	X	X	X

1. तर्पयति – Refreshment

2. प्रीणयति – Pleasing or satisfying

3. ऊर्जयति – That gives energy

4. बृंहयति – Nourishing

5. पर्याप्तिमभिनिर्वर्तयति – Brings satisfaction and

6. भुक्तमवसादयति – Steadiness in the food consumed

7. अन्नसंघातं भिनत्ति – Helps in breakdown of the food particles

8. मार्दवमापादयति – Softens the food

9. क्लेदयति – Brings unctuousness to food

10. जरयति – Helps in digestion

11. सुखपरिणामिता – Proper assimilation

12. आशुव्यवायिता – Helps in instant diffusion of food

13. बलकर – Bestows strength

14. आहारस्य उपजनयति – Supplies the food to the tissues instantaneously

15. रोचन – Improves taste

16. वृष्य – Improves the potency

17. दोषसङ्घात भेदन – Dissolves the accumulated Doshas

18. श्रम हर – Relieves fatigue

19. क्लम हर – Removes lethargy

20. सुख – Pleasant

21. दीपन – Appetiser

22. दोष शमन – Alleviates Doshas

23 पिपासाच्छेदन – Quenches thirst

24. वर्ण कर – Improves complexion

25. तृप्ति कर – Brings satisfaction

26. व्याप्ति कर – Spreads the food or medicine

27. दृढाङ्गता – Brings strength

28. विक्लित्ति जरण – That gives unctuousness

29. दोषवद्दुरु वा भुक्तमतिमात्रं सुखमन्नं प्रजीर्यति – Even helps in digestion of heavy meals

30. सात्म्यतां प्रयच्छति – Offers compatibility

31. अपकर्षति – Helps in downward movement of excreta.

32. मनोज्ञ – Good for *manas*.

33. रोग नाशन – Capacity to cure the disease.

Different Anupana dravyaas and indications :-

There are different Anupana *dravyaas* are told in the classics like *mahendra jala, Ushna jala* and *ksheera* etc. With different Anupana a single *oushadha dravya* can be given in different *rogaas*. So the understanding of each Anupana *dravyaas* and its indication is very essential. Some of the Anupana *dravyaas* are tabulated below;

Mahendra jala :-

Table No. 7 – Showing indication mahendra jala as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Saatmya	X	✓	X	X	X	X	X	X
2.	Hita	X	✓	X	X	X	X	X	X

Ushna jala :-

Table No. 8 – Showing indication Ushna jala as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Snehapaana	X	✓	✓	X	X	✓	✓	✓
2.	Vata	X	✓	X	X	X	X	✓	X
3.	Kapha	X	✓	X	X	X	X	✓	X
4.	Ghritapana	✓	X	✓	✓	X	X	X	X
5.	Durjaraa	X	X	✓	X	X	X	X	X

Sheeta jala :-

Table No. 9 – Showing indication sheeta jala as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Madyaarti	X	✓	X	X	X	X	X	X
2.	Visha	X	✓	X	X	X	X	X	X
3.	Pitta	X	✓	X	X	X	X	✓	X
4.	Shonita	X	✓	X	X	X	X	✓	X
5.	Bhallaataka sneha	X	X	X	X	✓	✓	X	X
6.	Moorcchaa	X	X	X	X	✓	X	X	X
7.	Vidaaha	X	X	✓	X	X	X	X	X

Dadhi :-

Table No. 10 – Showing indication dadhi as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Madyaarti	X	X	X	X	X	✓	✓	X
2.	Vishajushta	X	X	X	X	X	✓	✓	X

Ksheera :-

Table No. 11 – Showing indication ksheera as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Yuddha	X	✓	X	X	X	X	✓	X
2.	Adhwa	✓	✓	✓	✓	✓	✓	✓	X
3.	Aatapa sevana	✓	✓	X	✓	✓	✓	✓	X
4.	Santaapa	X	✓	X	X	X	X	✓	X

Sl.No	Indication								
5.	Visha	X	✓	X	X	✓	✓	✓	X
6.	Madya	X	✓	X	X	✓	✓	✓	X
7.	Ruja	X	✓	X	X	X	X	✓	X
8.	Gharma	X	✓	X	X	X	X	✓	X
9.	Bhaashya	✓	✓	✓	✓	✓	✓	✓	X
10	Stree	✓	✓	✓	✓	✓	✓	✓	X
11.	Klaanta	✓	✓	✓	X	✓	✓	✓	X
12.	Shonitapitta	X	✓	X	X	✓	✓	✓	X
13.	Upavaasa	✓	X	✓	X	✓	✓	X	X
14.	Vyaayaama	X	X	✓	X	X	X	X	X
15.	Baala	X	X	✓	✓	X	X	X	X
16.	Vruddha	X	X	✓	✓	X	X	X	X
17.	Ksheena	X	X	X	✓	X	X	X	X
18.	Langhana	X	X	X	✓	X	X	X	X
19.	Vyaadhi karshiata	X	X	X	✓	X	X	X	X
20.	Oushadha karshita	X	X	X	✓	X	X	X	X

Maamsa rasa :-

Table No. 12 – Showing indication maamsa rasa as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Yuddha	X	✓	X	X	X	X	✓	X
2.	Adhwa	X	✓	X	X	X	X	✓	X
3.	Santaapa	X	✓	X	X	X	X	✓	X
4.	Visha	X	✓	X	X	X	X	✓	X
5.	Madya	X	✓	X	X	X	X	✓	X
6.	Ruja	X	✓	X	X	X	X	✓	X

7.	Shosha	X	X	✓	✓	X	X	X	X
8.	Atilanghanokta roga	X	X	✓	X	X	X	X	X
9.	Aatapa	X	X	X	X	X	X	✓	X

Suraa :-

Table No. 13 – Showing indication sura as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Krusha	✓	✓	✓	✓	X	✓	✓	X
2.	Shrama	X	X	✓	X	X	X	X	X

Madhoodaka :-

Table No. 14 – Showing indication madhoodaka as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Sthoola	✓	✓	✓	✓	X	✓	✓	X

Madya :-

Table No. 15 – Showing indication madya as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Alpaagni	✓	X	✓	✓	✓	✓	X	X
2.	Anidraa	✓	X	X	X	X	✓	X	X
3.	Tandraa	✓	X	X	X	X	✓	X	X
4.	Shoka	✓	X	X	X	X	✓	X	X
5.	Bhaya	✓	X	X	X	X	X	X	X
6.	Klama	✓	X	X	X	X	✓	X	X

7.	Madyasevee	✓	✓	✓	X	X	✓	✓	X
8.	Maamsasevee	✓	✓	✓	X	X	✓	✓	X
9.	Bhrama	X	X	X	✓	X	✓	X	X
10.	Shosha	X	X	X	X	✓	X	X	X
11.	Visha	X	X	X	X	✓	X	X	X

Ikshu rasa :-

Table No. 16 – Showing indication ikshu rasa as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Shonita Pitta	X	✓	X	X	X	✓	✓	X

Arkasava :-

Table No. 17 – Showing indication arkaasava as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Vishaarti	X	✓	✓	X	X	✓	✓	X

Shelu aasava :-

Table No. 18 – Showing indication shelu aasava as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Vishaarti	X	✓	✓	X	X	✓	✓	X

Shireeshaasava :-

Table No. 19 – Showing indication shireeshaasava as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Vishaarti	X	✓	✓	X	X	✓	✓	X

Kaanjikaadi aamla :-

Table No. 20 – Showing indication kaanjikaadi aamla as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Vata	X	X	✓	X	X	X	X	X

Sharkarodaka :-

Table No. 21 – Showing indication sharkarodaka as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Pitta	X	X	✓	X	X	X	X	X

Triphalodaka with kshoudra :-

Table No. 22 – Showing indication triphalodaka with kshoudra as Anupana ;

Sl.No	Indication	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Kapha	X	X	✓	X	X	X	X	X

Different Aahaara dravyaas and Anupana :-

To get the desired benefit of in the body, specific Anupana *dravya* are told for specific *dravyaas*, those are tabulated below;

Ushnodaka :-

Table No. 23 – Showing Ushna jala as Anupana for aahaara dravya ;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Pishtaanna	X	X	✓	X	X	X	X	X

Sheeta jala :-

Table No. 24 – Showing sheeta jala as Anupana for different aahaara dravya ;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Maakshika/Madhu	X	✓	✓	✓	X	✓	✓	X
2.	Pishtaanna	X	✓	X	X	X	✓	✓	X
3.	Dadhi	X	✓	✓	✓	X	✓	X	X
4.	Paayasa	X	✓	X	X	X	✓	X	X
5.	Visha	X	✓	X	✓	X	✓	X	X
6.	Madya	X	✓	✓	✓	X	✓	X	X
7.	Bisagranthi	X	X	X	X	X	X	X	X
8.	Yava	X	X	✓	✓	X	X	X	X
9.	Godhooma	X	X	✓	✓	X	X	X	X
10.	Taila	X	X	X	X	X	X	✓	X
11.	Yoosha	X	X	X	X	X	X	✓	X
12.	Aamlakaanjee	X	X	X	X	X	X	✓	X

Sukhoshna jala :-

Table No. 25 – Showing sukhoshna jala as Anupana for aahaara dravya ;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Pishta	X	✓	X	✓	X	✓	✓	X

Ksheera :-

Table No. 26 – Showing ksheera as Anupana for different aahaara dravya ;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Shashtika shaali	X	X	✓	X	X	X	X	X
2.	Shaali	X	✓	X	X	X	X	✓	X
3.	Mudga	X	✓	X	X	X	X	✓	X

Maamsa rasa :-

Table No. 27 – Showing maamsa rasa as Anupana for different aahaara dravya ;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Shaali	X	✓	X	X	✓	✓	✓	X
2.	Mudga	X	✓	X	X	✓	✓	✓	X

Yoosha :-

Table No. 28 – Showing yoosha as Anupana for different aahaara dravya ;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Taila	✓	✓	X	X	X	X	X	X
2.	Shaali	X	X	X	X	✓	✓	X	X
3.	Mudga	X	X	X	X	✓	✓	X	X

Dadhi mastu :-

Table No. 29 – Showing dadhi mastu as Anupana for different aahaara dravya ;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Shaaka	X	X	X	✔	X	X	X	X
2.	Mudga	X	X	X	✔	X	X	X	X

Takra :-

Table No. 30 – Showing takra as Anupana for different aahaara dravya ;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Shaaka	X	X	X	✔	X	X	X	X
2.	Mudga	X	X	X	✔	X	X	X	X

Aamla kaanjikaa :-

Table No. 31 – Showing aamla kaanjikaa as Anupana for different aahaara dravya ;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Shaaka	X	X	X	✔	X	X	X	X
2.	Mudga	X	X	X	✔	X	X	X	X

Ashwagandhaa kashaaya :-

Table No. 32 –Showing ashwagandha kashaaya as Anupana for different oushadha dravya;

Sl.No	Aahaara/Oushadha dravya	C.S	S.S	A.S	A.H	M.P.N	M.D.G	A.D	B.S
1.	Vaarunee	X	X	X	X	X	X	X	✓
2.	Manda	X	X	X	X	X	X	X	✓

Different Anupana dravya for different dosha :-

Anupana *Dravyaas* act either by *rasa* or *guna* or *vipaaka* or *veerya* and antagonize the vitiated Doshaas in the body. The specific Anupana *dravya* against each Doshaas is very essential to get beneficial effects. Different *Aachaaryaas* have told different Anupana for different *Doshaas* which are tabulated below;

Vata -

Table No. 33 – Showing different Anupana for Vata dosha ;

Sl.No	Anupana	C.S	S.S	A.S	D.G.S	K.D.N	A.P	A.M	A.D	M.V	M.D.G	LOL
1.	स्निग्ध	✓	✓	X	✓	X	X	X	✓	✓	✓	X
2.	उष्ण	✓	✓	X	✓	X	X	X	✓	✓	✓	X
3.	अम्ल रस	X	X	✓	X	X	X	X	X	X	X	X
4.	सक्षौद्र पिप्पली	X	X	X	X	X	✓	X	X	X	X	X
5.	साज्य रसोनक	X	X	X	X	X	X	✓	X	X	X	✓

Pitta -

Table No. 34 – Showing different Anupana for Pitta dosha ;

Sl.No	Anupana	C.S	S.S	A.S	D.G.S	K.D.N	A.P	A.M	A.D	M.V	M.D.G
1.	मधुर	✓	✓	X	✓	X	X	X	✓	✓	✓
2.	शीत	✓	✓	X	✓	X	X	X	✓	✓	✓
3.	शर्करोदक	X	X	✓	X	X	X	X	X	X	X
4.	एला	X	X	X	X	X	✓	X	X	X	X
5.	सिता	X	X	X	X	X	✓	X	X	X	X
6.	कर्पूर	X	X	X	X	X	✓	X	X	X	X

Kapha -

Table No. 35 – Showing different Anupana for Kapha dosha ;

Sl.No	Anupana	C.S	S.S	A.S	D.G.S	K.D.N	A.P	A.M	A.D	M.V	M.D.G
1.	रूक्ष	✓	✓	X	✓	X	X	X	✓	✓	✓
2.	उष्ण	✓	✓	X	✓	X	X	X	✓	✓	✓
3.	त्रिफलोदक + क्षौद्र	X	X	✓	X	X	X	X	X	X	X
4.	तोय	X	X	X	X	✓	X	X	X	X	X
5.	त्र्यूषण	X	X	X	X	X	✓	X	X	X	X
6.	चित्रक मूल चूर्ण	X	X	X	X	X	✓	X	X	X	X
7.	ताल	X	X	X	X	X	X	✓	X	X	X

For *Tridosha, sakshoudra ardrodaka* is told as Anupana *Lolimbaraja*.

Different anupana dravya for different roga :-[30]

Table No. 36 – Showing different Anupana dravya for different Roga ;

Sl.No.	रोग	अनुपान
1.	लूकरोग (सूर्यतापयुक्त दुष्ट वायु जानित रोग)	चिञ्चा, आमलक + शर्करा and मधुयुक्त जलपान
2.	शीतलाजनित दाह	मधुयुक्त जल + शर्करा
3.	शीतलाजनित दाह	नीलिका + जल
4.	शूल	घृतयुक्त हिङ्गु हिङ्गु + उष्णजल
5.	पुराण ज्वर	पिप्पली
6.	वातरोग	घृतयुक्त लशुन
7.	श्वसनक	मधुयुक्त त्रिकटु
8.	शीतरोग	मरीचयुक्त बृहतीपत्र
9.	प्रमेह	शर्करायुक्त त्रिफला
10.	त्रिदोष प्रकोप	मधुयुक्त आर्द्रक स्वरस
11.	ज्वर	मुस्ता गफ्छ पर्पट
12.	गृहणी	मथित
13.	विष	सुवर्ण
14.	छर्दि	लाजा (कमलबीज लाजा)
15.	अतिसार	कुटज
16.	रक्तपित्त	वसा
17.	अर्श	भल्लातक

18.	कृमि	विडङ्ग
19.	विस्फोटक वात	सूत (पारद)
20.	रक्तस्राव	अश्मभेद
21.	विसूचिका	वृक्ति
22.	वातरक्त	गन्धक
23.	शिरोरोर	शुण्ठिका
24.	अश्मरी	हेमाहरीतकी + गन्धक
25.	मूत्रकृच्छ्र	हेमाहरीतकी + गन्धक
26.	अपस्मार	तैल
27.	मूर्छा	तैल
28.	ऊर्ध्व वात	वचायुक्त लवङ्ग
29.	बुद्धिभ्रंश	वचायुक्त लवङ्ग
30.	उदर	अप्लावित पिप्पली + अर्कदुग्ध
31.	क्षय	गुडूचि
32.	पाण्डु	लोह + मधु/त्रिफलाक्वाथ/तक्र
33.	प्रदर	रसाञ्जन
34.	अजीर्ण [31]	i. आर्द्रक स्वरस/निम्बू स्वरस/दाडिम स्वरस+बिड लवण ii. हिङ्ग्वाष्टक चूर्ण iii. पाचकार्क iv. कुमारी आसव

Different anupana dravya for different dhaatu :-[32]

Table No. 37 – Showing different Anupana dravya for different dhaatu ;

Sl.No.	धातु	अनुपान
1.	सुवर्ण	हरीतकी + सिता
2.	रौप्य	शर्करा + मधु
3.	ताम्र	वनव्रीहि + सिता
4.	नाग	हेमाहरीतकी + सिता
5.	वङ्ग	मेषशृङ्गी + सिता
6.	आर	त्रुटि + मधु–खण्ड
7.	त्रिधातु	त्रिफला चूर्ण
8.	अय	त्रिवृता + सैन्धव
9.	अय	दूर्वारस + मधु
10.	मण्डूर	हरीतकी + मधु
11.	कृपाणि लोह	श्वेत दूर्वा रस + सिता
12.	पिङ्ग	पक्व दाडिम फल रस
13.	घोष	चिञ्चा फल

Different anupana dravya for different upadhaatu :-[33]

Table No. 38 – Showing different Anupana dravya for different upadhaatu ;

Sl.No.	उपधातु	अनुपान
1.	मलसंयुत पारद्	पाचित गन्धक
2.	मलसंयुत पारद	गन्धक + नागवल्ली दल

3.	सूत	द्राक्षा, कूष्माण्ड, तुलसी, शतपुष्पिका, लवङ्ग, त्वक्, नागकेशर, गन्धक + पय
4.	सूत	नागवल्ली रस, भृङ्गराज रस, तुलसी रस + छाग दुग्ध
5.	ताल	जीरक + शर्करा
6.	ताल	कूष्माण्ड रस, दुरालभा रस, राजहंसी रस
7.	ताल	स्वर्णपुष्पी गुच्छ भूनिम्ब क्वाथ
8.	ताल	सर्पाक्षी रस + सिता
9.	रस	गन्धक + गोदुग्ध
10.	मनःशिला	जीरक + माक्षिक
11.	बलि	गोदुग्ध, देवकुसुम, वचा + घृत
12.	अभ्रक	धात्री फल
13.	माक्षि	कुलत्थ कषाय
14.	माक्षि	दाडिमत्वचा
15.	शिलाजित	मरीच/आम्लवेतस + घृत
16.	मल्ल	मेघनाद रस +सिता
17.	मल्ल	निम्बू
18.	मल्ल	शर्करायुक्त गोदुग्ध/ शर्करायुक्त खदिरसार
19.	रसकर्पूर	धान्यक/महिषीशकृत् + सिता
20.	तुत्थक	जम्बीरी रस/ लाजा + वारि
21.	मृदासंग	गोघृत/अम्लक रस + सिता
22.	नवसार	गर्दभशकृत्
23.	मृत्ति	गर्दभशकृत्
24.	गैरिक	गर्दभशकृत्

25.	कासीस	गर्दभशकृत्
26.	काच	गर्दभशकृत्
27.	तौरी	गर्दभशकृत्
28.	मुक्ता	घृत/मधु/सिता/गोदुग्ध
29.	प्रवाल	घृत/मधु/सिता/गोदुग्ध
30.	हीरक	घृत/मधु/सिता/गोदुग्ध

Different anupana dravya for different sthaavara visha :-[34]

Table No. 39– Showing different Anupana dravya for different sthaavara visha ;

Sl.No.	स्थावर विष	अनुपान
1.	नागफेन	बृहत्क्षुद्रारस + दुग्ध
2.	नागफेन	वचा, सैन्धव, पिप्पली ग्फ्छ मदनफल
3.	नागफेन	टङ्कण, तुत्थ + घृत
4.	धत्तूर	वृन्ताकफला रस
5.	वत्सनाग	पटवणवृक्ष रस + शर्करा
6.	भल्लात	मेघनादरस लेप + नवनीत
7.	भल्लात	दारु, सर्षप, मुस्ता + नवनीत
8.	भल्लात	नवनीत, तिल/दुग्ध/खण्ड + घृत
9.	भङ्ग	गोदधि, शुण्ठी
10.	भङ्ग	आर्द्रक, संदेसडा मूल
11.	उच्चटा	मेघनादरस+ शर्करा
12.	उच्चटा	दुग्ध
13.	मद्य	मधु, खर्जूरी, मृद्वीका, वृक्षाम्ल, अम्ला, दाडिम,

		परुष, आमल
14.	पूगीफल	शर्करा/शर्करायुक्त मधु
15.	कोद्रव	सुशीतल क्षीर, कूष्माण्डरस + गुड
16.	कर्णवीर	माहिष दधि + सिता
17.	कर्णवीर	माहिष पय+ सिता
18.	कर्णवीर	अर्कत्वचा+ सिता
19.	वज्री	शतावरि + सिता
20.	स्नुही	सुवर्णगैरिकयुक्त जल
21.	अर्क	सुवर्णगैरिकयुक्त जल
22.	दन्तीबीज	धान्यक + सिता
23.	कोचक	घृत, मधु, शर्करा

Different anupana dravya for different jaangama visha :-[35]

Table No. 40 – Showing different Anupana dravya for different jaangama visha ;

Sl.No.	जाङ्गम विष	अनुपान
1.	पन्नग	त्रिफला, चन्दन, कुष्ठ, आर्द्रक + घृत
2.	पन्नग	गोजिह्वा रस, फलिनी रस, इन्द्रवारुणी रस, त्रिपर्णिका रस
3.	पन्नग	तुत्थ, वचा, मदनफल + गोदुग्ध
4.	पन्नग	मरीच + घृत
5.	श्वान	सैन्धव मिश्रित कुमारीदल + सुखोष्ण जल
6.	श्वान	तिलतैल, पलाण्डु, गुड गफ्छ अर्कक्षीर
7.	श्वान	शुष्क अर्क मूल + मरीच

8.	श्वान	घृत
9.	विषकीट	घृत
10.	उदरगत जन्तु	विषकोच + जल
11.	वृश्चिक	बाणपुङ्ख रस, मेघनाद रस + शर्कर
12.	गृहगोधिका	त्रिकटु, शिग्रुबीज, हरिद्राद्वय,कपिकच्चु बीज
13.	सरठ	अर्क मूलत्वच + शीतजल
14.	मूषक	बाणपुङ्खरस + सिता
15.	श्वेतमूषकजन्य ग्रन्थि	गर्दभ शकृत्
16.	सिंहबाल	मधु
17.	छुछुन्दर	काञ्जिका
18.	दुष्ट जल	मण्डूर, गर्दभशकृत्, अजशकृत्
19.	जलोदर due to यूका	पिप्पली चूर्ण + स्नुहि क्षीर
20.	सर्वविष	घृतयुक्त तण्डुल
21.	ज्ञाताज्ञात विष	सिता/मधु/दुग्द/तण्डुला/माहिष शकृत्
22.	अलर्क विष	रूक्ष अन्न/तैल/पलाण्डु

Importance of Anupana in *chikitsaa* :-

Anupana or the adjuvant for food and medicine has its relevance and importance in Ayurvedic Clinical practice.

As the oil spreads on the water, the medicine also gets spread by the effect of Anupana.[36,37] When the medicine is administered with appropriate Anupana, the effect of drug gets enhanced.[38] If water is not consumed after food, then the food becomes dry and produces different ailments in the body. At the same time, consumption of proper Anupana after food does proper digestion even if the quantity

of food consumed is excess in quantity and quality (*Guru, Adhikamatrayukta anna*).[39] By the help of Anupana the properties of the *oushadha* (medicine) will increase and helps to cure the disease.[40]

Factors to be considered during Anupana :-

Before administering Anupana certain factors are to be considered especially to those who are lazy and leads a comfortable life (*sukhochita*), who has *mandaagni*, who is *sukumaara*.

A *dheera vaidya* should give proper Anupana like *sheeta jala, ushna jala, aasava, madya, yoosha, phalaamla, dhaanyaamla, paya* and *maamsa rasa* in proper quantity by considering *kaala, roga* and different *dravyaas*.[41, 42]

Indications of Anupana :- [43]

1. *Peenasa*

2. *Urakshata*

3. *Shwaasa*

4. *Kasa*

5. *Jatroordhwa roga*

6. *Geetaa gaayana*

7. *Adhyayana*

8. *Sambhaashana*

9. *Swarasaada*

Those who are [44]

10. *Balavaan*

11. Habituated to *kathina bhojana*

12. *Teekshnaagni*

13. *Karmanitya*

14. *Swarakshaya*

Contraindications of Anupana :-

The proper rules and regulations are to be followed when consuming, if not even the *amruta* will act like *visha*. Similarly in certain conditions some of the *Anupanaas* are also prohibited from consumption which is mentioned below ;

Contraindications of Jala as Anupana :-

1. ऊर्ध्वाङ्ग रोग – Diseases above the clavicle

3. श्वास – Difficulty in breathing

4. कास – Cough

5. गीता गायन – Singing

6. भाष्य – Speech

7. अध्ययन प्रसक्त – Habituated for reading

8. उरोरोग – Diseases of chest region

9. क्षत – Injury to chest

10. प्रसेक – Excessive salivation

11. स्वर भेद – Hoarseness of voice

12. प्रक्लिन्न देह – Oily skin

13. मेह – Excessive urination

14. कण्ठ रोग – Diseases of throat

15. अक्षि रोग – Diseases of eyes

16. व्रण – Wound or ulcer

17. पीनस – Rhinitis

18. मेढ़ रोग – Penile diseases

19. गल रोग – Diseases of throat

Table No. 41 – Showing contraindications of jala as Anupana ;

Sl.No	अयोग्य	च.सं.	सु.सं.	अ.सं.	अ.हृ	द्र.गु.सं	कै.नि.	म.वि	म.द्र.गु
1.	ऊर्ध्वाङ्ग रोग	✓	✓	✓	✓	✓	✓	✓	✓
2.	हिक्का	✓	X	✓	X	X	X	X	X
3.	श्वास	✓	✓	✓	✓	✓	✓	✓	✓
4.	कास	✓	✓	✓	✓	✓	✓	✓	✓
5.	गीता गायन	✓	X	✓	✓	X	X	X	✓
6.	अध्व	X	X	X	X	X	X	X	✓
7.	भाष्य	✓	X	✓	✓	X	X	X	✓
8.	अध्ययन प्रसक्त	✓	X	X	X	X	X	X	✓
9.	स्वप्न	X	X	X	X	X	X	X	✓
8.	उरोरोग	✓	✓	✓	X	✓	✓	X	✓
9.	क्षत	✓	✓	✓	✓	✓	✓	✓	✓
10.	प्रसेक	X	✓	✓	X	✓	✓	X	✓
11.	स्वर भेद	X	✓	✓	✓	✓	✓	X	✓
12.	प्रक्लिन्न देह	X	X	✓	X	X	✓	X	X
13.	मेह	X	X	✓	X	X	X	X	X

14.	कण्ठ रोग	X	X	✓	X	X	X	X	X
15.	अक्षि रोग	X	X	✓	X	X	✓	X	X
16.	व्रण	X	X	✓	X	X	✓	X	X
17.	पीनस	X	X	X	✓	X	X	X	X
18.	मेढ्र रोग	X	X	X	X	X	✓	X	X
19	गल रोग	X	X	X	X	X	✓	X	X

Contraindications of Ushna jala as Anupana :-

In some conditions *ushna jala* is also contraindicated. *Ushna jala* is contraindicated while consuming ;

1. *Ksheera*

2. *Dadhi*

3. *Madhu* [45]

4. *Bhallaataka snehapaana*

5. *Tuvaraka snehapaana* [46]

6. *Pittaja jwara*

7. *Daaha*

8. *Bhrama*

9. *Atisaara* due to *pralaapa* [47]

10. *Raktasrava*

11. *Garbha chyuti*

12. *Garbha daha* [48]

Adverse effects of Anupana :-

If Anupana is taken in contraindicated conditions it does *dushti* in *amashaya*, *kanta*, *uras* and there by produces *mandaagni*, *saada*, *chardi* etc.[49]

Anupananantara nishiddha karma :-[50,51,52]

After the Anupana, the person should not undertake -

1. Journey

2. Too much of talk

3. Too much of study

4. Too much of sing

5. Too much of sleep

6. Exercise.

Disadvantage of not taking Anupana :-

If Anupana is not consumed in prescribed form then the solid food which is taken will not mix with liquid portion, remains without any movement and causes disorders. Hence proper Anupana should be used.[53]

Single formulation or drug with different Anupana :-

In Ayurveda there are many references in which single yoga (formulation) or a drug is used in different conditions based on different Anupana. This shows the importance of Anupana. Some of such references are tabulated below ;

Gudoochi –

Table No. 42 – Showing different Anupana dravya for Gudoochi ;

Sl.No	Anupana	Vyaadhi
1.	Ghrita	Vata
2.	Guda	Vibandha
3.	Mishree	Pitta
4.	Madhu	Kapha
5.	Eranda sneha	Vata-rakta
6.	Shunti	Aamavaata

Rutu Hareetaki –

Table No. 43 – Showing different Anupana dravya for Hareetaki in different rutu ;

Sl.No	Rutu	Anupana
1.	Varsha	Saindhava
2.	Sharad	Sharkaraa
3.	Hemanta	Shunti
4.	Shishira	Kanaa
5.	Vasanta	Madhu
6.	Greeshma	Guda

Yogaraaja Guggulu –

Table No. 44 – Showing different Anupana dravya for Yogaraaja Guggulu ;

Sl.No.	Vyaadhi	Anupana
1.	Vata roga	Raasnaadi kwaatha
2.	Medovruddhi and Kushta	Manjishtadi kwaatha
3.	Sarva vrana	Nimba and Nirgundee kwaatha

Naaraayana choorna –

Table No. 45 – Showing different Anupana dravya for Naaraayana choorna ;

Sl.No	Vyaadhi	Charaka	Vaagbhata	Shaarangadhara
1.	Udara	X	Takra	Ushtradugdha/Takra
2.	Gulma	Badaraambu	Badara kwaatha	Badara kwaatha
3.	Aanaaha	Suraa	Suraa	X
4.	Vata roga	Prasanna	Prasanna	Prasanna
5.	Malaavarodha	Dadhi manda	Dadhi manda	Dadhi mastu
6.	Arsha	Daadimaambu	Daadima swarasa	daadimaambu
7.	Parikartikaa	Vrukshaamla	Vrukshaamla	Vrukshaamla
8.	Ajeerna	Ushna jala	Sukhodaka	Ushna jala
9.	Aadhmaana	X	X	Suraa
10.	Visha	X	X	Ghrita

Rasa Sindhoora –

Table No. 46 – Showing different Anupana dravya for Rasa Sindhoora ;

Sl.No	Vyaadhi	Anupana
1.	Nava jwara	Tulasee, Aardraka swarasa, Taamboola swarasa
2.	Jeerna jwara	Gudoochi, Dhaanyaka kwaatha
3.	Prameha	Gudoochi swarasa, Haridraa kwaatha
4.	Pradara	Ashoka, Balaa, Lodhra kwaatha
5.	Arsha	Baala abhayaa kwaatha
6.	Apasmaara	Vachaa swarasa/ Braahmee + Vachaa + Shankhapushpee + Kushta + Elaa kwaatha
7.	Unmaada	Kooshmaanda swarasa
8.	Shwaasa	Vibheetaki swarasa, Vaasaa swarasa

9.	Kaamalaa	Daarvee kwaatha
10.	Paandu	Loha bhasma
11.	Mootrakrucchra	Seetopala + Elaa + Shilaajitu + Sheeta ksheera
12.	Ajeerna	Madhu/ Mustaka kwaatha
13.	Shoola	Triphalaa kwaatha
14.	Moorcchaa	Kanaa choorna + Madhu
15.	Vamana	Bruhadelaa kwaatha + Madhu
16.	Shwayathu	Punarnava kwaatha
17.	Visphota	Gudoochi, Nimba, Khadira twak, Indrayava kwaatha
18.	Garbhaashaya roga	Kaakolee choorna + Naarikela taila
19.	Atikaalaja prameha	Vanga bhasma + Madhu
20.	Teevra vamana	Trikatu + Dhaanyaa + Jeeraka + Madhu
21.	Bhagandara	Triphalaa/ Vidanga kwaatha
22.	Gulma	Mishreya + Baala abhayaa + Yavaanee choorna kwaatha/ Yavaanee choorna/ Vida lavana
23.	Vata-Kaphajanya Puraatana shirahshoola	Dashamoola kwaatha
24.	Puraatana vrana	Kantakaaree, Sugandhabalaa, Gudoochi, Shuntee kwaatha
25.	Puraatana aamavaata	Gudoochi, Mustaka, Shataavaree, Pippalee, Hareetakee, Vachaa/ Shuntee kwaatha
26.	Vaajeekaranaartha	Shaalmalee moola choorna/ Vidaaryaadi gana + Ksheera
27.	Dhaatu vardhanaartha	Abhraka bhasma + Swarna bhasma
28.	Swapna meha	Jaateephala, Lavanga, Karpoora, Ahiphena choorna
29.	Chirakaaleena shirahkampa	Balaa kwaatha

Review on Sahapana :-

Sahapana is a concept in which the administration of medicine by mixing with another substance. Thoug such concepts are found in Ayurvedic practice, the word Sahapana is not found in any of the Ayurvedic text books prior to *Rasa Tarangini*. In Rasa Tarangini Anupana has been classified into two types that are Anupana and Sahapana. So a brief understanding of the concept is essential.

Derivation -

The word Sahapana is made up of two words ;

❖ सह + पान (Saha + Paana)

Saha :-

❖ सह, व्य, सहितम् । तत्पर्यायः । साकम् सार्व्हम् सत्रम् समम् । इत्यमरः ।

(S.K.D Vol. V)

The word *Saha* is an "*avyaya*" which indicate the meaning as *sahitam.* It has the synonyms like, *saakam*, *saahrvyam*, *satram*, *samam* and *sajuhu*. The term *paana* means to drink or to consume.

Sahapana :-

❖ सहपानम् । क्लौ । एकत्रपाने । हे.चं. । (V.S.S)

The word Sahapana is formed from "*Kleeba*" *linga* i.e, *napumsaka linga.*

Definition :-

The substance which is taken by mixing with *oushadha* (medicine) is called Sahapana.[54]

Mode of action of Sahapana :-

During the intake of medicine, the *dravya* which is taken by mixing and that helps the *dravya* to reach the target place in *paramaanu roopa* (minute form) is carried out by the help of Sahapana. [55]

Importance of Sahapana -

By the help of Sahapana the properties of the *oushadha* (medicine) will increase and thereby helps to cure the diseases.[55]

Anupana concepts in other systems of medicine :-

In western system of medicine –

The terms which can be taken to understand the concepts of Anupana from modern system of medicine are vehicle, adjuvant or synergist and carrier through which the actions like drug absorption, drug companion, drug interaction, drug delivery and bioavailability of the drug will takes place.

Vehicle :-

The word vehicle is derived from the Latin word "*vehiculum*" means that which carries. It is also called as excipient.

Definition :-

1. Liquid etc. as a medium for suspending pigments, drugs, etc. vehicular adj. [Latin veho carry] [56]

2. An inert agent that carries the active ingredient in a medicine is called vehicle. [57]

3. An excipient or a menstruum. A substance, usually without therapeutic action, used as a medium to give bulk for the administration of medicines is called vehicle. [58]

4. A more or less inert substance added in a prescription as a diluent or vehicle or to give form or consistency when the remedy is given in pill form is called excipient.[58]

5. Any more or less inert substance added to prescription in order to confer suitable consistency or a form of to the drug is called excipient. [59]

6. An inert medium (as a syrup) in which a medicinally active agent is administered is called vehicle. [60]

7. Any of various media acting usually as solvents, carriers, or binders for active ingredients or pigments is called vehicle. [60]

8. A substance, usually fluid, possessing little or no medicinal action, used as a medium for active remedies is called vehicle. [61]

9. Excipients are non-active ingredients added to capsules to facilitate a number of desired effects.

Classification of Excipients – It can be classified into the following categories,

- Diluent

- Lubricants

- Surfactants or wetting agents

- Absorbents

Diluent - Diluents are fillers that add bulk to a capsule to facilitate proper fill and cohesion.

Eg - Lactose, microcrystalline cellulose and pregelatinized starch.

Lubricants - Lubricants are added to a capsule to prevent adhesion and facilitate the flow of the drug fill into the tableting or encapsulating machinery.

Eg - Magnesium stearate.

Surfactants - Surfactants or wetting agents facilitate the wetting of the drug substance to enhance dissolution.

Eg - Sodium lauryl sulfate.

Absorbents - Absorbents are added to a capsule to physically separate interacting agents and absorb any liquefied material.

Eg - Magnesium carbonate, kaolin, or light magnesium oxide.

Eg for vehicle –

- A syrup in liquid preparation.

Simple syrup, aromatic powder, honey, and various elixirs.

Research article on vehicle :- [62]

Title – "*Extrinsic sugar as vehicle for dietary fat*"

This study concludes that lowering the intake of extrinsic sugar is unlikely to be associated with higher fat intake. Instead extrinsic sugar may act as a vehicle for fat intake, encouraging consumption by making the fat more palatable.

Adjuvant :-

The word adjuvant is derived from Latin word "*adjuvans*" means to aid. Synergist is the synonym given for adjuvant.

Definition :–

- That which assists, especially a drug added to a prescription to hasten or increase the action of a principal ingredient. [63]

- A remedy that acts to enhance the action of another is called synergist. [63]

- A substance added to a drug product formulation which affects the action of the active ingredient in a predictable way. [64]

Eg – In immunology, chemicals such as aluminium hydroxide and aluminium phosphate that are added to an antigen to increase the body's immunologic response. The adjuvants that increase the size of the antigen, making it easier for B-lymphocytes and phagocytes to recognize it. It also promotes the chemotaxis and stimulates the release of cytokines.

The terms related to synergist are ;

- Synergetic or synergic – The one which exhibits co-operative action.

- Synergistic – That which is concerning synergy on acting together.

- Synergy or synergism – An action of two or more agents working with each other. The action will be combined and co-ordinated. [65]

Carrier :-

Definition :–

A molecule that when combined with another substance is called carrier.

Benefit – When it is combined with another substance, it can pass through a cell membrane, as occurs in facilitated diffusion or some transport mechanisms. [66]

Importance of vehicle :–

Vehicle is a substance that is advised along with the medicine. And the actions of it are seen in relation with following aspects;

1. **Drug administration :-**

There are many routes of drug administrations are mentioned in modern system of medicine. One of such method is oral administration or oral ingestion.

Oral ingestion – It is the most common method of drug administration. It is the safest, most convenient and most economical.

Absorption from GI tract is governed by factors such as surface area for absorption, blood flow to the site of administration, the physical state of drug like

solution, suspension or solid dosage form, its water solubility and the drugs concentration at the site of action. For drugs given in solid form, the rate of dissolution may be the limiting factor in their absorption, especially they have low water solubility. Since most drug absorption from the GI tract occurs by passive diffusion, absorption is favoured when the drug is in the non-ionized and more lipophilic form.

Modifications in oral ingestion –

Some of the modifications in drug administration are made in modern system of medicine to increase the efficacy of the medicines like in the case of tablets. The modifications that are made in tablets are given below;

1. Controlled – release preparations -[67]

The rate of absorption of a drug administered as a tablet or other solid oral dosage form is partly dependent on its rate of dissolution in GI fluids. This is the base of controlled release, extended release, sustained release and prolonged action pharmaceutical preparation that is designed to produce slow, uniform absorption of the drugs for eight hours or longer. Such preparations are offered for medication in all drug categories.

Advantages of such preparation –

- ♣ Reduction in the frequency of drug administration

- ♣ Maintenance of therapeutic effect over night.

- ♣ Decreased incidence and intensity of both undesired effect and non-therapeutic blood levels of the drug that often occur after administration of immediate release dosage forms.

Base – Hydroxides or carbonates or bicarbonates as a base for Esculetin

Eg –

- • Antidepressant therapy – Nemeroff, 2003

- Ca^{++} entry blockers – Dihydropyridine

2. Sustained action tablets [68] – The tablet which is administered through oral route and they release the drug at desired time and prolong the effect is called sustained action tablet.

Base - Ethyl cellulose.

Eg - Aspirin (acetylsalicylic acid) tablets

3. Sublingual tablets [68] –

Definition - One that dissolves when held beneath the tongue, permitting direct absorption of the active ingredient by the oral mucosa is called sublingual tablets.

These contain the drugs which are destroyed, inactivated or not absorbed in the GI tract, but are directly absorbed through, the mucosal tissues of the oral cavity.

Use - Sublingual tablets are used when the drug is unstable in the stomach or when a rapid onset of drug action is desired.

Base - Epinephrine bitartrate with the total quantity of microcrystalline cellulose and two thirds of the quantity of low-substituted hydroxypropyl cellulose.

Eg - Nitroglycerin tablets

4. Lozenge tablets [68] – The type where the drugs will not disintegrate in oral cavity, but slowly dissolve in the oral cavity to produce continuous effect on the mucous membrane in mouth or the throat is called lozenge tablet.

Base - Aspartame, Asukfame-K, Cyclamate, Saccharin and Sucralose.

5. Soluble tablets [68] - The tablets which are dissolve in liquids like water is called soluble tablets. Base - Sugar alcohol.

Eg – Antibiotics

6. Effervescent tablets [68] – The tablets which liberate CO_2 and produce effervescence.

Use - Effervescent tablets are easily placed in solution for a patient to drink. The patient absorbs the drug more rapidly because the active ingredient is in solution.

Base - Bicarbonate, citric acid and tartaric acid which are added with other drugs.

Eg- Generic Name - Aspirin Effervescent Tablets, Brand Name example - Alka-Seltzer

7. Enteric coated tablets [68]–

The tablets which disintegrate in the alkaline media of intestines are called enteric coated tablets or an enteric-coated tablet is a tablet that has a special outer covering designed to dissolve in the small intestine. Once the enteric-coating is dissolved, the tablet disintegrates and the active ingredient can be absorbed by the patient.

Use - Enteric-coated tablets are used when the active ingredient is destroyed by substances in the stomach. In addition, enteric-coated tablets are indicated when the stomach is irritated by the drug in the tablet.

Base - Hydroxyproply methylcellulose.

Eg – Aspirin

8. Chewable tablets [68]– That which is consumed by chewing is called chewable tablets.

Use - It gives pleasant, cooling sensation. Antacids are invariably prepared as chewable to obtain quick ingestion relief as well as the antacid dose is too large to swallow and the activity is related to particle size.

Base - Mannitol, Sorbitol, Lactose, Chocolate powder, Dextrose and Glycine are used as a base for the chewable tablets.

Eg - Antacid tablets, Multivitamin tablets

9. Sugar coated tablets [68]– In this sugar coating is done to mask the odd taste and odour as well as to protect the drug from atmospheric condition.

Base - Sugar coating liquids used in preparing sugar coated tablets contain binders such as gelatin or gum arabic so as to increase strength of the sugar coating layer or to increase bonding strength between an uncoated tablet and the sugar-coating layer.

10. Film coated tablets [68]– Here thin coating with water soluble materials to protect the drug from atmospheric conditions.

Use - Film coating techniques reduce process times, offer greater control over coating parameters.

Base – i. Film coating involves the deposition of a thin polymer layer onto the tablet core, usually by a spray method.

ii. The colour concentrated base dispersion contains a pigment, dye (optional) and at least one plasticizer adapted to affect the disintegration time of the final coating in a co-solvent mixture of water and a lower alkanol. The color concentrated base dispersion is diluted with a film-forming solution of zein in a lower alkanol (and optionally a small amount of water) to form a film coating mixture. A mixture of plasticizers having different moisture resistance may be utilized to vary the moisture resistance of the coating.

11. Hard and soft gelatin capsules [68]- The basic difference between the hard and soft gelatin encapsulation processes is that in the hard gelatin capsule process, the capsule is prefabricated and supplied empty, whereas in the soft gelatin capsule process the encapsulation and filling take place simultaneously. A soft gelatin capsule comprising a shell of gelatin and a softener.

Base - Polyethylene glycol and a low polyhydric alcohol.

Eg - Cod liver oil soft gel capsules

2. Drug companion :- [69]

Definition -

A medication whose efficacy depends on its use with second agent and the same drug may have little effect when used alone is called drug companion.

3. **Drug delivery :-**

Definition –

Systems for the delivery of drugs to target sites of pharmacological actions. Technologies employed include are those concerning drug preparation, route of administration, site targeting, metabolism, and toxicity. [70]

There are several methods of drug delivery have been used experimentally.

Those are ;

1. Chemical modifications of a drug to enable it to penetrate membranes such as blood brain barrier.

2. Incorporation of micro-particles in colloidal carriers made of proteins, carbohydrates, lipids or synthetic polymers.

3. Controlled release systems that permit a drug to be delivered for very long periods.[71]

4. **Drug interaction :–**

Definition - The combined effect of drugs taken concurrently is called drug interaction.

The result may be antagonism or synergism and consequently may be lethal in some cases. It is important for the patient, physician and nurse to be aware of the potential interaction of drugs that are prescribed as well as self administering. Many patients especially elderly may take several medicines each day. The chances of developing an undesired drug interaction increase rapidly with the number of drugs used. It is estimated that if eight or more medications are being used then there is a 100% chance of interaction.[72]

5. Drug absorption :-

Definition –

The process whereby a drug moves from the muscle, digestive tract, or other site of entry into the body toward the circulatory system. [73]

Drugs given by mouth may be inactive because, [74]

- Enzymatic degradation of polypeptides within the lumen of the gastrointestinal tract

  Eg – Insulin, adrenocorticotrophic hormone

- Poor absorption from the gastrointestinal tract

  Eg – Aminoglycoside, antibiotics.

- Some of the inactivation compounds are absorbed from the GIT but are degraded in the gut wall or during the first passage through the liver before they can reach their site of action.

  Eg - Testosterone and aldosterone

6. Bioavailability :-

Definition :–

- Bioavailability is a term used to indicate the fractional extent to which a dose of drug reaches its site of action or a biological fluid from which the drug has access to its site of action.[75]

- The rate and extent to which an active drug or metabolite enters the general circulation, permitting access to the site of action. It is determined either by measurement of the concentration of the drug in body fluids or by the magnitude of the pharmacologic response.[76]

o Bioavailability of a drug is defined as the amount or percentage of drug that is absorbed from a given dosage form and reaches the systemic circulation following non-vascular administration.[77]

Some of the factors affecting drug absorption and its bioavailability [78]–

Physical properties of drug

♣ Nature of the dosage form

♣ Physiological factors

Physical properties –

- Physical state – Liquids are absorbed better than solids and crystalloids.

- Lipid or water solubility – Drugs in aqueous solution mix more rapidly than those in oily solution with the aqueous phase of absorption site and hence absorbed faster. However, at the cell surface, the lipid soluble drugs penetrate into the cell more rapidly than the water soluble drugs.

Nature of the dosage form –

- Particle size – The particle size of sparingly soluble drugs can affect their absorption. So a tablet that contains large aggregates of the active compound does not disintegrate easily even on prolonged contact with gastric and intestinal juices and hence poorly absorbed. Small particle size is important for absorption of corticosteroids, antibiotics. Thus by reducing the particle size the drug dose can be reduced.

- Disintegration time and dissolution rate – The effect of the physical factors is commonly evaluated by determining,

  i. The 'disintegration time' which measures the rate of the breakup of the tablet or capsule into the granules. The disintegration time of a tablet is a poor measure of the bioavailability of the contained drug. Because, in addition to the disintegration time and particle size, various

other factors such as crystalline form, saturation solubility and salvation can modify the bioavailability of a drug.

ii.   The 'dissolution rate' which is the rate at which the drug goes into the solution.

- Formulation – Usually substances like lactose, sucrose, starch and calcium phosphate or lactate are used as inert diluents in formulating powders ant tablets. Such filters may not be totally inert but may affect the absorption as well as stability of the medicament. Thus, calcium and magnesium ions reduce the absorption of tetracycline, while calcium phosphate used as a diluent for calciferol may cause calcium toxicity, when given in large doses. Replacement of calcium phosphate by lactose made a marked difference the efficacy of a reformulated phenytoin preparation. It is well established that the method formulations markedly influence the drug absorption and thus determine its bioavailability. A faulty formulation can render a useful drug totally usefully therapeutics.

Contraindications of vehicle :-

In modern system of medicine some of the drugs which should not be consumed along with some particular vehicle. If consumed it shows ill effect to the body. Some of the examples are tabulated below;

Table No. 47 - Showing contraindications of vehicle for different drugs;

Sl.No	Drug	Vehicle	Ill effect
1.	Tetracycline	Milk and its products	Because of the presence of calcium in milk the drug action hampers
2.	Tranquilizers	Caffeine	Harmful effects
3.	Antidepressant	Caffeine Fish Alcohol	Harmful effects Hyper tension and other cardiac disorders Depression
4.	Sedatives	Caffeine	Harmful effect
5.	Anti-arrhythmic	Caffeine	Impairment in cardiac activity
6.	Drugs used in angina	Caffeine	Impairment in cardiac activity
7.	Peptic ulcer forming	Caffeine	Increase in gastric secretion

	drugs		
8.	Antihistamine	Alcohol	Excess sleep
9.	Paracetamol	Alcohol	Liver disorder
10.	Aspirin	Alcohol	Liver disorder, blood mixed stool
11.	β -blockers	Meat	Reduced action of the drug
12.	Dalcolax	Milk	Reduced action of the drug
13.	Iodine (in goiter)	Cauli-flower	Obstruction in production of thyroid hormones
14.	Drugs used in angina	Alcohol	Hypertension, death
15.	Anticoagulant	Alcohol	Internal hemorrhage
16.	Hypoglycemic drugs	Alcohol	Hypoglycemia leading to giddiness etc.
17.	Sulfonamide	Alcohol	Severe impairment in the body may lead to death
18.	Antibiotic	Alcohol	Severe impairment in the body may lead to death
19.	Diuretics	Alcohol	Hypertension

In Siddha system of medicine[79] –

In this system of medicine, the same formulation is used for different ailments but varies its adjuvant called *Anupanam*. According to Siddha, the Anupana will be varying in different seasons.

Eg - Milk, ghee, honey, herbal extracts, ginger juice, betel leaf juice, cold water and warm water.

Importance –

o It is believed that, if proper, the adjuvant itself would modify the therapeutic properties and potency of the drug leading to the desired effect.

o The adjuvant used for a drug would also modify the potency and curative capability synergistically for better therapeutic results.

o **In Naturopathy system of medicine –**

o The main methods of treating any disease in *Prakruti chikitsaa* (Naturopathy) are by the help of mud, water and sun. According this system, the fruits and vegetables juices are advised after or before the food intake or only the intake of fruit juices to cure many diseases.

Table No. 48 – Showing the examples for fluids as Anupana for different diseases in *Prakruti chikitsaa*;

Sl.No	Disease	Fluids
1.	Blood pressure	Carrot, grapes, orange, sweet orange, milk,
2.	Jaundice	Grapes, orange, sweet orange
3.	Carcinoma	Carrot, fig
4.	Hyper-acidity	Carrot, spinach leaf, holy basil
5.	Ulcer	Grapes, fig, carrot, milk
6.	Dyspnoea	Carrot, fig, grapes, green leafy soups, goat milk, black gram soup
7.	Disorder related to blood	Lemon, carrot, tomato, spinach leaf, apple
8.	Loss of appetite	2 parts tomato + 1 part pine apple and lemon juice
9.	Arthritis	Carrot, spinach leaf, coriander, coconut water
10.	Diabetes	Carrot, coconut water, bitter gourd, spinach leaf
11.	Stones	Cucumber, carrot
12.	Headache	Beet root, carrot

In Homeopathic system of medicine –

The term 'vehicle' implies, "Means of conveyance or transmission."

Definition - Vehicle is a substance, in which medicines are prepared or mixed and given for their internal administrations either by oral or olfaction method and external application for medications. [80] These substances are comparatively inert as such taken as a means of developing the therapeutic activity of medicinal substance.

Forms of Vehicles :-

There are two forms of vehicles:

1. Solid

2. Liquid

Solid Vehicles:-

1. Milk sugar

2. Globules or pillules

3. Pellets

4. Tablets or Tabloids

5. Cones

Liquid Vehicle :-

1. Distilled Water

2. Alcohol

3. Glycerine

4. Olive Oil

5. Almond Oil

Qualities of an ideal vehicle :-

1. It may not have any medicinal property of its own.

2. It should be chemically neutral; neither acidic nor alkaline in medicinal effects. They must not undergo change or decomposition,

3. The above two specific properties are more applicable to those which are used in potentising medicines.

4. It must be harmless regarding its action on human organisms. The pharmacological message of the original drug is not disturbed in any way.

5. It should be capable of carrying the dynamic powers of drugs into interior human organisms to fight the disease force.

6. It should be edible and palatable.

Uses of Vehicles :-

1. Vehicles are used in the preparation of mother tinctures, mother solutions and mother powders from crude drug materials and without any vehicles these preparation could not be made.

2. It is used for further triturations and increased potentisation from the mother, so that pharmaceutical message is easily carried and therapeutic values are retained of the particular drug substances.

3. Used as bases for preparing external applications of medicines.

4. For dispensing medicines or remedies according to the prescriptions of physicians.

5. Vehicles like olive oil, vaseline, glycerine, etc. are themselves applied externally as a mechanical aid only.

6. As a preservant or certain medicines, vehicle like alcohol is mixed in certain percentage with the freshly expressed juices of plants (vide Organon of Medicine, aphorism 268, footnote).

7. Used as 'placebo' or 'phytum' in between the administrations of the two doses of medicines or remedies, especially in cases of chronic diseases and where long-acting remedies are used.

8. Sick babies who could not tolerate fats, sugar of milk is given as a diet.

9. The concept of' biological specificity and resonant promotion of lone pair electrons is put forward by Dr. Rati Ram Sharma. According to this concept, the lone pair of electrons in the vehicle molecules (alcohol, water and lactose) gets resonantly promoted during dynamisation. During this process, the vehicle molecules achieve the same number of active electrons and same exchangeable energies as the drug molecules. Thus the vehicle molecules exhibit the properties of drug molecules. The new concept, which shows that an imprint of original drug molecules could be made upon vehicle molecules. So even in the absence of original drug molecules vehicle molecules bear the properties of drug molecules. [81]

In Unani system of medicine :-[82]

In *Unani* system of medicine, the term "*Badarakaa/Rahanuma* which means *Samrakshaka/pathapradarshaka*" indicates the word Anupana or vehicle.

Definition :– The one which helps for the consumption of medicine and for the *oushadha vilineebhava* (to mix the oushadha) is called Anupana.

According to them mixing of several drugs also is considered as *Badrakaa* i.e, Anupana.

Types of Badrakaa –

- ♣ *Moophrad (Asamsrushta)*

- ♣ *Murakkab (Samsrushta)*

Moophrad or asamsrushta – When a drug is administered with simple Anupana then the action will take place only based on the drug

Eg – Any *moola* (*asla* or *amood*) with simple Anupana like water.

Murakkab or samsrushta – When a drug is administered with similar property that of the drug then the action takes place by both drug and Anupana.

Eg – *Sanaayake* or *sonaamukhi* with milk.

Benefits –

- To help the drug in reaching specific target organ

- It quickly enhances the quality and action of the drug

- By the help of Anupana, the drug will enter even to the minute cell

Eg –

- *Ahiphena* with *taila*

- *Karpoora* with sneha or madya

- *Sonaamukhi* with milk for *virechana.*

In Chinese system of medicine :–

In Chinese medicine system the importance of vehicle for the consumption of medicine is also given. The research article shows that the importance of vehicle in that system. The drug which is taken in this study is *Danshen* (*Salvia miltiorrhiza*). *Danshen* is widely used in traditional Chinese medicine, often in combination with other herbs. Remedies containing *danshen* are used traditionally to treat a diversity of ailments, particularly cardiac and vascular disorders such as atherosclerosis or blood clotting abnormalities.

Title :-

"*Reducing effect of Salvia miltiorrhiza extracts on alcohol intake: Influence of vehicle.*"[83]

The results of the present study demonstrate that Polysorbate 80 is a proper vehicle for unravelling the reducing effect of Salvia miltiorrhiza extracts on alcohol intake. The ability of Polysorbate 80 to form micelles with the active ingredient(s) of the Salvia miltiorrhiza may explain these results. They may also offer relevant information for pharmaceutical preparation of Salvia miltiorrhiza extract to be used in future clinical trials.

REVIEW ON KASA

Uchhwaasa and *nishwaasa* or to say breathing out and breathing in are the continuous phenomenon of life. i.e, to and fro movement of air through the *Praanavaha srotas.* It is the vital sign of life and the normalcy of which suggests health. The abnormality in respiration indicates disease, and its cessation marks death. The one of the *rogas* that affects the *praanavaha srotas* is the disease Kasa.

Kasa or Cough is a trivial disease, which is one of the commonest complaint in day to day practice and it is also a symptom of various diseases of respiratory system. In Ayurveda, *Kasa* is explained as a separate disease entity with the explanation of specific *Nidaana panchakaas, saadhyaasaadhyataa, chikitsaa* and *pathyaapathya.*

Kasa may not be a life threatening but increasingly annoying and irritating to the individuals in routine activities. More over when neglected they may lead to a series of complications later. *Kasa* or cough has a broad-spectrum of etiology, ranging from allergens to infections. Recurrent attacks of *Kasa* or cough hamper the person's day today activities. So it needs to be treated properly either by *Shodhana* or *Shamana* line of treatment.

Derivation of Kasa :-

- o According to *Gangadhara* on *Charaka Kasadhikaara*, *Kasa* from the *dhaatu* "*kasri*", which means "*bhinnaswara*" i.e, unpleasant or broken sound.

- o *Paanini* When "*gater*" *partyaya* is added to the root "*kas*" which gives the meaning *gati* - movement.

- o According to Chakrapaani on Charaka Kasadhikaara, the word *Kasa* is derived from "*kas*" and gives the meaning "गति शातनयोः" means "to fall"

Definition of Kasa :-

1. शुष्कोवा स कफो वा कसनात् कास उच्यते ॥ (च.चि.18/8)

This means the production of abnormal sound in the process which may be productive or dry.

2. उरप्रभृति शातनयोः कास इति अनवस्था साम्य उच्यते । (चक्रपाणि– च.चि.18/8)

Means that *shareera* especially *urapradesh* shows falling posture while coughing.

3. सम्भिन्नकांस्य स्वान तुल्य घोषः । (सु.उ.52/5)

Means it is the disease associated with a typical sound that can be compared to that of sound obtained from broken bronze vessel.

4. स घोष तद्विविध प्राण निगमनथः स्वरयुक्त स प्राण वायुः । (डल्हण–सु.उ.52/5)

Means forceful expulsion of the *praana vaayu* resulting in the production of sound (*ghosha*) resembling that of a broken bronze vessel is called Kasa.

5. कसति शिरोकण्ठात् ऊर्ध्वगच्छति वायुरिति । (मधुकोष–मा.नि.11/2)

The disease where the *vaayu* attains upward movement and moves above *kanta* and *shira* is called as *Kasa*.

The English meaning of *Kasa* is "cough". [84]

Synonyms of Kasa :-

Synonyms of Kasa given in *Atharva veda* are,

1. *Kaasaha*
2. *Kaasa*
3. *Kaasika,*
4. *Kshavathu* [85]

"*Kasa*" and "*Kshavathu*" are the synonyms. Though they are different entities, their pathogenesis could be the same.

Nidaana of Kasa :-

Nidaana is the cause for all disease and one among the five factors (*nidaana panchaka*) for the diagnosis of any disease. It is classified into different groups in Ayurvedic classics on different basis.

Nidaana is categorized broadly into two main divisions;

1) *Samanya Nidaana* (General causative factor)

2) *Vishesha Nidaana* (Specific causative factor)

Saamaanya nidana :-

General etiological factors are responsible for the manifestation of all varieties of *Kasa* where as the specific etiological factors are responsible for the specific variety of *Kasa*.

For the better understanding of *Nidaanaas* can also be grouped into two groups;

✧ *Aahaaraja Nidaana*

✧ *Vihaaraja Nidaana*

Aahaaraja Nidaana **of** *Kasa* **:-**

Table No. 49 – Showing *aahaaraja nidaana* of *Kasa* in different classics ;

Sl.No	*Nidaanaas*	C.S	S.S	A.S	B.S	H.S	M.N	Y.R	B.P	G.N	B.R
1.	*Rookshaahaara sevana*	✔	✔	✔	✔	X	✔	✔	✔	✔	✔
2.	*Ati kashaayarasa aahaara sevana*	✔	✔	X	X	X	X	X	X	X	X
3.	*Sheeta aahaara sevana*	✔	✔	X	X	X	X	X	X	X	X
4.	*Asaatmyaahaara sevana*	X	✔	X	✔	✔	X	X	X	X	X
5.	*Alpaahaara sevana*	✔	X	X	X	X	X	X	X	X	X
6.	*Bhojanasya vimaargagamana*	X	✔	X	X	X	✔	✔	✔	✔	✔

Vihaaraja nidaana **of** *Kasa* :-

Table No. 50 – Showing *vihaaraja nidaana* **of** *Kasa* **in different classics ;**

Sl.No	*Nidaanaas*	C.S	S.S	A.S	B.S	H.S	M.N	Y.R	B.P	G.N	B.R
1.	*Dhoomopaghaata*	X	✓	X	✓	X	✓	✓	✓	✓	✓
2.	*Rajasevana*	X	✓	X	X	✓	✓	✓	✓	✓	✓
3.	*Shrama*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4.	*Vegaavarodha*	✓	✓	✓	✓	X	✓	✓	✓	✓	✓
5.	*Haasyapraharsha*	X	X	X	X	✓	X	X	X	X	X
6.	*Anila sannirodha*	X	X	X	X	✓	X	X	X	X	X
7.	*Vega udeerana*	X	X	✓	X	X	X	X	X	X	X
8.	*Raatri jaagarana*	X	X	✓	X	X	X	X	X	X	X
9.	*Kshavathu dhaarana*	X	✓	X	✓	X	✓	✓	✓	✓	✓

Vishesha nidaana

Aachaarya Charaka has given the special etiological factors for the causation of individual type of Kasa.

Table No. 51- Showing *vishesha aahaaraja nidaana* **of** *Kasa*; [86]

Sl.No	*Vataja Kasa*	*Pittaja Kasa*	*Kaphaja Kasa*	*Kshataja Kasa*	*Kshayaja Kasa*
1.	*Rookshaahaara*	*Katu ahaara*	*Guru aahaara*		*Vishama aahaara*
2.	*Sheetaahaara*	*Ushnaahaara*	*Abhishyandhi aahaara*		*Asaatmya aahaara*
3.	*Kashaayaahaara*	*Vidaahi aahaara*	*Madhura aahaara*	–	
4.	*Alpaahaara sevana*	*Amla, kshaara aahaara*	*Snigdha aahaara*		
5.	*Pramitaashana*				
6.	*Anashana*				

Vihaaraja nidaana –

Table No. 52 - Showing *vishesha vihaaraja nidaana* **of** *Kasa*; [86]

Sl.No	Vataja Kasa	Pittaja Kasa	Kaphaja Kasa	Kshataja Kasa	Kshayaja Kasa
1.	*Ati stree sevana*	*Krodha*	*Swapna vicheshta*	*Ati vyavaaya*	*Ati vyavaaya*
2.	*Vegadhaarana*	*Agni santaapa*	*avyaayaama*	*Bhaara vahana*	*Vega dhaarana*
3.	*Aayaasa*	*Soorya santaapa*		*Adhwa*	*Ghruninaam chintaa*
4.				Yuddha	

Poorwaroopa of *Kasa* :-

Poorwaroopa are those signs and symptoms which appear earlier to the actual disease. They manifest during the stage of *dosha dooshya sammoorchana*.

The *Poorwaroopa* of *Kasa* are tabulated below ;

Table No. 53 – Showing *poorwaroopa* **of** *Kasa* **in different classics ;**

Sl.No	Poorvarupa	C.S	S.S	A.S	A.H	M.N	G.N	B.P	V.S
1.	*Shooka poorna gala*	✔	X	✔	✔	✔	✔	✔	✔
2.	*Shooka poorna aasya*	✔	X	X	X	✔	✔	✔	✔
3.	*Kante kandu*	✔	✔	✔	✔	✔	✔	✔	✔
4.	*Bhojyaanaamavarodha*	✔	✔	X	X	✔	✔	✔	✔
5.	*Arochaka*	X	✔	✔	✔	X	X	X	X
6.	*Sashabdha vaishamya*	X	✔	X	X	X	X	X	X
7.	*Agnisaada*	X	✔	X	X	X	X	X	X
8.	*Gala lepa*	X	✔	X	X	X	X	X	X
9.	*Taalu lepa*	X	✔	X	X	X	X	X	X
10.	*Hrudaya Aswasthataa*	X	X	✔	X	X	X	X	X
11.	*Kavala galane vyadha*	X	X	X	X	X	X	✔	X

Types :-

In *Garuda puraana* three types of *Kasa* are mentioned ;

1. Abhrata Kasa

2. Vataja Kasa

3. Summaa Kasa

Aachaaryaas like *Charaka, Sushruta, Vaagbhata, Bhela, Bhaavamishra, Shaarngadhara, Yogaratnaakara, Maadhavakara, Sodhala (Gada Nigraha)* mentioned *Kasa* as five types. They are;

1. *Vataja*
2. *Pittaja*
3. *Kaphaja*
4. *Kshataja*
5. *Kshayaja*

Haareeta Samhitaa mentioned eight types *Kasa* ;

1. *Vataja*
2. *Pittaja*
3. *Kaphaja*
4. *Vata Pittaja*
5. *Kapha Pittaja*
6. *Sannipataja*
7. *Raktaja*
8. *Kshayaja*

Maharshi Haareeta has excluded *Kshataja Kasa* and has included *Vata-Pittaja, Shleshma-Pittaja, Sannipataja* and *Raktaja Kasa*. The lakshanas mentioned for *Raktaja Kasa* is more or less similar to the *Kshataja Kasa* explained by other authors. In the management of Kasa while discussing the *chikitsaa* aspects Charaka, Sushruta and Vaagbhata explains

1. *Kaphaanubandhi anilaja*
2. *Kaphanubandhi pittja*
3. *Vatanubandhi Pittaja*
4. *Sannipataja*

In *Basavarajeeyam* only five types of *Kasa* are explained while classifying the disease but in the context of management classified 14 different varieties of Kasa ;

1. *Shukti*
2. *Shleshma*
3. *Aama*
4. *Paandu*
5. *Krishna*
6. *Dadhi*
7. *Shleshma jihwika*
8. *Upajihwikaa*
9. *Oordhva*
10. *Kushta*
11. *Kanta jiwhikaa*
12. *Jaraa*
13. *Kasa*
14. *Kasaatisara*

Based on *saadhyaasaadhyataa*, the disease can be classified into

1. *Saadhya Kasa*
2. *Asaadhya Kasa*

Based on occurrence, Kasa can be classified into two groups ;

1. *Nija* or *Doshaja Kasa*
2. *Aagantuja Kasa*

Based on the nature of *kasa*, the disease *kasa* can be classified into two varieties ;

1. *Shushka Kasa*
2. *Aardra Kasa*

Classification of Kasa :-

Flow chart No. 2 – Showing Kasa bheda according to different aachaaryaas ;

KASA BHEDA

Based on occurrence   Based on *Dosha*   Based on Nature of *Kasa*   Based on *Saadhyaasaadhata*

(Based on *Lakshana*)

     Nija   *Aaganthuja*   *Saadhya*   *Asaadhya*

Aardhra   *Shushka*

5 types (Most of the *Aachaaryaas*)   **8 types** (*Haareeta*)

1) Vataja Kasa,   *1) Vataja Kasa*

2) Pittaja Kasa,   *2) Pittaja Kasa,*

3) Kaphaja Kasa,   *3) Kaphaja Kasa,*

4) Kshataja Kasa   *4) VataPittaja Kasa,*

5) Kshyaja Kasa   *5) Shleshma Pittaja Kasa,*

                                           6) Sannipataja Kasa,

                                           7) Raktaja Kasa,

                                           8) Kshyaja Kasa.

Roopa or *lakshana* of *Kasa* –

The actual signs and symptoms of the disease will be seen in the *vyakta avasthaa* where *dosha dooshya sammoorchana* takes place. With the help of *roopa*, a disease can be diagnosed and confirmed. The *sampraapti ghatakaas* can be studied with the help of *roopa* only.

Roopa of *Vataja Kasa* –

Vataja Kasa is having the lakshanas like *shushka Kasa*, *kapha shushkata* or *alpa kaphata* which comes out with *krucchrata*, *shushka ura*, *shushka kanta*, *shushka vaktra*, *hrut shoola*, *parshwa shoola*, *shirashoola*, *nirghosha*, *shirashoola* and *swarabheda*.

Roopa of *Pittaja Kasa* –

Table No. 54 – Showing Pittaja Kasa lakshanas in different classics ;

Sl. No	*Lakshanaas*	C.S	S.S	A.S	A.H	B.S	M.N	B.P
1.	*Peetha nishteevana and peetha netra*	✓	✓	✓	✓	X	X	✓
2.	*Tikta aasyata*	✓	✓	✓	✓	X	✓	✓
3.	*Urodoomaayana*	✓	X	✓	X	✓	✓	X
4.	*Trushnaa*	✓	✓	✓	✓	X	✓	✓
5.	*Daaha*	✓	✓	X	X	X	✓	✓
6.	*Moha*	✓	X	✓	X	X	X	X
7.	*Aruchi*	✓	✓	X	X	X	X	X
8.	*Bhrama*	✓	X	✓	✓	X	X	X
9.	*Pratata Kasa*	✓	X	✓	✓	X	X	X
10.	*Shleshmana Pitta samsrustam*	✓	X	X	X	X	X	X
11.	*Hrudgraha*	X	X	X	X	✓	X	✓
12.	*Jwara*	X	✓	✓	✓	✓	✓	✓
13.	*Paandu*	X	✓	✓	X	X	✓	✓
14.	*Pitta* and *rakta vamana*	X	✓	✓	✓	X	✓	✓
15.	*Mukha shosha*	X	X	X	✓	X	✓	✓

Roopa of Kaphaja Kasa –

Table No. 55 – Showing *Kaphaja Kasa lakshanas* in different classics ;

Sl. No	Lakshanas	C.S	S.S	A.S	A.H	B.S	M.N	B.P
1.	Bahula, Madhura, Snigdha, Ghana, Sandra Kapha	✓	X	X	X	X	X	X
2.	Urah alpa rujatwa	X	✓	X	X	X	✓	✓
3.	Hrudaya stimitha	X	X	✓	X	X	X	X
4.	Vaksha Kapha Sampurnamiva Manyate	✓	X	X	X	X	X	X
5.	Kanthe kandu	X	X	X	X	✓	X	X
6.	Swarabheda	X	X	X	X	X	X	✓
7.	Peenasa	✓	X	✓	X	X	X	✓
8.	Utklesha	✓	X	X	X	X	X	X
9.	Chardi	✓	X	✓	X	X	X	X
10.	Aruchi	✓	✓	✓	X	✓	X	X
11.	Aasya maadhuryataa	✓	X	X	X	✓	X	X
12.	Shirashoola	X	✓	X	X	✓	✓	X
13.	Mandaagni	✓	X	X	X	X	X	X
14.	Gourava	✓	X	✓	X	X	✓	X
15.	Angasaada	X	✓	X	X	X	X	X
16.	Romaharsha	✓	X	✓	X	X	X	X
17.	Mukhalepa	X	✓	X	X	X	X	X
18.	Kledataa	X	X	✓	X	X	X	X

Roopa of *Kshataja Kasa*–

Kshataja Kasa has the *lakshanaas* like,

1. *Shushka Kasa* in the beginning
2. *Rakta mishrita kapha shteevana* later
3. *Toda* in the *kanta*
4. *Toda* in the *vaksha Pradesha*
5. *Parwa bheda*
6. *Jwara*
7. *Shwasa*
8. *Trushnaa*
9. *Vikruta swara*
10. *Paaraavata iva koojana*

Roopa of Kshayaja Kasa–

Kshayaja Kasa has the *lakshanaas* like,

1. *Harita varnayukta kapha which is rakta mishrita*
2. *Durgandhayukta steevana*
3. *Rogi* feels as if like *hrudaya* has become *sthaana chyuta*
4. Feels to take more *aahaara* but still becomes *krusha*
5. *Mukha, twacha, paani* and *paada tala shlakshnataa*
6. *Shreemaddarshana lochana* (*kaantiyukta lochana*)
7. *Dwandwa doshaja jwara*
8. *Paarshwa ruja*
9. *Peenasa*
10. *Aruchi*
11. Some times *malabaddhataa* and some times *samhata mala*
12. *Swarabheda*
13. *Lakshanaas* will sometimes increase due to *ushna* and some time due to *sheeta*.

Sampraapti of Kasa :-

 Sampraapti deals with all the pathological process, which are responsible for clinical signs and symptoms of the disease. *Sampraapti* helps to understand how the

disease has manifested after *nidaana Sevana*. Ayurveda has given much importance for *Sampraapti Vighatana*. Because *chikitsaaa* is mainly to disintegrate the *Sampraapti* (pathology) i.e "*Sampraapti Vighatana meva Chikitsaa*"

Aachaarya Charaka explained *saamaanya sampraapti* of *Kasa* as vitiated *praana* and *udaana vaayu*, attains upward movement and gets filled up in the channels, which are present in the *shira, ura* and *greevaa pradesha*. Vitiation of *praana* and *udaana vaayu* and blocking of *srotas* results in increased pressure inside the channels of eyes, nose, ear and throat. In turn there will be severe painful contraction of muscles in the areas like mandibular joint and cervical region, resulting in forceful expulsion of air producing a typical sound in the presence or absence of sputum called as Kasa.

Aachaarya Sushruta narrates *sampraapti* of *Kasa* as by the *nidaana sevana*, vitiation of *praana vaayu* takes place and this gets mixed with *udaana vaayu*, and further moves upwards. The *prakopa* of these two *vaayus* causes abnormal, forceful expulsion of *vaayu* from the mouth creating a peculiar sound similar to that of sound produced by broken bronze vessel.

In *Ashtaanga Hrudaya*, *Vaagbhata* opined that due to *nidaana sevana*, vitiation of *praana* and *udaana vaayu* take place, which move upwards and get filled up in the *srotas* of *kanta* and *shira pradesha*. Due to increased pressure inside the *srotas*, the *vaayu* expels out with a forceful forward bending of *urah pradesha* and even eyeballs move forward along with little pain in above-mentioned regions. This creates a peculiar sound that resembles the sound produced by a broken bronze vessel.

In *Ashtaanga Sangraha*, *Vaagbhata* describes *sampraapti* in a different view i.e., due to *kashaayadi sevana*, sustenance of urges, waking up in the nights and causes which are responsible for *dhaatu kshaya* provocates vitiation of *apaana vaayu* causing obstruction in the natural movements of *apaana vaayu*. As a result *vaayu* move upwards and reaches *urah sthaana* which is the seat of *udaana vaayu*, *rasa dhaatu* and *sanchaara sthaana* of *praana vaayu*. This vitiated vayu fills up in the channels present in the *ura, kanta* and *shira pradesha*. This results in increased in pressure inside the *srotas* followed by a spasm pain in *prishta, ura* and *paarshwa pradesha* and forceful expulsion of *vaayu* through the wide opened mouth making a typical sound resembling that of sound produced by broken bronze vessel in a forward

bending posture. He also opines that the sound may vary depending upon the areas of obstruction, the structure involved and whether *Kapha* is accompanied or not.

Kasa vega dhaarana [87]–

In Ayurveda, elaborative explanation on natural urges are given and these natural urges should not be suppressed i.e, *vegadhaarana* should not be done as it is one of the major cause for the manifestation of almost all the *vyaadhees*. One of them is *Kasa vega dharana*.

Suppression of *Kasa* makes increase in its *vega*, appearance of *shwasa*, *aruchi, hrudroga, shosha* and *hidhmaa*.

REVIEW ON VATAJA KASA

Introduction :–

Kasa is one of the common complaints in day to day practice and it is also a symptom of various diseases of respiratory system. In Ayurvedic classics mainly there are five types of *Kasa* have been explained. Among them *Vataja Kasa* though it is not life threatening, it troubles the person as it hinders the day to day activity. So the detailed understanding of the disease *Vataja Kasa* helps to treat effectively.

Derivation :-

Etymologically the word "*Vataja Kasa*" consists of two components viz., वातज and कास.

Vataja - The word Vata belongs to "*pullinga*" derived from the root वा – गति गन्धनयोः and *"tha" prathyaya* giving the meaning "to move", "to make known", "to enlighten". *Ja* means "produced by"

Kasa – It is derived from *"Kas" dhaatu* "*gater*" *pratyaya*.

Definition :-

Vataja :-

o वा गति गन्धनयोः वाति गच्छतीति । (सु.सू./रणजित् राय देसायी)

That which gives movement (*gati*), knowledge (*jnaana*) and enlightment (*utsaaha*/*gandhana*) to the *shareera*. Vataja means that which is produced by *Vata* which is one of the *doshaa* in the body.

Kasa – Expulsion of the *praana vaayu* resulting in the production of sound resembling that of a broken bronze vessel is called *Kasa*.

Nidaana of *Vataja Kasa* :-

Aahaaraja nidaana –

- *Rookshaahaara*
- *Sheetaahaara*
- *Kashaayaahaara*
- *Alpaahaara sevana*
- *Pramitaashana*
- *Anashana*

Vihaaraja nidaana –

- *Ati stree sevana*
- *Vegadhaarana*
- *Aayaasa*

Poorwaroopa of *Vataja Kasa* :-

There is no specific *poorwaroopa* told for individual type of Kasa in classics. So the *saamaanya poorwaroopa* told for the *Kasa* can only be taken as the Poorwaroopa of the *Vataja Kasa*.

Roopa of *Vataja Kasa* :-

Table No. 56 –Showing *Vataja Kasa lakshanaas* in different classics;

88,89,90,91,92,93,94,95,96,97

Sl.No	*Lakshanaas*	C.S	S.S	A.S	A.H	B.S	M.N	B.P	Y.R	V.S	G.N
1.	*Shushka Kasa*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2.	*Kapha shushkataa*	✓	X	✓	X	X	X	X	X	X	X
3.	*Alpa* and *krucchra Kapha*	✓	X	✓	X	X	X	X	X	X	X
4.	*Hrutshoola*	✓	✓	✓	✓	X	✓	✓	✓	✓	✓
5.	*Parshwashoola*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6.	*Urahshoola*	✓	X	✓	✓	✓	X	✓	✓	X	X
7.	*Shirashoola*	✓	✓	✓	✓	X	✓	✓	✓	✓	✓
8.	*Swarabheda*	✓	✓	X	X	✓	✓	✓	✓	✓	✓
9.	*Shushka ura*	✓	X	✓	✓	X	X	X	X	X	✓
10.	*Shushka kanta*	✓	X	✓	✓	X	X	X	X	X	✓
11.	*Shushka vaktra*	✓	X	✓	✓	X	X	X	X	X	✓
12.	*Lomaharsha*	✓	X	X	X	X	X	X	X	X	X
13.	*Prataamyataa*	✓	X	X	X	✓	X	X	X	X	X
14.	*Nirghosha*	✓	X	X	X	X	X	X	X	X	X
15.	*Deenataa*	✓	X	X	X	X	X	X	X	X	X
16.	*Dourbalya*	✓	X	X	X	X	X	X	X	✓	✓
17.	*Kshobha*	✓	X	✓	✓	X	X	X	X	X	X
18.	*Moha*	✓	X	✓	✓	X	X	X	X	X	X

19.	*Snigdha, aamla, lavana Bhukte peete prashaamyati*	✓	X	X	X	X	X	X	X	X	X
20.	*Vega vahana of maaruta*	✓	X	X	X	X	X	X	X	X	X
21.	*Udara shoola*	X	✓	X	X	X	✓	X	X	✓	✓
22.	*Prasakta vega*	X	✓	X	X	✓	✓	✓	✓	✓	✓
23.	*Shankhashoola*	X	✓	X	X	✓	✓	✓	X	✓	✓
24.	*Kantashoola*	X	X	✓	X	X	X	X	X	X	X
25.	*Ksheena oja*	X	✓	X	X	✓	✓	✓	✓	✓	✓
26.	*Ksheena bala*	X	✓	X	✓	X	✓	✓	✓	✓	✓
27.	*Ksheena swara*	X	✓	✓	✓	✓	✓	✓	✓	✓	✓
28.	*Rujaaswana*	X	X	X	✓	X	X	X	X	X	X
29.	*Paaraavata ivakoojana*	X	X	X	X	✓	X	X	X	X	X
30.	*Kashamaanana*	X	✓	X	X	X	✓	X	X	✓	✓
31.	*Mahaavega*	X	X	✓	✓	X	X	X	X	X	X
32.	*Angaharsha*	X	X	✓	X	X	X	X	X	X	X
33.	*Prushta stambha*	X	X	X	X	X	X	✓	X	X	X
34.	*Vaksha shoola*	X	X	X	X	X	X	X	X	X	✓
35.	*Satata shteevana Swalpa shushka*	X	X	X	X	X	X	X	X	X	✓
36.	*Aatopa*	X	X	X	X	✓	X	X	X	X	X
37.	*Shira manthana*	X	X	X	X	✓	X	X	X	X	X
38.	*Shooka poorna gala*	X	X	X	X	✓	X	X	X	X	X

39.	*Shushka nishteevana*	X	X	X	X	✓	X	X	X	X	X
40.	*Shushka nishteevana, mukte na kasate*	X	X	X	X	✓	X	X	X	X	X
41.	*Hrudayam avakupyati*	X	X	X	X	✓	X	X	X	X	X
42.	*Shwasena vikoojana*	X	X	X	X	✓	X	X	X	X	X
43.	*Taalu shosha*	X	X	X	X	✓	X	X	X	X	X
44.	*Shyaava netra*	X	X	X	X	✓	X	X	X	X	X
45.	*Varna bheda*	X	X	X	X	✓	X	X	X	X	X
46.	*Visheshaadrikta koshtashca kasate*	X	X	X	X	✓	X	X	X	X	X

Sampraapti of *Vataja Kasa* :-

There is no clear explanation of *sampraapti* of the disease *Vataja Kasa* except from some of the *Aachaaryaas* like *Bhela*. But the description regarding the general *sampraapti* of *Kasa* explained in our classics can be taken to understand the *sampraapti* of *Vataja Kasa*.

The *sampraapti* of *Vataja Kasa* explained by *Aachaarya Bhela* tells that, due to *nidaana sevana,* vitiation of *Vata* takes place and moves to the *Hrudaya.* In *Hrudaya,* it creates *hrudgraha* and reaches *oordhwa dhamanees* thereby produces *Vataja Kasa.*[98]

Upashaya of *Vataja Kasa* :-

Food having *snigdha, aamla, lavana, ushna* and *vatahara aahaaraas* are considered as *upashaya* of *Vataja Kasa.*

Anupashaya of *Vataja Kasa* :-

Ruksha, sheeta, kashaaya dravya sevana, alpa bhojana, pramitha bhojana and *vegadhaarana* all act as *anupashaya.*

Saadhyaasaadhyatha :-

Before starting treatment *vaidya* should decide whether the patient should be treated based on the prognosis of the disease. *Aachaaryaas* have mentioned that only *saadhya vyaadhees* have to be treated.

According to *Charaka* and *Vaagbhata* the *Kasa*, which is manifested by a single *dosha* is *saadhya*. So *Vataja Kasa* is *saadhya* to treat.

Vataja Kasa will be *saadhya* for *chikitsaa* if it is;

- *Eka doshaja*
- *Navotpanna*.
- *Upadrava rahita*
- All the *chikitsaa chatushpaadaas* are in proper condition
- Manifested with a*lpa nidaana*, *poorwaroopa* and *roopa*
- The *prakruti* is not of *Vataja*
- The *kaala* and the *desha* are not similar to the *Vata dosha*.

In *Bhaavaprakasha* it is stated that all type of Kasa in old age is *yaapya*.

Chikitsaaa Vivechana :-

Elaborate description about the line of treatment of individual varieties of Kasa has been mentioned by different *Aachaaryaas*.

Based on the *rogi* and *roga bala* the mode of treatment whether *Shodhana* or *Shamana* in has to be decided.

The line of treatment of *Vataja Kasa* includes [99]

1. *Sneha*
2. *Sarpi*
3. *Basti*
4. *Peya*
5. *Yoosha*
6. *Ksheera*
7. *Maamsa rasa*
8. *Snaihika dhooma*
9. *Lehya*
10. *Abhyanga*
11. *Parisheka*
12. *Swedana*
13. *Oordhwa bhaktika sneha*
14. *Virechana*

Some of the *yogaas* for *Vataja Kasa* –

Table No. 57 – Showing some of the *yogaas* for *Vataja Kasa* –

Sl.No	DIFFERENT *KALPANAAS*	*YOGAAS*
1.	*Choorna*	i. Duralabhaadi yoga(C.Chi.) ii. Pathyaadi churna (B.R) iii. Hingwaadi churna (B.R)
2.	*Leha*	i. Agasthya hareetaki (A.H) ii. Chitrakaadi leha (C.S Chi.) iii. Duralabhadi leha (C.Chi.) iv. Dusparshaadi leha (C.Chi.) v. Nagaraadi leha (Y.R) vi. Kantakaari leha (C.Chi.)
3.	*Ghrita and Taila*	i. Kantakaaryaadi Ghrita (C.D) ii. Pippalyaadi Ghrita (Y.R) iii. Raasnaa Ghrita (C.Chi.) iv. Vyoshaadi Ghrita (Y.R)
4.	*Dhooma yoga*	i. Harataala dhooma (C.Chi.) ii. Manshilaadi dhooma (C.D) iii. Prapoundarikaadi dhooma (C.Chi.)
5.	*Swarasa, Kwaatha Kshreera*	i. Dashamoola kwaatha (Y.R) ii. Panchakola ksheera (C.D) iii. Shrangavera swarasa (B.R)
6.	*Vati* and *Rasayogaas*	i. Elaadi gutika (B.R) ii. Amrutaarnava rasa (B.R) iii. Chandraamurta rasa (B.R) iv. Kasa kutaara rasa (R.S) v. Kasaantaka rasa (B.R) vi. Kasa samhaara bhairavi rasa (B.R) vii. Lakshmee vilaasa rasa (B.R) viii. Mahaakaaleshwara rasa (B.R) ix. Nityodaya rasa (R.S.S) x. Panchaamruta rasa (B.R) xi. Vijaya bhairavi rasa (B.R)

Pathya for *Vataja Kasa* –

Table No. 58– Showing *Pathyaas* for *Vataja Kasa* –

Sl.No.	*Aahaara varga*	*Dravya*
1.	*Shooka varga*	i. Shaali ii. Puraana shaali iii. Godhooma iv. Tandula v. Yava vi. Shashtika shaali vii. Laajaa
2.	*Shimbee varga*	i. Mudga ii. Kulattha iii. Maasha
3.	*Maamsa varga*	i. Graamya praani maamsa ii. Jaangala maamsa iii. Aanoopa praani maamsa iv. Pakshi maamsa
4.	*Gorasa varga*	i. Ksheera ii. Dadhi iii. Go-ksheera iv. Gomootra v. Ghrita
5.	*Jala varga*	i. Ushnodaka
6.	*Phala varga* and *Shaaka varga*	i. Vaastuka ii. Aamra phala iii. Beejapoora iv. Raasnaa v. Draaksha vi. Devadaaru vii. Balaa viii. Maatulunga ix. Pippalee x. Triphalaa xi. Kadalee xii. Vidanga xiii. Dashamoola xiv. Lashuna
7.	*Madhu varga*	i. Madhu
8.	*Ikshu varga*	i. Ikshu rasa ii. Sharkaraa iii. Guda
9.	*Taila varga*	i. Tila taila ii. Sarshapa taila iii. Bilva taila

Vataja kasa in western system of medicine :-

Cough :-

Cough is an explosive expiration that provides a protective mechanism for clearing the Tracheo-bronchial tree of secretions and foreign material. It is considered as a symptom but not as such as a disease according to modern medicine.

Definition -

- A cough is a sudden, often involuntary, forceful release of air from the lungs.
- Cough is a sudden explosive forcing of air through the glottis, excited by an effort to expel mucus or other matter from the bronchial tubes or larynx or it is to force the air through the glottis by a series of expiratory efforts. [100]

Cough reflex -

Cough is a protective reflex, occurs due to the irritation of the mucus membrane of the larynx or Tracheo-bronchial tree causes coughing.

Physiology of cough reflex [101]-

The bronchi and the trachea are so sensitive that any foreign matter or other cause of irritation initiates the cough reflex. The larynx and carina (the point where the trachea divides into the bronchi) are especially sensitive to corrosive chemical stimuli, such as sulphur-dioxide gas and chlorine. Afferent impulses pass from the respiratory passages mainly through the vagus nerve to the medulla. There, the neuronal circuits of the medulla, causing the following effects, integrate an automatic sequence of events ;

- First, about 2.5 liters of air is inspired.
- Second, the epiglottis closes and the vocal cords shut tightly to entrap the air within the lungs.
- Third, the abdominal muscles contract forcefully, pushing against the diaphragm while other expiratory muscles, such as the internal intercostals, also contract forcefully. Consequently, the pressure in the lungs raises usually to 100 mm of Hg or more.
- Fourth, the vocal cords and the epiglottis suddenly open widely so that the air under pressure in the lungs explodes outward. Indeed, this air is sometimes expelled at velocities as high as 75 to 100 miles an hour. The rapidly moving

air usually carries with it any foreign matter that is present in the bronchi or trachea.

Flow chart No. 3 – Showing Physiology of cough reflex;

```
                        ┌─────────────────────────┐
                        │   Sensors stimulated     │
                        └─────────────────────────┘
                                    │
                                    ▼
                        ┌─────────────────────────┐
                        │   Setting up of reflex   │
                        └─────────────────────────┘
                                    │
                                    ▼
        ┌──────────────────────────────────────────────────────┐
        │  Relaxation of Diaphragm + Violent contraction of      │
        │  expiratory Muscles + Closure of Glottis               │
        └──────────────────────────────────────────────────────┘
                                    │
        ┌──────────────────────────────────────────────────────┐
        │ Vocal cords closed and air can't escape – pressure     │
        │ within lungs build up                                  │
        └──────────────────────────────────────────────────────┘
                                    │
                        ┌─────────────────────────┐
                        │ Forceful opening of glottis │
                        └─────────────────────────┘
                                    │
        ┌──────────────────────────────────────────────┐
        │ Air escapes violently with high speed and sound │
        └──────────────────────────────────────────────┘
                                    │
        ┌──────────────────────────────────────┐        ┌──────────┐
        │ Unwanted material in the lungs expelled │  ───▶ │  COUGH   │
        └──────────────────────────────────────┘        └──────────┘
```
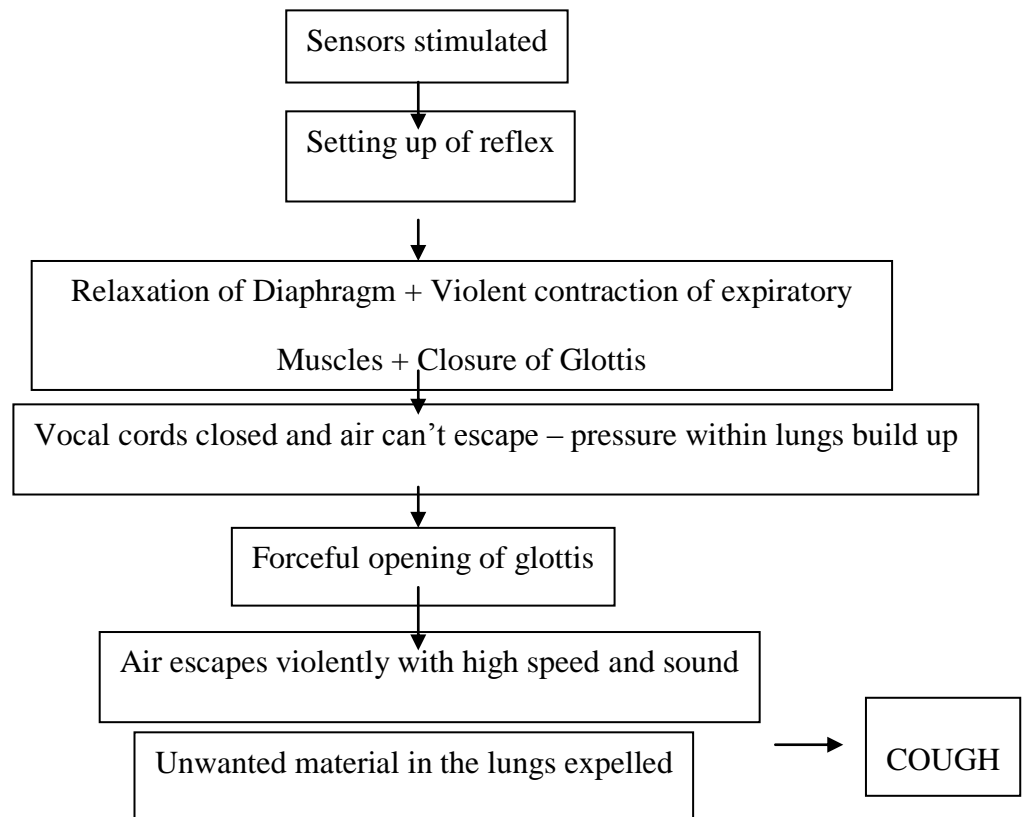
Types of cough -

Cough is divided into two types based on association of mucus. They are ; [102]

- ○ Dry cough
- ○ Productive cough

Cough which is devoid of expectoration is named as dry cough. Minor irritations in the throat can start the cough reflex, even when there is no mucus secretion in the bronchial tree. Cough associated with profuse mucus secretion of bronchial mucosa is termed as productive cough.

Causes and Symptoms [103] -

- Environmental pollutants, such as cigarette smoke, dust or smoke.
- Post-nasal drip (the irritating trickle of mucus from the nasal passages into the throat caused by allergies or sinusitis) can also result in cough.

- Some chronic conditions, such as asthma, chronic bronchitis, emphysema and cystic fibrosis, are characterized by cough.

- A condition in which stomach acid backs up into the esophagus (Gastro esophageal reflex) can cause coughing, especially when a person is lying down.

- A cough can also be a side effect of medications that are administered via an inhaler (It can also be a side effect of beta-blockers or ACE inhibitors).

Investigations -

Laboratory investigations help the physician to confirm the diagnosis, though much can be diagnosed based on the clinical signs and symptoms.

1. Routine blood investigations like TLC, DLC, Hb%, ESR helps to rule out, Anemia etc.

2. Absolute Eosinophil Count (AEC) to rule out Eosinophilia.

3. Stool examination for evidence of Helminthic ova and cyst.

4. Chest Radiograph may help to indicate the presence and extent of inflammation.

5. Branchoscopy or laryngoscopy may be used to inspect the interior of bronchi and larynx, when a physician can't come to a conclusion with Radiograph.

Treatment [104]**-**

Specific remedies (antibiotics etc), cough may be treated as a symptom with,

- ✓ Pharyngeal Demulcents
- ✓ Expectorants
- ✓ Antitussives
- ✓ Antihistamines
- ✓ Bronchodilator

Prevention [103]-

It is important to identify and treat the underlying diseases and origin of the cough. Prevention of repeated respiratory tract infections play a major role in reducing cough and making the child to be more active in his curricular as well as in extracurricular activities.

 ➢ Avoid smoking and coming in direct contact with dust and allergens.
 ➢ Avoid coming in direct contact with people experiencing cough or the symptoms.
 ➢ Wash hands frequently during episodes of upper respiratory illness.
 ➢ Wear a nasal mask in places of pollution and while attending patients with cough.
 ➢ Proper immunization should be administered such as for rubella, measles and pertussis.

Eosinophil :–

A white blood cell with a polymorphic nucleus and cytoplasmic granules that stain with eosin or other acid stains. Eosinophil are known to destroy parasitic organisms and to play a major role in allergic reactions. They release some of the major chemical mediators that cause broncho-constriction. [105]

Eosinophilia [106]:-

Eosinophilia is a chronic disorder resulting from excessive production of a particular type of white blood cells. If diagnosed in time and treated in a proper fashion this disorder is curable in most cases and affected persons can lead normal life.

Definition –

Eosinophilia refers to a health condition resulting due to presence of excessive Eosinophils (type of white blood cell) in blood or body tissues. Eosinophils are produced in the bone marrow existing normally in the bloodstream and gut lining, which helps the body fight infection from parasitic organisms.

Causes of Eosinophilia -

There are a variety of disorders that can cause Eosinophilia ranging from simple hay fever to life threatening tumor. Most common cause for Eosinophilia are parasitic infections (such as hookworm, schistosomiasis), allergic conditions (such asthma and hey fever) and certain types of drug reactions. Few other rarer causes include:

- Lung diseases (e.g., Tropical Pulmonary Eosinophilia, Loeffler's Syndrome)
- Due to inflammation of blood vessels (e.g., Churg-Strauss syndrome)
- Certain malignant tumors (e.g., lymphoma)
- Due to certain types of antibody deficiencies
- Certain types of skin diseases (e.g., dermatitis herpetiformis)
- allergy causing substances such as pollen or dust mite allergy, or any other

Symptoms of Eosinophilia -
Symptoms of Eosinophilia vary based on the underlying conditions;

1. Frequent wheezing and breathlessness caused due to asthma.
2. Due to parasitic infections symptoms may range between abdominal pain, diarrhoea, fever, cough and rashes.
3. Frequent infectio ns, abscesses, pneumonia, mouth sores
4. Weight loss
5. Night sweats
6. Enlargement of lymph nodes
7. skin rashes

Investigations –

Lab studies can be in the following lines:

- A complete blood count may be conducted in order to identify if problem exists
- A spinal fluid examination is carried out in order to diagnose Eosinophilia due to worm infestation.

- Imaging studies can be carried out via CT scan of the lungs, abdomen, pelvis, etc depending on symptoms and cause of Eosinophilia.

Normal values of AEC –

Different openions regarding normal values of AEC,

- 40 - 400 cells/mm^3
- Less than 350 cells per micro liter (cells/mcL)
- 50 - 350/mm^3
- 150 - 450cu.mm

Eosinophil in Hypersensitivity reaction - [107]

- The peripheral blood hyper-eosinophil in states of parasitic invasion leads to an expanded total pool of Eosinophil, which are predominantly located in the tissues. Tissue Eosinophil is prominent at the mucosal and cutaneous surfaces in a distribution similar to that of the mast cells and lymphocytes which produce IgE.
- Eosinophil attracted to the sites of parasite invasion fulfils at least two roles: Defending the sensitized host by directly damaging the parasite and containing the immediate hypersensitive reaction, involved by antigens release from the parasites.
- The Eosinophil possess enzyme which are capable of specifically degrading mast cell mediators and there by containing immediate type of hypersensitivity reaction to antigen derived from parasite.
- Thus Eosinophil attracted by diverse specific chemotactic factors to the sites of parasitic invasion are able to degrade many of the mast cell mediators elaborated by immediate hypersensitivity response to parasitic antigen.

Treatment for Eosinophilia [106]**-**

Once Eosinophilia is diagnosed treatment will proceed in lines of trying to identify cause of the disorder. Physician may perform simple skin / blood tests in order to identify the specific allergy causing the problem (such as pollen or dust mite allergy, or any other as may be determined). Parasitic infections can be detected by

analyzing blood and stool samples. Following methods can be adopted for the treatment of Eosinophilia;

- Diet history and details of medication in order to detect any specific allergic reactions
- Primarily on lines of reducing symptoms. Initially treatments are mostly oral with corticosteroid therapy (beginning with prednisolone both inhaled and topical). Systemic (oral, intramuscular, intravenous) may also be used to treat allergic conditions. In most cases treatments help to significantly reduce symptoms of Eosinophilia enabling persons to lead normal life.

Rise in AEC in Peripheral Blood Smear -

Eosinophil have anti parasitic role, they are also related to defend the body against allergic disorders. Here in TPE there will be infiltration of filarial parasites larvae into the lungs in order to act against larvae there will be increase in the number of eosinophillia because MBP (major basic protein) granules present in the eosinophillia acts against the larvae. In order to tone defense mechanism against larvae eosinophils show rise in number and migrate - resulting in rise in AEC in peripheral blood smear.[108]

DRUG REVIEW

Duraalabhadi yoga :-

The references of *Duraalabhaadi yoga* in the context of *Kasa* are available in C.Chi.18/50, A.H.Chi. 3/13,14

Duraalabhaadi yoga consists of following drugs ;

Table No. 59 - Showing ingredients and quantities of *Duraalabhaadi yoga*;

Sl.No	Ingredients	Quantity
1.	*Duraalabhaa*	One part
2.	*Shati*	One part
3.	*Draakshaa*	One part
4.	*Shrangavera*	One part
5.	*Sitopala*	One part
6.	*Karkatashrungi*	One part

The properties of each drug are explained as follows ;

1. *Duraalabha*

Latin name – Fagonia cretica

Family – Zygophyllaceae

Synonyms – *Dhanvayaasa, Samudraantaa, Gaandhaaree, Dusparshaa, Kacchuraa* and *Ananta*

Table No. 60 - Showing *gana vargeekarana* of *Duraalabha*;

Charaka	Sushruta	Vaagbhata
i. *Trushnaa Nigrahana* ii. *Arshoghna*		

Morphology :– It is a perennial spiny shrub which grows 1-3 feet height.

Stem - Stem pieces 0.5 to 1.5 cm thick, of variable lengths; young green, mature brown; spiny, two pairs of spines present at each node, spines sharp, slender, 1.5 to 2 cm in length; external surface of stem green, whitish brown when dry, striated; transversely smoothened surface showing a thin bark and prominent wood, bark peeling from stem; fracture, short.

Leaf - Small, subsessile, linear, oblong, leaflets entire, green or blackish brown, 0.5 to 1.5 cm in length and 0.05 to 0.1 cm in width, without any prominent midrib region

projected above the level of lamina.

Flower - Flowers small, pale rose or purple, pedicels slender, 6 to 12 mm long; sepals 3 to 4 mm long, ovate, aristate; petals twice as long as the sepals, spathulate, claw long; ovary hairy, style tapering.

Fruit - Pentagonous schizocarp.

Root - Tap root externally brownish green, rough, with longitudinal striations, core yellowish-green; fracture, fibrous.

Habitat – Western part of India, Punjab, Afghanistan and Urab countries.

Chemical composition – Ceryl alcohol, Chinovic

acid, Harmine, Alanine, Arginine, Glycine, Isoleucine, Leucine, Lysine, Phenylalanine, Oleanolic acid, Campesterol and Stigmasterol

Properties –

Rasa – Kashaya, Tikta, Madhura, Katu

Guna – Laghu, Snigdha

Veerya – Ushna

Vipaaka – Madhura

Dosha karma – Vatapitta shaamaka

Karma – Vrana ropana, Stambhana, Jwaraghna

Indications – *Vrana, Raktapitta, Kushta, Bhrama, Moorchaa, Chardi, Atisaara Kasa* and *Shwasa.*

Prayojya anga :- *Panchaanga*

Dose :- Choorna-5 to 10gms

Vishishta yoga :- *Duralabhaadi yoga, Duralabhadi kwatha.*

2. *Shati*

Latin name – Hedychium spicatum

Family – Zingiberaceae

Synonyms – *Gandhamoolioka, Palaashee*

Table No. 61 - Showing *gana vargeekarana* **of** *Shati***;**

Charaka	Sushruta	Vaagbhata
i. *Shwasahara* ii. *Hikka nigrahana*		

Morphology :– Rhizomes 15-20 cm long, 20-25 mm in diameter, externally yellowish-brown hut changed to dark brown on storage

Habitat – Himalayan region, Nepal, Bhutan.

Chemical composition – Essential oil, starch, carbonic acid, ash.

Properties -

Rasa – Katu, Tikta, Kashaya

Guna – Laghu, Teekshna

Veerya – Ushna

Vipaaka – Katu

Dosha karma – Kapha vata shaamaka

Karma – Shotha hara, Vedanaasthaapaka, Rochana, Deepana, Shoola prashamana

Indications – *Shoola, Shwaasa, Kasa, Chardi, Twak roga*

Prayojya anga :- *Kanda*

Dose :- *Choorna* – 1 to 3gms

Vishishta yoga :- *Duralabhadi yoga, Shatyadi churna, Shatyadi kwatha*

3. *Draakshaa*

Latin name – Vitis vinifera

Family – Vitaceae

Synonyms – *Mrudveeka, Gosthanee*

Table No. 62 - Showing *gana vargeekarana* **of** *Draakshaa***;**

Charaka	Sushruta	Vaagbhata
i. Snehopaga ii. Virechanopaga iii. Kasahara iv. Jwarahara	i. Parooshakaadi	i. Parooshakaadi

Morphology :– It is a large climber with light green coloured flowers.

Habitat – Western part of India, Punjab, Kashmir, Baluchistan and Afghanistan

Chemical composition – Catechin, Epicatechin, Beta-Sitosterol, Ergosterol and Jasmonic acid.

Properties -

Rasa – Madhura

Guna – Snigdha, Guru, Mrudu

Veerya – Sheeta

Vipaaka – Madhura

Dosha karma –Vata pitta hara

Karma – Vryshya, Brumhana, Chakshushya, Kasahara

Indications – *Kasa, Shwasa, Jwara, Raktapitta, Kaamala, Daaha, Rajayakshma* and *Trushna*

Prayojya anga :- *Phala*

Dose :- *Swarasa-* 20 to 40 ml.

Vishishta yoga :- *Duralabhadi yoga, Draksharishta, Drakshadya ghrita, drakshadi leha*

4. *Shrungavera*

Latin name – Zingiber officinale

Family – Zingiberaceae

Synonyms – *Shunti, Naagara, Mahoushadha, Vishwabheshaja, Vishwa* and *Katubhadra*

Table No. 63 - Showing *gana vargeekarana* **of** *Shrungavera***;**

Charaka	Sushruta	Vaagbhata
i. Truptighna ii. Arshoghna iii. Deepaneeya iv. Shoola prashamana v. Trushnaa nigrahana	i. Pippalyaadi ii. Trikatu	i. Pippalyaadi ii. Trikatu

Morphology :– An erect perennial herb with aromatic rhizome

Stem- Erect, leafy, 15-150cms tall; leaves- subsessile, lanceolate, acuminate, glabrous; flowers- light green colour, dull purple with creamy blotches.

Habitat – Throughout India.

Chemical composition – Alpha-curcumene, Beta-D-curcumene, Beta-bourbornene, Citronellol, Geraniol, Gingerol, Alpha & beta zingiberenes, Zingiberol and zingerone etc.

Properties -

Rasa – Katu

Guna – Laghu, snigdha

Veerya – Ushna

Vipaaka – Madhura

Dosha karma – Vata kaphahara

Karma – Deepana, Vedanaasthaapana, Shothahara etc

Indications – *Shoola, Amavata, Kasa, Shwasa, Hikka, Jwara, Atisaara* etc.

Prayojya anga :- Kanda

Dose :- *Choorna –* 1 t 2 gms, *Swarasa-* 5 to 10 ml.

Vishishta yoga :- *Duralabhadi yoga, Ardraka khanda, Soubhaagya shuntee paaka, Sama sharkara choorna, Trikatu choorna.*

5. *Sitopala*

Latin name –Saccharum officinarum

Family – Poaceae/Gramineae

Synonyms – *Sitasharkara, Kandasharkara, Sthoola shwetha vaaluka kana, Sharkara, Khanda sitaa*

Table No. 64 - Showing *gana vargeekarana* of *Sitopala*;

Charaka	Sushruta	Vaagbhata
i. Ikshu varga	i. Ikshu varga	i. Ikshu varga

Habitat – Throughout India the plant *ikshu* is cultivated.

Chemical composition – Carbohydrate, sucrose, carbon, hydrogen and oxygen.

Properties -

Rasa –Madhura

Guna – Snigdha, Guru

Veerya – Sheeta

Vipaaka – Madhura

Dosha karma – Vata pitta shaamaka

Karma – Vrushya, Trushagna

Indications – *Raktapitta, Trushna, Kshataksheena*

Vishishta yoga :- Duralabhadi yoga, Sithopaladi choorna, Taaleeshaadi choorna

6. *Karkatashrungi*

Latin name – Pistacia integerrima

Family – Anacardiaceae

Synonyms – *Kuleera vishaanika, Ajashrungi, Vakraa* and *Shrungi*

Table No. 65 - Showing *gana vargeekarana* of *Karkatashrungi*;

Charaka	Sushruta	Vaagbhata
i. Kasahara ii. Hikkaa nigrahana	i. Kaakolyaadi	

Morphology :– It is glabrous tree growing upto 16 meters with dark grey or blackish bark. Leaves- 15 to 20 cms long, compound, with or without terminal leaflet. Leaflets are 4-5 pairs, lanceolate, coriacious, base oblique. Flowers- pubescent, elongate with panicle inflorescence. Fruits- drupe, globose, dry, stony with grey colour.

Habitat – North-west Himalayan region, Punjab

Chemical composition – Tannin, Essential oil, Resin, Pistacienoic acids A & B, beta-sitosterol, Camphene, Caprylic acid, Cineol, Alpha-pinene etc.

Properties -

Rasa – Kashaya, Tikta

Guna – Laghu, Rooksha

Veerya – Ushna

Vipaaka – Katu

Dosha karma – Kapha vata shaamaka

Karma – Vrushya, Grahee, Deepana, kasahara, Shotha hara etc

Indications – *Kasa, Shwasa, Hikka, Jwara, Trushnaa, Chardi, Aruchi, Baala roga* etc.

Prayojya anga **:-** Galls

Dose :- *Choorna –* 1 to 3 gms

Vishishta yoga :- Duralabhadi yoga, Shrungyaadi choorna, Karkataadi choorna, Bala chaturbhadra.

Table No. 66 - Showing ingredient of *Duralabhaadi yoga* and its properties :-

Sl.No	Name of the drug	Latin name	*Rasa*	*Guna*	*Veerya*	*Vipaka*	*Doshaghnata*	*Karma*	Part used
1.	*Duralabha*	*Fagonia cretica*	*Kashaya, Tikta, Madhura, Katu*	*Laghu, Snigdha*	*Ushna*	*Madhura*	*Vatapitta shaamaka*	*Vrana ropana, Stambhana, Jwaraghna*	*Panchaanga*
2.	*Shati*	*Hedychium spicatum*	*Katu, Tikta, Kashaya*	*Laghu, Teekshna*	*Ushna*	*Katu*	*Kapha vata shaamaka*	*Shotha hara, Vedanaasthaapaka, Rochana, Deepana, Shoola prashamana*	*Kanda*
3.	*Draaksha*	*Vitis vinifera*	*Madhura*	*Snigdha, Guru, Mrudu*	*Sheeta*	*Madhura*	*Vata pitta hara*	*Vryshya, Brumhana, Chakshushya, Kasahara*	*Phala*
4.	*Shrungavera*	*Zingiber officinale*	*Katu*	*Laghu, snigdha*	*Ushna*	*Madhura*	*Vata kaphahara*	*Deepana, Vedanaasthaapana, Shothahara*	*Kanda*
5.	*Seetopala*	*Saccharum officinarum*	*Madhura*	*Guru, snigdha*	*Sheeta*	*Madhura*	*Vata pitta hara*	*Vrushya, Trushagna*	Prepared from Saccharum officinarum
6.	*karkatashrungi*	*Pistacia integerrima*	*Kashaya, Tikta*	*Laghu, Rooksha*	*Ushna*	*Katu*	*Kapha vata shaamaka*	*Vrushya, Grahee, Deepana, kasahara, Shotha hara*	Galls

Tila taila :–

Rasa – madhura

Anurasa – tikta, kashaaya

Guna **-** *teekshna, vyavaayi, sookshma, aagneya, vishada, sara, guru, vikaasi*

Veerya – usha

Vipaka – madhura

Dosha karma - Vata, kapha hara, pitta kara

Karma – brumhana, preenana, vrushya, twak prasaadana, medhakara, maardavakara, maamsa sthairyakara, balavarnakara, chakshushya, baddhamootrakara, lekhana, paachana, krimighna, yoni, shira, karna shoolaprashamana, garbhaashaya shodhana, bhagna, china, bhinna hara, ksharaagnidagdha prashamana, mruga, vyaaladi visha hara, sthoolaanaam karshana, krushaanaam brumhana, baddhavitka etc.

Speciality of *tila taila* - because of *samskaara* it cures all *roga*, it will not increase *kapha* even though it is *snigdha*. Its best for *parisheka, abhyanga, avagaaha, basti, nasya, karna poorana, akshi poorana* and for *annapaana*.

Jala :-

There are different types of *jala* are mentioned in Ayurveda such as *koupa, saarasa, tataaka, nadee* etc. another way of classification of *jala* is, *ushna* and *sheeta jala.*

Qualities of *sheeta jala* according to *Vaaghbhata* -

It cures *madaatyaya, glaani, moorchaa, chardi, shrama, bhrama, trushnaa, ushna, daaha, pitta, rakta, visha.*

Qualities of *nadee jala* according to *Vaaghbhata* -

Nadee jala is *rooksha, katuka* and *vaatala.*

Ushna jala :-

Jala or water is the nectar for all the living creatures. It is one among the *Mahaabhootaas* according to Indian philosophy. According modern philosophers life started at ocean that is in water. *Aadi Shankaraachaarya* quoted that the water comes from the heaven and gets collected in the form of the sea on the earth.

According to *Taitireeya Upanishad*, the *Aakaasha* is originated from *Aatmaa* and from that *Vaayu, Agni*, *Ap mahaabhoota* in the sequence of genesis. *Jala* is the essential

factor for the maintenance of life hence called *amrita* and *jeevana*. Water is essential in health as well as in disease conditions like diarrhea, dehydration, dysuria and fever. Charaka considered *jala* as the base for taste. There are many types of *jala* explained in Ayurvedic classics under *jala varga*. One of such is *Ushna jala.*

Latin name – Aqua

English name – Hot water

Table No. 67 - Showing *gana vargeekarana* of *Ushna jala*;

Sl.No	*Aachaaryaas*	*Varga*
1.	*Sushruta Samhitaa*	*Jala*
2.	*Ashtaanga Sangraha*	*Jala*
3.	*Ashtaanga Hrudaya*	*Toya*
4.	*Dhanwanthari Nighantu*	*Jala*
5.	*Kaiyyadeva Nighantu*	*Jala*
6.	*Shodhala Nighantu*	*Paaneeya*
7.	*Raja Nighantu*	*Paaneeya*
8.	*Maadhava Dravyagun*	*Toya*
9.	*Madanapaala Nighantu*	*Paaneeya*
10.	*Harithakyaadi Nighantu*	*Vaari*
11.	*Priyaa Nighantu*	*Jala*

Method of preparation of *Ushna jala* :-

There are different methods told for the preparation of *Ushna jala* by different *aachaaryaas.* According to *aachaarya Sharangadhara, ushna jala* is prepared just by boiling the water.

Qualities of *Ushna jala* according to *Ashtanga Sangraha:-*

Rasa – Madhura

Guna – Laghu

Veerya – Sheeta

Vipaaka – Swaadu

Dosha karma – Tridosha shaamaka

Gunakarma of *Ushna jala :-*

Table No. 68 - Showing the qualities of *Ushna jala* by different *aachaaryaas*;

Sl.No	Gura karma	C.S	S.S	A.S	A.H	K.S	Y.R	Sha.S	B.P
1.	*Deepana*	✓	✓	X	✓	✓	✓	✓	X
2.	*Kapha vicchedee*	X	✓	X	X	X	X	X	X
3.	*Pittaanulomana*	X	✓	X	X	X	X	X	X
4.	*Vaataanulomana*	✓	✓	X	X	X	X	X	X
5.	*Kapha jwara*	X	✓	X	X	X	X	X	X
6.	*Vata jwara*	X	✓	X	X	X	X	X	X
7.	*Kapha-Vata jwara*	X	✓	X	X	X	X	X	X
8.	*Jwarahara*	✓	✓	X	X	X	✓	✓	✓
9.	*Trushnaa*	✓	✓	X	X	✓	X	X	X
10.	*Chedana*	X	✓	X	X	X	X	X	X
11.	*Dosha maardavataa*	X	✓	X	X	X	X	X	X
12.	*Sroto maardavataa*	X	✓	X	X	X	X	X	X
13.	*Kaphahara*	X	✓	X	✓	✓	✓	✓	✓
14.	*Medohara*	X	✓	X	X	X	✓	✓	✓
15.	*Anilahara*	X	✓	X	✓	✓	✓	X	✓
16.	*Aamahara*	X	✓	✓	X	X	✓	X	✓
17.	*Basti shodhana*	X	✓	X	✓	X	✓	✓	X
18.	*Shwasahara*	X	✓	X	✓	X	✓	✓	✓
19.	*Kasahara*	X	✓	X	✓	X	✓	✓	✓
20.	*Sadaa pathya*	X	✓	X	X	X	✓	X	✓
21.	*Snehapaana*	X	✓	✓	X	X	X	X	X
22.	*Vishtabdha*	X	X	✓	X	X	X	X	X
23.	*Anna kledakaaraka*	X	X	✓	X	X	X	X	X
24.	*Agni naashana**	X	X	✓	X	X	X	X	X
25.	Solves the *aamaashaya vibaddha* due to *Kapha*	X	X	✓	X	X	X	X	X
26.	Solves the *aamaashaya vibaddha* due to *Vata*	X	X	✓	X	X	X	X	X
27.	*Pachyate kshipramaahaara*	✓	X	✓	X	X	X	X	X
28.	*Paachana*	✓	X	X	✓	X	X	X	✓
29.	*Kantya*	X	X	X	✓	X	X	X	X
30.	*Highmaa*	X	X	X	✓	✓	X	X	X
31.	*Aadhmaana*	X	X	X	✓	X	X	X	X
32.	*Nava jwara*	X	X	X	✓	X	X	X	X

33.	*Apeenasa*	X	X	X	✓	X	X	X	X
34.	*Paarshwa ruk*	X	X	X	✓	X	X	X	X
35.	*Ghrita paana*	X	X	X	X	✓	X	X	X
36.	*Shoolahara*	X	X	X	X	✓	X	X	X
37.	*Arochaka*	X	X	X	X	✓	X	X	X
38.	*Vibandha*	X	X	X	X	✓	X	X	X
39.	*Gulma*	X	X	X	X	✓	X	X	X
40.	*Vrana mrudukarana*	X	X	X	X	✓	X	X	X
41.	*Dhaatu mrudukarana*	X	X	X	X	✓	X	X	X
42.	*Aamavaata*	X	X	X	X	X	X	✓	X
43.	*Pitta*	X	X	X	X	X	X	X	✓
44.	*Vamana*	✓	X	X	X	X	X	X	X
45.	*Apatarpanakara*	✓	X	X	X	X	X	X	X
46.	*Shleshma parishoshana*	✓	X	X	X	X	X	X	X

* It does *agni naashana* if consumed in excess quantity.

MATERIALS AND METHODS

This part deals with the materials and methods of the research work carried out in the study.

Materials :-

1. Literary study
2. Drugs
3. Instruments

Collection of Materials -

1) Literary Study

The Literary source for the present study was obtained from **;**

- *Charaka Samhitaa* with commentaries
- *Sushruta Samhitaa* with commentary
- *Ashtaanga Sangraha* with commentary
- *Ashtaanga Hrudaya* with commentaries
- *Kashyapa Samhitaa*
- *Bhela Samhitaa*
- *Haareeta Samhitaa*
- *Laghutrayees*
- *Vangasena*
- *Gada Nigraha*
- *Ayurveda Ka Vaijnanika Itihasa*
- *Anupana Manjari*
- *Anupana Darpana*
- *Anupana Kalpataru*
- *Dravyaguna* books
- *Nighantus*
- *Rasashaatra* books like *Rasa Tarangini*, *Ayurveda Prakasha, Ananda Kanda* etc.
- Modern text books
- Websites
- Retrospective study

Sources of the data -

The literary sources for the present work were obtained from ;

- Library, Tilak Maharashtra Vidyapeeth Gultekadi, Pune
- Library, S.D.M. College of Ayurveda and Hospital, Hassan
- Library, Government Ayurveda Medical College, Mysore
- Library, S.D.M. Institute of Ayurveda and Hospital, Bengaluru

2) Drugs

- *Duraalabhaadi yoga*
- *Tila taila* for Anupana
- *Ushna jala* for Anupana
- *Jala* for Anupana

Duraalabhaadi yoga :-

Preparation of *Duraalabhaadi yoga* :-

Table No. 69 - showing the ingredients of *Duraalabhaadi yoga*;

Sl.No	Ingredients	Quantity
1.	*Duralabha*	1 part
2.	*Shati*	1 part
3.	*Draksha*	1 part
4.	*Shunti*	1 part
5.	*Sitopala*	1 part
6.	*Karkatashrungi*	1 part

For the present study *Duraalabhaadi yoga* was prepared and authenticated in the pharmacy of SDM college of Ayurveda & hospital Hassan under the supervision of dept of *Bhaishajya kalpana* HOD & other teaching staff. Then equal quantity of each drugs are taken and mixed well.

Tila taila :-

Edible *tila taila* were purchased through dispensary and given to the patients of *tila taila* group. The *tila taila* was tested and authenticated in the department of *Rasashastra & Bhaishajya kalpana*, SDMCA & H Hassan.

Ushna jala :-

Ushna jala was told to prepare by the patients by just boiling before consuming the *Duraalabhaadi yoga*.

Jala :-

Patients were asked to take the normal drinking water in last group

Instruments :-

Torch light, Stethoscope, Sphygmomanometer, Thermometer, Measuring cups were used for the present study.

Measuring cups - Measuring cups were used in each group for measuring the Anupana *dravya* while consuming the medicine.

Methodology :-

Methods:

1. **Literary -**

   In the present study, the literary work was done on the basis of *Doota sandesha vidhi, Samucchaya vidhi* and *Nirdesha tantrayukti*. The discussion will be done on the basis of *Ooncha shiloccha nyaaya* by applying relevant *tantrayuktis, saptavidha kalpanaas* and *arthaashrayaas*.

2. **Methods of clinical study -**

The comparative clinical study with different Anupana was done on the basis of *Vidyaa Kalpanaa.*

Note -

- *Doota sandesha vidhi* - Whatever told in the text was written as it is

- *Samucchaya vidhi* - Represents the collection of all matter related to particular topic

- *Nirdesha tantrayukti* - Elaborate explanation of concise matter

- *Ooncha shiloccha nyaaya* - It represents the selection of collected matters

- *Vidyaa Kalpanaa* - Application and introduction of *Anya shastra vishayas* for
  better understanding of the present topic.

Aim of the study –

- To study the role of *snigdhoshna* Anupana in *Vataja Kasa*

Objective of the study -

- To study on the concept of Anupana

Study design -

Clinical study -

All the diagnosed patients of *vataja kasa* were made into three groups consisting of 100 patients in each group. They are administered with *Duraalabhaadi yoga* along with *tila taila, ushna jala* and *jala* as Anupana respectively to evaluate the efficacy of the Anupana and the drug clinically.

Sources of the patients -

Patients who fulfill the diagnostic criteria were taken from OPD, IPD and special camps conducted in and around SDM college of Ayurveda and Hospital, Hassan were selected for the study.

Method of collection of data -

- Patients suffering from *vataja kasa* belonging to either sex were selected by lottery method and made into three groups.
- Informed consent was obtained before study.
- Patients were studied with a detailed case-sheet proforma prepared for the study.

Diagnostic criteria -

- *Shushka Kasa*

- *Kapha shushkata*

- *Alpa kaphata* which comes out with *krucchrata*

- *Ura shoola/Hrut shoola* due to excess *Kasa*

- *Parshwashoola*

- Raised Absolute Eosinophil Count (AEC) above 400 cells/mm^3

Inclusion Criteria -

- Individuals coming under diagnostic criteria were selected

- Individuals of either sex between the age group of 31-60 years were selected

Exclusion criteria -

- Individuals with other systemic disorders like cardiac disorders etc that interfere the course of study were excluded

- Eosinophilia with other respiratory problems like Bronchial asthma etc. were excluded

Sampling method -

- Patients of *vataja kasa* were selected randomly by lottery method and made in to three groups.

Research design -

It is a comparative study among the three groups to assess the pre and post test design.

Investigations -

- Absolute Eosinophil Count

- Blood Routine wherever necessary

- Erythrocyte Sedimentation Rate wherever necessary

- Chest X-ray wherever necessary

Intervention -

Table No. 70 – showing groupings – Minimum of 100 Patients in each group;

	Group A	Group B	Group C
Yoga	Duraalabhaadi yoga	Duraalabhaadi yoga	Duraalabhaadi yoga
Anupana	Tila Taila	Ushna Jala	Jala
Maatra	4gms thrice in a day with 8 ml of tila taila	4gms thrice in a day with 30 ml of ushna jala	4gms thrice in a day with 30ml of jala
Sevana kala	Bhojanottara (After food)	Bhojanottara (After food)	Bhojanottara (After food)
Duration	7 days	7 days	7 days
Follow up	15 days	15 days	15 days
Pathya apathya	As per classics	As per classics	As per classics

Assessment criteria -

Assessment was done based on subjective parameter, objective parameter and observational parameter.

For the assessment of the treatment following subjective parameters were considered and they were graded and scores were given as follows;

Shushka kasa Vega -

- No *Kasa Vega* - Grade 0
- *Alpa Kasa Vega* 3-4 times/day - Grade 1
- *Muhurmuhu Kasa Vega* more than 3-4 times/day - Grade 2
- *Kasa Vega* which disturbs the sleep - Grade 3

Hrut shoola (chest pain)/ Ura shoola due to excess Kasa -

- No *Hrut shoola* - Grade 0
- *Hrut shoola* (chest pain)/ *Ura shoola* at *Kasa Vega* - Grade 1
- *Hrut shoola* (chest pain)/ *Ura shoola* persists 1-2hrs after *Kasa vega* - Grade 2
- *Hrut shoola* (chest pain)/ *Ura shoola* which disturbs the sleep - Grade 3

Parshwa shoola -

- No *Parshwa shoola* -   Grade 0

- *Parshwa shoola* at Kasa Vega -   Grade 1

- *Parshwa shoola* persists 1-2hrs after *Kasa vega* -   Grade 2

- *Parshwa shoola* which disturbs the sleep -   Grade 3

Shira shoola -

- No *Shira shoola* -   Grade 0

- *Shira shoola* at *Kasa Vega* -   Grade 1

- *Shira shoola* persists 1-2hrs after *Kasa vega* -   Grade 2

- *Shira shoola* which disturbs the sleep -   Grade 3

Shankha shoola -

- No *Shankha shoola* -   Grade 0

- *Shankha shoola* at *Kasa Vega* -   Grade 1

- *Shanka shoola* persists 1-2hrs after *Kasa vega* -   Grade 2

- *Shankha shoola* which disturbs the sleep -   Grade 3

Udara shoola -

- No *Udara shoola* -   Grade 0

- *Udara shoola* at *Kasa Veg*a -   Grade 1

- *Udara shoola* persists 1-2hrs after *Kasa vega* -   Grade 2

- *Udara shoola* which disturbs the sleep -   Grade 3

Objective parameter :-

Absolute Eosinophil count -

40 – 400 cells/mm^3 is the normal range.

Observational parameter :-

- *Shushka ura*   Present/Absent

- *Shushka kantha*   Present/Absent

- *Shushka vaktra*   Present/Absent

- *Nirghosha*   Present/Absent

- *Swarabheda*   Present/Absent

- *Lomaharsha*   Present/Absent

- *Deenata*   Present/Absent
- *Dourbalya*   Present/Absent
- *Kshobha*   Present/Absent
- *Moha*   Present/Absent
- *Mahaavega*   Present/Absent

Data collection -

Data was collected before treatment, after treatment and at the end of follow up i.e, on 1st day, 7th day and 15th day.

Observations & Discussion -

During the study various observations in terms of changes in the objective, subjective and observational parameters will be made periodically. The outcome of the results will be discussed in detail with reference to the efficacy of the three groups.

Statistical Analysis :-

The data of groups A, B and C will be analyzed individually. Following descriptive and inferential statistics were employed in the present study.

Descriptive statistics -

The Descriptive procedure displays univariate summary statistics for several variables in a single table and calculates standardized values (z scores). Variables can be ordered by the size of their means (in ascending or descending order), alphabetically, or by the order in which the researcher specifies.

Mean, S.D, frequency and percentage are the descriptive statistics employed in the present study.

Inferential statistics -

Cramer's V Test (Cross tabulations) -

The Crosstabs procedure forms two-way and multiway tables and provides a variety of tests and measures of association for two-way tables. The structure of the table and whether categories are ordered determine what test or measure to use. Cramer's V is a measure of association between two nominal variables, giving a value between 0 and +1 (inclusive). It is based on Pearson's chi-squared statistic. In the present study Cramer's V

test was applied to find out the association between grades and duration for various parameters selected.

Repeated Measure ANOVA -

Repeated measures ANOVA is the equivalent of the one-way ANOVA, but for related, not independent groups, and is the extension of the dependent t-test. A repeated measures ANOVA is also referred to as a within-subjects ANOVA or ANOVA for correlated samples. In repeated measures ANOVA, the independent variable has categories called **levels** or **related groups**. Where measurements are repeated over time, such as when measuring changes in blood pressure due to an exercise-training programme, the independent variable is **time**. Each **level** (or **related group**) is a specific time point. Hence, for the exercise-training study, there would be three time points and each time-point is a level of the independent variable.

In the present study repeated measure ANOVA was applied for objective parameters like AEC where it was measures 3 times for 3 groups separately. To find out the differential change across 3 groups in 3 durations repeated measure ANOVA was applied.

All the statistical methods were carried out through the SPSS for Windows (version 23.0).

OBSERVATIONS AND RESULTS

Observations :-

Total 300 patients coming under the inclusion criteria were randomly taken by lottery method for the clinical study and made into three groups. Observations in the present study were done in following manner;

- General Observations
- Observation during intervention
- Observation on results

General observations -

In the present study total 305 patients were registered, out of which 5 patients discontinued the treatment during various stages of the clinical study and with 300 patients the clinical study was completed.

Table No. 71 - showing No. of patients in different age groups;

Age groups	Groups				
		A	B	C	Total
31-40	Frequency	39	42	46	127
	Percentage	39.0%	42.0%	46.0%	42.3%
41-50	Frequency	32	35	26	93
	Percentage	32.0%	35.0%	26.0%	31.0%
51-60	Frequency	29	23	28	80
	Percentage	29.0%	23.0%	28.0%	26.7%
Test Statistics	CV=.067 ; p=.607				

In present study age group between 31-60 yrs were selected. It was found that the patients of age group between 31-40 yrs were 127 (42.3%), 41-50 yrs were 93 (31.0%) and 51-60 yrs were 80 (26.7%). In group A, the patients of age group between 31-40 yrs were 39 (39%), 41-50 yrs were 32 (32.0%) and 51-60 yrs were 29 (29.0%). In group B, the patients of age group between 31-40 yrs were 42 (42.0%), 41-50 yrs were 35 (35.0%) and 51-60 yrs were 23 (23.0%). In group C, the patients of age group between 31-40 yrs were 46 (46.0%), 41-50 yrs were 26 (26.0%) and 51-60 yrs were 28 (28.0%). There is no statistically significant in age groups of the patients.

Table No. 72 - showing No. of patients in each sex;

Sex	Groups			
		A	B	C	Total
Male	Frequency	57	59	52	168
	Percentage	57.0%	59.0%	52.0%	56.0%
Female	Frequency	43	41	48	132
	Percentage	43.0%	41.0%	48.0%	44.0%
Test Statistics		CV=.059; p=.590			

In case of sex, it was found that the male patients were of 169 (56.0%) and that of female are 132 (44.0%). In group A, male patients were of 57 (57.0%) and that of female are 43 (43.0%). In group B, male patients were of 59 (59.0%) and that of female are 41 (41.0%).. In group C, male patients were of 52 (52.0%) and that of female are 48 (48.0%). Statistically no significant in sex/gender of the patients.

Table No. 73 - showing No. of patients and their occupation;

Occupation	Groups				
		A	B	C	Total
Agriculture	Frequency	12	17	11	40
	Percentage	12.0%	17.0%	11.0%	13.3%
Business	Frequency	24	25	16	65
	Percentage	24.0%	25.0%	16.0%	21.7%
Engineer	Frequency	5	1	7	13
	Percentage	5.0%	1.0%	7.0%	4.3%
Cooli	Frequency	3	0	4	7
	Percentage	3.0%	0.0%	4.0%	2.3%
Teacher	Frequency	9	7	12	28
	Percentage	9.0%	7.0%	12.0%	9.3%
HW	Frequency	33	35	32	100
	Percentage	33.0%	35.0%	32.0%	33.3%
Merchant	Frequency	4	5	7	16
	Percentage	4.0%	5.0%	7.0%	5.3%
Clerk	Frequency	2	5	6	13
	Percentage	2.0%	5.0%	6.0%	4.3%
Ex-military	Frequency	1	0	0	1
	Percentage	1.0%	0.0%	0.0%	0.3%
Priest	Frequency	1	0	0	1
	Percentage	1.0%	0.0%	0.0%	0.3%
Driver	Frequency	1	0	2	3
	Percentage	1.0%	0.0%	2.0%	1.0%
Real estate	Frequency	0	0	1	1
	Percentage	0.0%	0.0%	1.0%	0.3%
Carpenter	Frequency	0	0	1	1
	Percentage	0.0%	0.0%	1.0%	0.3%

Tailor	Frequency	0	0	1	1
	Percentage	0.0%	0.0%	1.0%	0.3%
Advocate	Frequency	0	1	0	1
	Percentage	0.0%	1.0%	0.0%	0.3%
Mechanic	Frequency	2	2	0	4
	Percentage	2.0%	2.0%	0.0%	1.3%
Contractor	Frequency	0	1	0	1
	Percentage	0.0%	1.0%	0.0%	0.3%
Bank	Frequency	0	1	0	1
	Percentage	0.0%	1.0%	0.0%	0.3%
Garments	Frequency	2	0	0	2
	Percentage	2.0%	0.0%	0.0%	0.7%
Watchman	Frequency	1	0	0	1
	Percentage	1.0%	0.0%	0.0%	0.3%
Test Statistics	CV=.269; p=.295				

Here it was observed that, 40 (13.3%) patients had the occupation as agriculture, 65 (21.7%) business, 13 (4.3%) engineer, 7 (2.3%) cooli, 28 (9.3%) teacher, 100 (33.3%) house wife, 16 (5.3%) merchant, 13 (4.3%) clerk, ex military, priest, real estate, carpenter, tailor, advocate, contractor, bank and watchman 1 (0.3%) each, 3 (1%) driver, 4 (1.3%) mechanic and 2 (0.7%) garments. Here no statistically significant in occupation of the patients.

Table No. 74 - showing location of the patients;

Location	Groups				
		A	B	C	Total
Urban	Frequency	50	49	40	139
	Percentage	50.0%	49.0%	40.0%	46.3%
Rural	Frequency	50	51	60	161
	Percentage	50.0%	51.0%	60.0%	53.7%
Test Statistics		CV=.090; p=.295			

In the study it was seen that 139 (46.3%) patients were from urban and 161 (53.7%) from rural. In group A, 50 (50.0%) patients were from urban and 50 (50.0%) from rural. In group B, 49 (49.0%) patients were from urban and 51 (51.0%) from rural. In group C, 40 (40.0%) patients were from urban and 60 (60.0%) from rural. Location of the patients did not show statistically significant.

Table No. 75 - showing fresh or treated patients;

Fresh / Treated	Groups			
		A	B	C	Total
Fresh	Frequency	97	92	97	286
	Percentage	97.0%	92.0%	97.0%	95.3%
Treated	Frequency	3	8	3	14
	Percentage	3.0%	8.0%	3.0%	4.7%
Test Statistics	CV=.112; p=.154			

In present research, 286 (95.3%) patients were of fresh case and 14 (4.7%) patients were treated. In group A, 97 (97.0%) patients were fresh and 3 (3.0%) patients were treated. In group B, 92 (92.0%) patients were of fresh case and 8 (8.0%) patients were treated. In group C, 97 (97.0%) patients were of fresh case and 3 (3.0%) patients were treated.

No statistically significant in fresh and treated cases.

Table No. 76 - showing mode of onset of *vataja kasa*;

Mode of onset	Groups			
		A	B	C	Total
Acute	Frequency	95	89	94	278
	Percentage	95.0%	89.0%	94.0%	92.7%
Gradual	Frequency	5	11	6	22
	Percentage	5.0%	11.0%	6.0%	7.3%
Test Statistics	CV=.101; p=.219			

In this study it was found that 278 (92.7%) had acute onset and 22 (7.3%) had gradual onset. In group A, 95 (95.0%) had acute onset and 5 (5.0%) had gradual onset. In group B, 89 (89.0%) had acute onset and 11 (11.0%) had gradual onset. In group C, 94 (94.0%) had acute onset and 6 (6.0%) had gradual onset.

Statistical analysis did not show significant in mode of onset of the patients.

Table No. 77 - showing course of *vataja kasa*;

Course of *vataja kasa*	Groups			
		A	B	C	Total
Continuous	Frequency	62	73	75	210
	Percentage	62.0%	73.0%	75.0%	70.0%
Intermittent	Frequency	38	27	25	90
	Percentage	38.0%	27.0%	25.0%	30.0%
Test Statistics	CV=.125; p=.097			

Present study revealed that 210 (70.0%) patients had continuous course and 90 (30.0%) had intermittent course. In group A, 62 (62.0%) patients had continuous course and 38 (38.0%) had intermittent course. In group B, 73 (73.0%) patients had continuous course and 27 (27.0%) had intermittent course. In group C, 75 (75.0%) patients had continuous course and 25 (25.0%) had intermittent course..

In case of course of *vataja kasa* no statistical significant is revealed.

Table No. 78 - showing periodicity of *vataja kasa*;

Periodicity of *vataja kasa*	Groups				
		A	B	C	Total
Seasonal	Frequency	85	57	71	213
	Percentage	85.0%	57.0%	71.0%	71.0%
Irregular	Frequency	15	43	29	87
	Percentage	15.0%	43.0%	29.0%	29.0%
Test Statistics		CV=.252; p=.000			

This study observed that seasonal periodicity 213 (71.0%) and irregular 87 (29.0%). In group A, seasonal 85 (85.0%) and irregular with 15 (15.0%). In group B, seasonal 57 (57.0%) and irregular with 43 (43.0%). In group C, seasonal 71 (71.0%) and irregular with 29 (29.0%).

In periodicity of the patients, it showed statistically highly significant with p value of .000.

Table No. 79 - showing occurrence of *vataja kasa*;

Occurrence of *vataja kasa*	Groups				
		A	B	C	Total
Night	Frequency	91	92	88	271
	Percentage	91.0%	92.0%	88.0%	90.3%
Persistent	Frequency	9	8	12	29
	Percentage	9.0%	8.0%	12.0%	9.7%
Test Statistics		CV=.058; p=.609			

In this study it was noticed that 271 (90.3%) patients had occurrence of *Kasavega* in night and persistent 29 (9.7%). In group A, 91 (91.0%) patients had occurrence of *Kasavega* in night and persistent 9 (9.0%). In group B, 92 (92.0%) patients had occurrence of *Kasavega* in night and persistent 8 (8.0%). In group C, 88

(88.0%) patients had occurrence of *Kasavega* in night and persistent 12 (12.0%). No statistical significance found in occurrence of the patients.

Table No. 80 - showing severity of *vataja kasa*;

Severity	Groups				
		A	B	C	Total
Mild	Frequency	15	23	38	76
	Percentage	15.0%	23.0%	38.0%	25.3%
Moderate	Frequency	65	69	61	195
	Percentage	65.0%	69.0%	61.0%	65.0%
Severe	Frequency	20	8	1	29
	Percentage	20.0%	8.0%	1.0%	9.7%
Test Statistics		CV=.225; p=.000			

It showed, 76 (25.3%) had mild severity, 195 (65.0%) had moderate and 29 (9.7%) had severe *Vataja Kasa*. In group A, 15 (15.0%) had mild 65 (65.0%) had moderate and 20 (20.0%) had severe *Vataja Kasa*. In group B, 23 (23.0%) had mild 69 (69.0%) had moderate and 8 (8.0%) had severe *Vataja Kasa*. In group C, 38 (38.0%) had mild 61 (61.0%) had moderate and 1 (1.0%) had severe *Vataja Kasa*.

There is statistically highly significant in severity of the patients with p value of .000.

Table No. 81 - showing *koshta* of the patient;

Koshta	Groups				
		A	B	C	Total
Madhya	Frequency	93	82	89	264
	Percentage	93.0%	82.0%	89.0%	88.0%
Krura	Frequency	7	18	11	36
	Percentage	7.0%	18.0%	11.0%	12.0%
Test Statistics		CV=.140; p=.053			

Among 300 patients, 264 (88.0%) patients had *madhyama koshta* and 36 (12.0%) with *kroora koshta*. In group A, 93 (93.0%) patients had *madhyama koshta* and 7 (7.0%) with *kroora koshta*. In group B, 82 (82.0%) patient had *madhyama koshta* and 18 (18.0%) with *kroora koshta*. In group C, 89 (89.0%) patients had *madhyama koshta* and 11 (11.0%) with *kroora koshta*.

Statistically no significant revealed in *koshta* of the patients.

Table No. 82 - showing *agni* of the patient;

Agni	Groups				
		A	B	C	Total
Vishama	Frequency	93	83	86	262
	Percentage	93.0%	83.0%	86.0%	87.3%
Sama	Frequency	7	17	14	38
	Percentage	7.0%	17.0%	14.0%	12.7%
Test Statistics		CV=.126; p=.093			

Agni of the patients of *vataja kasa* revealed that 262 (87.3%) patients had *vishama agni* and 38 (12.7%) had *samaagni*. In group A, 93 (93.0%) patients had *vishama agni* and 7 (7.0%) had *samaagni*. In group B, 83 (83.0%) patients had *vishama agni* and 17 (17.0%) had *samaagni*. In group C, 86 (86.0%) patients had *vishama agni* and 14 (14.0%) had *samagni*.

Agni did not show statistically significant in the patients of *vataja kasa*.

Table No. 83 - showing *nidraa* of the patient;

Nidraa	Groups				
		A	B	C	Total
Alpa	Frequency	85	69	42	196
	Percentage	85.0%	69.0%	42.0%	65.3%
Prakruta	Frequency	12	19	55	86
	Percentage	12.0%	19.0%	55.0%	28.7%
Anidra	Frequency	3	12	2	17
	Percentage	3.0%	12.0%	2.0%	5.7%
Ati	Frequency	0	0	1	1
	Percentage	0.0%	0.0%	1.0%	0.3%
Test Statistics		CV=.327; p=.000			

In this study it was found that 196 (65.3%) had *alpa nidraa*, 86 (28.7%) had *praakruta nidraa*, 17 (5.7%) had *anidraa* and 1 (0.3%) had *atinidraa.* In group A, 85 (85.0%) had *alpa nidraa*, 12 (12.0%) had *praakruta nidraa*, 3 (3.0%) had *anidraa* and no patient (0.0%) had *atinidraa.* In group B, 69 (69.0%) had *alpa nidraa*, 19 (19.0%) had *praakruta nidraa*, 12 (12.0%) had *anidraa* and no patient (0.0%) had *atinidraa.* In group C, 42 (42.0%) had *alpa nidraa*, 55 (55.0%) had *praakruta nidraa*, 2 (2.0%) had *anidraa* and 1 (1.0%) had *atinidraa*.

Statistically showed highly significant in *nidraa* of the patients with p value of .000. *Alpa nidraa* was noticed in *vataja kasa* patients.

Table No. 84 - showing *Vyasana* of patients;

Vyasana	Groups			
		A	B	C	Total
Cof	Frequency	29	14	41	84
	Percentage	29.0%	14.0%	41.0%	28.0%
Tea	Frequency	19	26	24	69
	Percentage	19.0%	26.0%	24.0%	23.0%
tea, smoke	Frequency	20	12	0	32
	Percentage	20.0%	12.0%	0.0%	10.7%
Smoke	Frequency	1	5	17	23
	Percentage	1.0%	5.0%	17.0%	7.7%
tea, alc	Frequency	5	1	1	7
	Percentage	5.0%	1.0%	1.0%	2.3%
cof, tobac	Frequency	0	6	1	7
	Percentage	0.0%	6.0%	1.0%	2.3%
tea, tobac	Frequency	2	2	0	4
	Percentage	2.0%	2.0%	0.0%	1.3%
cof, smoke	Frequency	2	5	4	11
	Percentage	2.0%	5.0%	4.0%	3.7%
tea, smoke, alc	Frequency	6	8	0	14
	Percentage	6.0%	8.0%	0.0%	4.7%
cof, smoke, alc	Frequency	8	4	1	13
	Percentage	8.0%	4.0%	1.0%	4.3%
cof, tobac, smoke, alc	Frequency	1	0	0	1
	Percentage	1.0%	0.0%	0.0%	0.3%
cof, tea	Frequency	2	2	5	9
	Percentage	2.0%	2.0%	5.0%	3.0%
tea, tobac, smoke, alc	Frequency	0	5	1	6
	Percentage	0.0%	5.0%	1.0%	2.0%
tea, tobac, alc	Frequency	0	1	0	1
	Percentage	0.0%	1.0%	0.0%	0.3%
tea, tobac, smoke	Frequency	1	1	0	2
	Percentage	1.0%	1.0%	0.0%	0.7%
cof, alc	Frequency	0	2	0	2
	Percentage	0.0%	2.0%	0.0%	0.7%
tea, smoke	Frequency	0	1	1	2
	Percentage	0.0%	1.0%	1.0%	0.7%
tobac, smoke, alc	Frequency	0	0	1	1
	Percentage	0.0%	0.0%	1.0%	0.3%
Tobac	Frequency	0	0	1	1
	Percentage	0.0%	0.0%	1.0%	0.3%
Alc	Frequency	2	2	1	5
	Percentage	2.0%	2.0%	1.0%	1.7%
smoke, alc	Frequency	1	2	0	3
	Percentage	1.0%	2.0%	0.0%	1.0%
tea, smoke,	Frequency	1	0	1	2
	Percentage	1.0%	0.0%	1.0%	0.7%
cof, tobac, alc	Frequency	0	1	0	1
	Percentage	0.0%	1.0%	0.0%	0.3%
	CV=.427; p=.000				

In the present research it was found that, 84 (28%) patients had the coffee as *vyasana*, 69 (23%) tea, 32 (10.7%) tea and smoking, 23 (7.7%) smoking, 7 (2.3%) tea and alcohol, 7 (2.3%) coffee and tobacco, 4 (1.3%) tea and tobacco, 11 (3.7%) coffee and smoke, 14 (4.7%) coffee, smoke and alcohol, 13 (4.3%) coffee, smoke and alcohol, 1 (0.3%) coffee, tobacco, smoke and alcohol, 9 (3%) coffee and tea, 6 (2%) tea, tobacco, smoke and alcohol, 1 (0.3%) tea, tobacco and alcohol, 2 (0.7%) tea, tobacco and smoke, 2 (0.7%) coffee and alcohol, 2 (0.7%) tea and smoke, 1 (0.3%) tobacco, smoke and alcohol, 1 (0.3%) tobacco, 5 (1.7%) alcohol, 3 (1%) smoke and alcohol, 2 (0.7%) tea and smoke, 1 (0.3%) coffee, tobacco and alcohol.

Here statistically highly significant in *vyasana* of the patients with p value of .000. Consumption of coffee, tea and tea smoke combination found more among the *vataja kasa* patients.

Table No. 85 - showing diet of the patient;

Diet	Groups				
		A	B	C	Total
Veg	Frequency	18	39	37	94
	Percentage	18.0%	39.0%	37.0%	31.3%
Mixed	Frequency	82	61	63	206
	Percentage	82.0%	61.0%	63.0%	68.7%
Test Statistics	CV=.204; p=.002				

More patients with mixed diet 206 (68.7%) and 94 (13.3%) patients were of vegetarian diet in the present study. In group A, 18 (18.0%) patients were of vegetarian and 82 (82.0%) of mixed diet. In group B, 39 (39.0%) patients were of vegetarian and 61 (61.0%) of mixed diet. In group C, 37 (37.0%) patients were of vegetarian and 63 (63.0%) of mixed diet.

It showed statistically significant in diet of the patients with p value of .002. Mixed diet patients found more in the *vataja kasa* patients.

Table No. 86 - showing *naadi* of patients;

Naadi	Groups				
		A	B	C	Total
Vata-pitta	Frequency	78	56	51	185
	Percentage	78.0%	56.0%	51.0%	61.7%
Kapha-vata	Frequency	21	27	22	70
	Percentage	21.0%	27.0%	22.0%	23.3%
Vata	Frequency	1	17	27	45
	Percentage	1.0%	17.0%	27.0%	15.0%
Test Statistics	CV=.226; p=.000				

Naadi of the patients showed that 185 (61.7%) patients had *Vata-Pitta naadi*, 70 (23.3%) had *Kapha-vata naadi* and 45 (15.0%) patients had *Vata naadi*. In group A, 78 (78.0%) patients had *Vata-Pitta naadi*, 21 (21.0%) had *Kapha-vata naadi* and 1 (1.0%) patient had *Vata naadi*. In group B, 56 (56.0%) patients had *Vata-Pitta naadi*, 27 (27.0%) had *Kapha-vata naadi* and 17 (17.0%) patient had *Vata naadi*. In group C, 51 (51.0%) patients had *Vata-Pitta naadi*, 22 (22.0%) had *Kapha-vata naadi* and 27 (27.0%) patient had *Vata naadi*.

Here statistically highly significant in *naadi* of the patients with p value of .000. *Vata pitta naadi* patients found more in *vataja kasa*.

Table No. 87 - showing *prakruti* of patients;

Prakruti	Groups				
		A	B	C	Total
Vata-pitta	Frequency	67	68	49	184
	Percentage	67.0%	68.0%	49.0%	61.3%
Kapha-vata	Frequency	25	12	20	57
	Percentage	25.0%	12.0%	20.0%	19.0%
Pitta-kapha	Frequency	8	20	31	59
	Percentage	8.0%	20.0%	31.0%	19.7%
Test Statistics	CV=.190; p=.000				

In relation to *prakruti,* 184 (61.3%) patients had *Vata-Pitta prakruti*, 57 (19.0 %) *Kapha-vata prakruti* and 59 (19.7%) *Pitta-kapha prakruti*. In group A, 67 (67.0%) patients had *Vata-Pitta prakruti*, 25 (25.0 %) *Kapha-vata prakruti* and 8 (8.0%) *Pitta-kapha prakruti*. In group B, 68 (68.0%) patients had *Vata-Pitta prakruti*, 12 (12.0 %) *Kapha-vata prakruti* and 20 (20.0%) *Pitta-kapha prakruti*.

In group C, 49 (49.0%) patients had *Vata-Pitta prakruti*, 20 (20.0 %) *Kapha-vata prakruti* and 31 (31.0%) *Pitta-kapha prakruti*.

There is statistically highly significant in *prakruti* of the patients with p value of .000. *Vata pitta prakruti* patients found more in getting *vataja kasa*.

Table No. 88 - showing *rogi bala* of patients;

Rogi bala	Groups				
		A	B	C	Total
Madhyama	Frequency	99	90	100	289
	Percentage	99.0%	90.0%	100.0%	96.3%
Avara	Frequency	1	1	0	2
	Percentage	1.0%	1.0%	0.0%	0.7%
Pravara	Frequency	0	9	0	9
	Percentage	0.0%	9.0%	0.0%	3.0%
Test Statistics	CV=.181; p=.001				

Madhyama bala patients found more in the study with 289 (96.3%), 2 (0.7%) *avara* and 9 (3.0%) *pravara bala*. In group A, 99 (99.0%) patients had *madhyama bala* and 1 (1.0%) *avara* and no *pravara bala*. In group B, 90 (90.0%) patients had *madhyama bala* and 1 (1.0%) *avara* and 9 (9.0%) *pravara bala*. In group C, 100 (100.0%) patients had *madhyama bala* and no *avara* and *pravara bala*.

Statistics showed highly significant in *rogibala* of the patients with p value of .000. *Madhyama bala* patients found more in *vataja kasa*.

OBSERVATIONS

Graph No. 1 – Showing age wise distribution of 300 patients in *Vataja Kasa*;
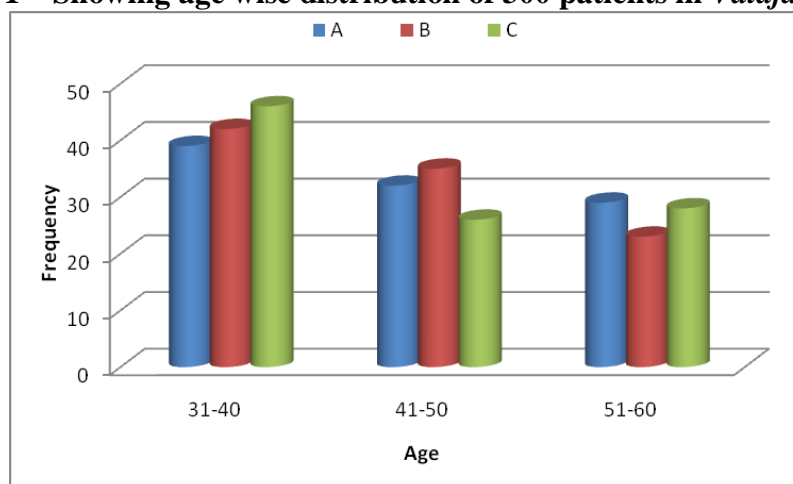
Graph No. 2 – Showing sex wise distribution of 300 patients in *Vataja Kasa*;
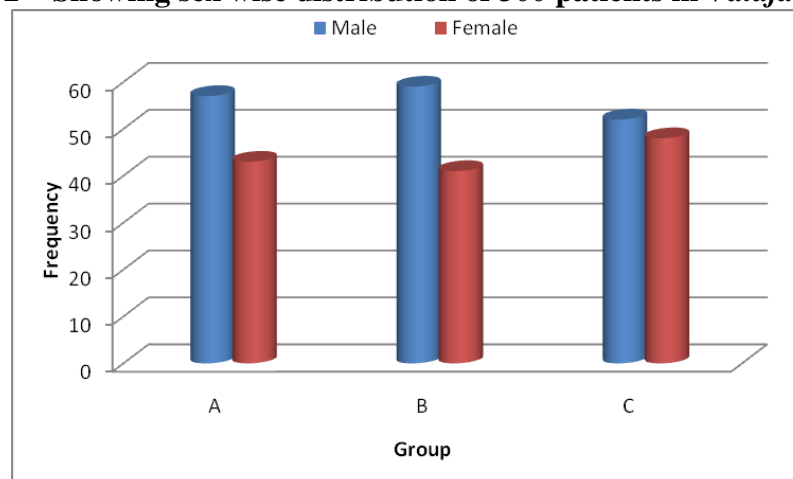
Graph No. 3 – Showing locality wise distribution of 300 patients in *Vataja Kasa*;
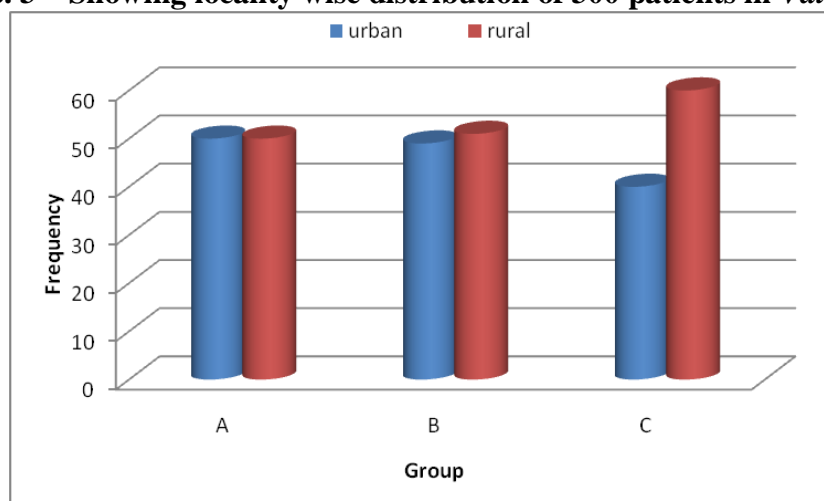
Graph No. 4 – Showing fresh/treated wise distribution of 300 patients in *Vataja Kasa*;
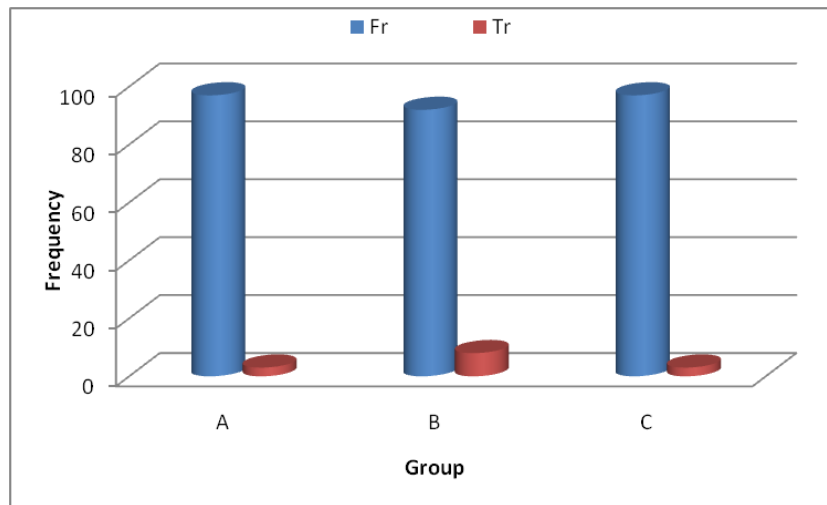
Graph No. 5 – Showing mode of onset wise distribution of 300 patients in *Vataja Kasa*;
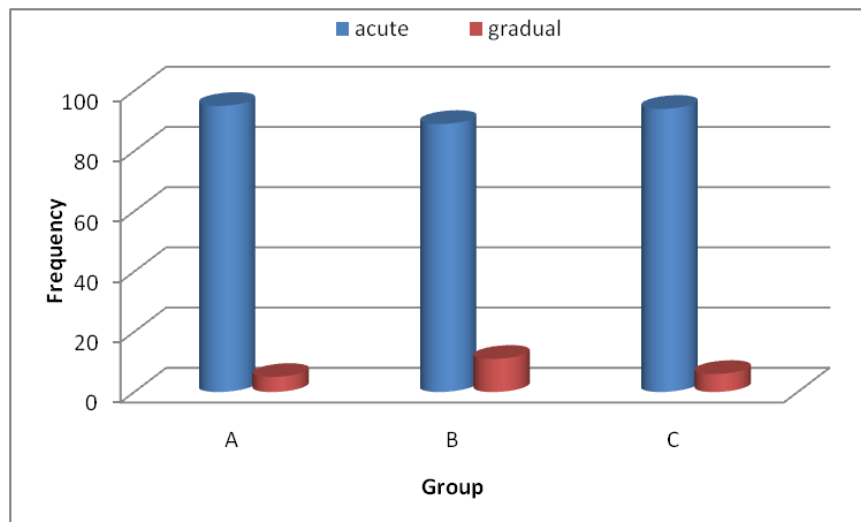
Graph No. 6 – Showing course wise distribution of 300 patients in *Vataja Kasa*;
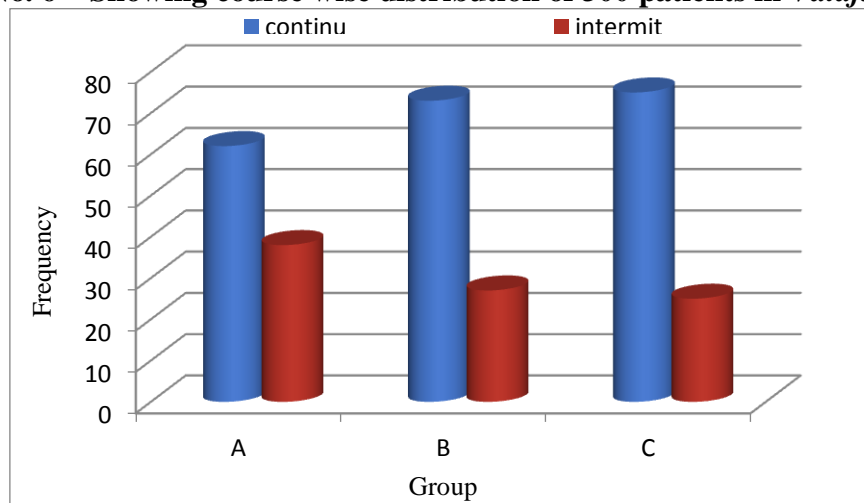
Graph No. 7 – Showing periodicity wise distribution of 300 patients in *Vataja Kasa*;
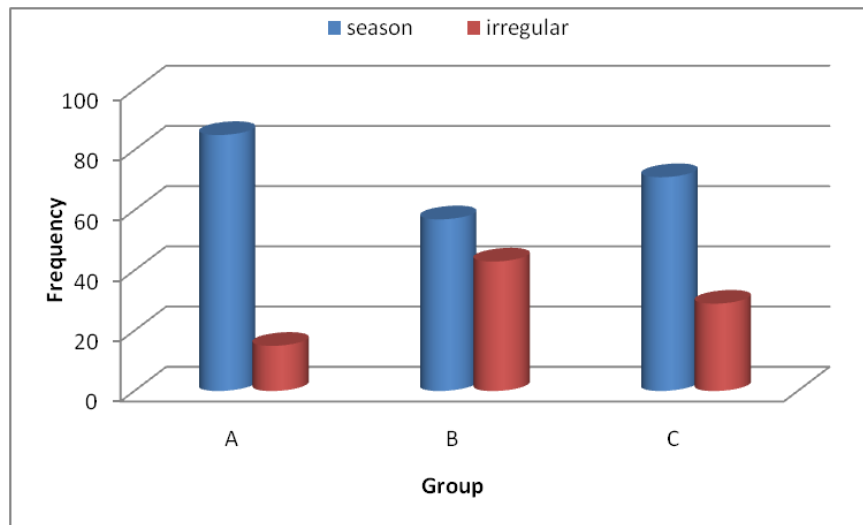
Graph No. 8 – Showing occurrence wise distribution of 300 patients in *Vataja Kasa*;
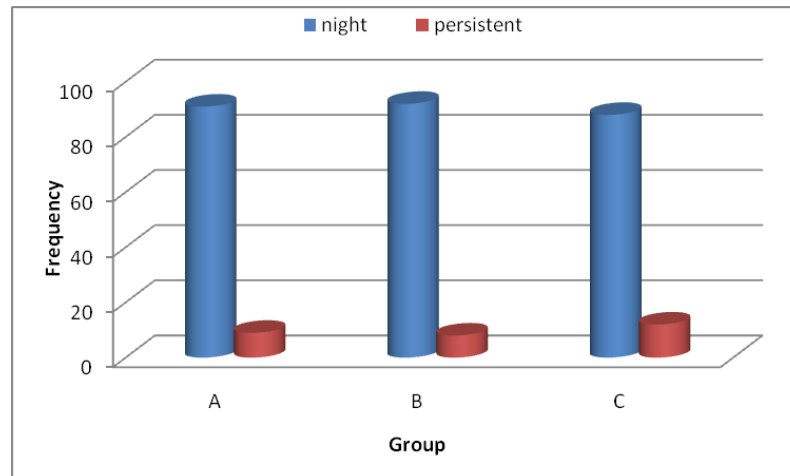
Graph No. 9 – Showing severity wise distribution of 300 patients in *Vataja Kasa*;
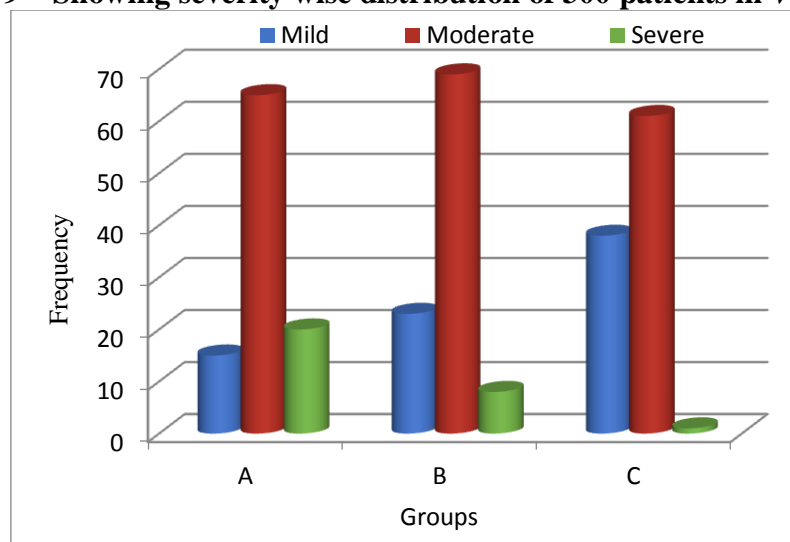
Graph No. 10 – Showing *koshta* wise distribution of 300 patients in *Vataja Kasa*;
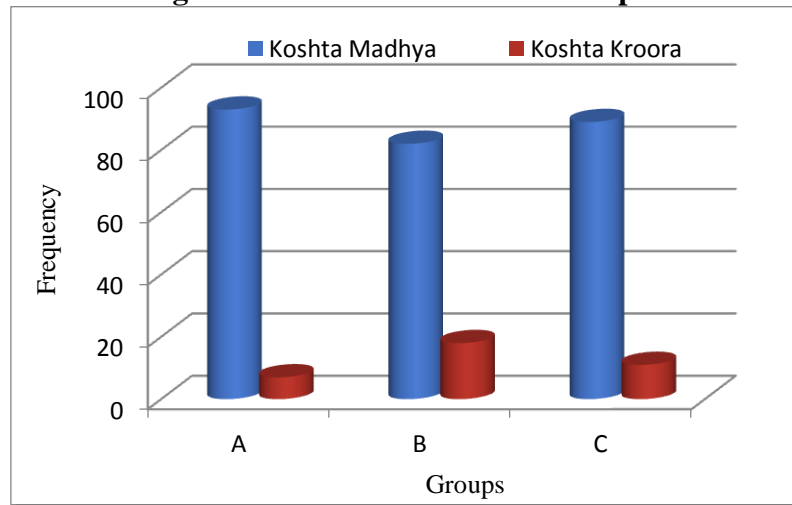
Graph No. 11 – Showing *agni* wise distribution of 300 patients in *Vataja Kasa*;
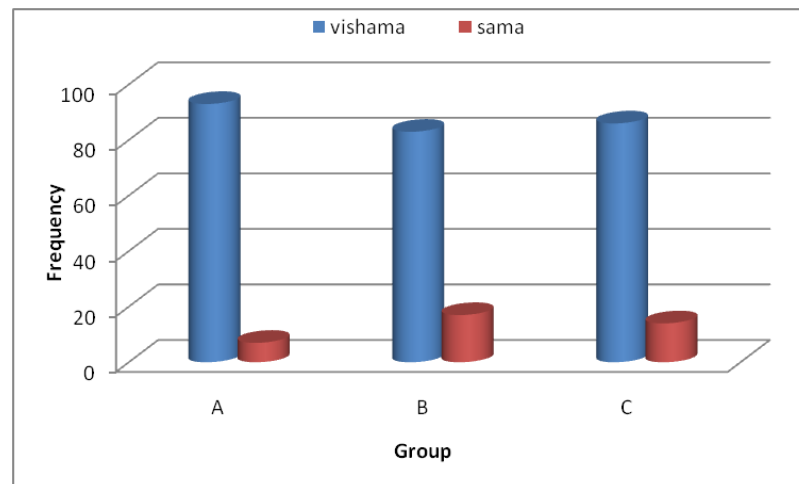
Graph No. 12 – Showing *nidraa* wise distribution of 300 patients in *Vataja Kasa*;
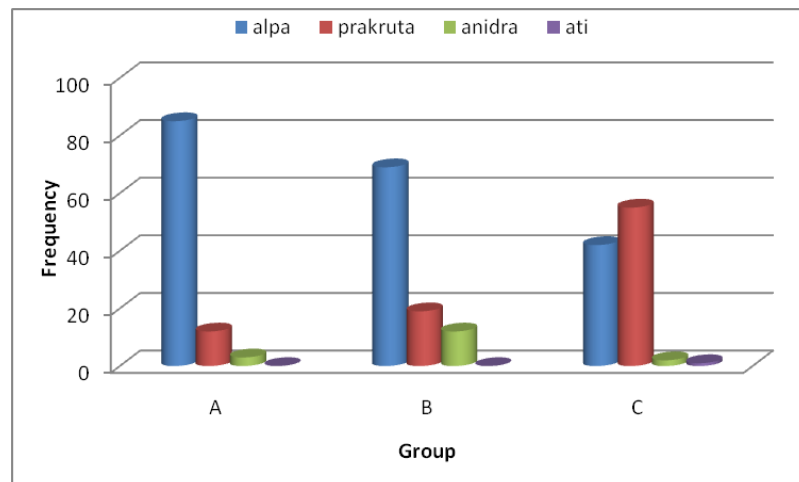
Graph No. 13 – Showing diet wise distribution of 300 patients in *Vataja Kasa*;
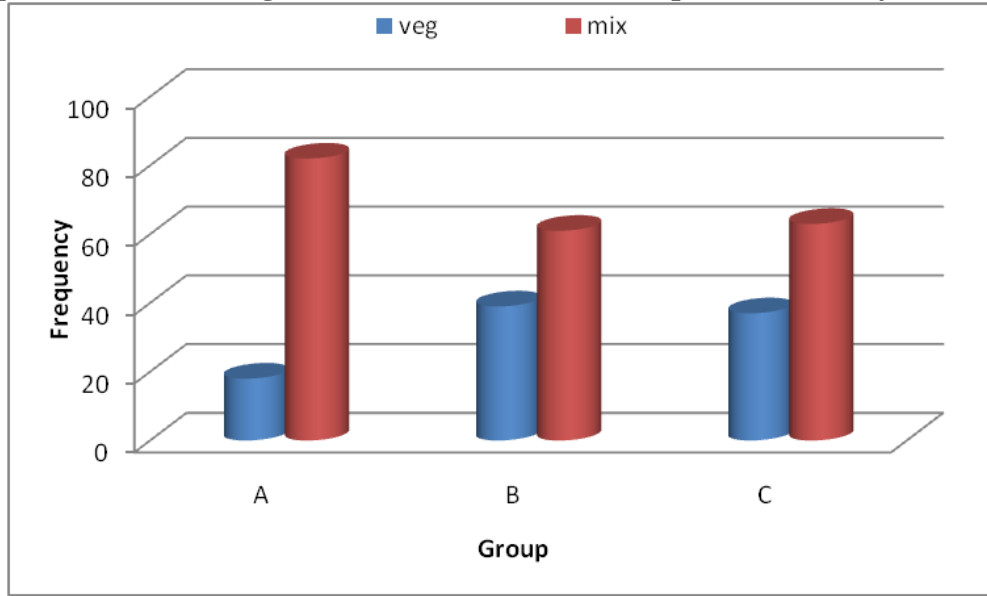
Graph No. 14 – Showing *naadi* wise distribution of 300 patients in *Vataja Kasa*;
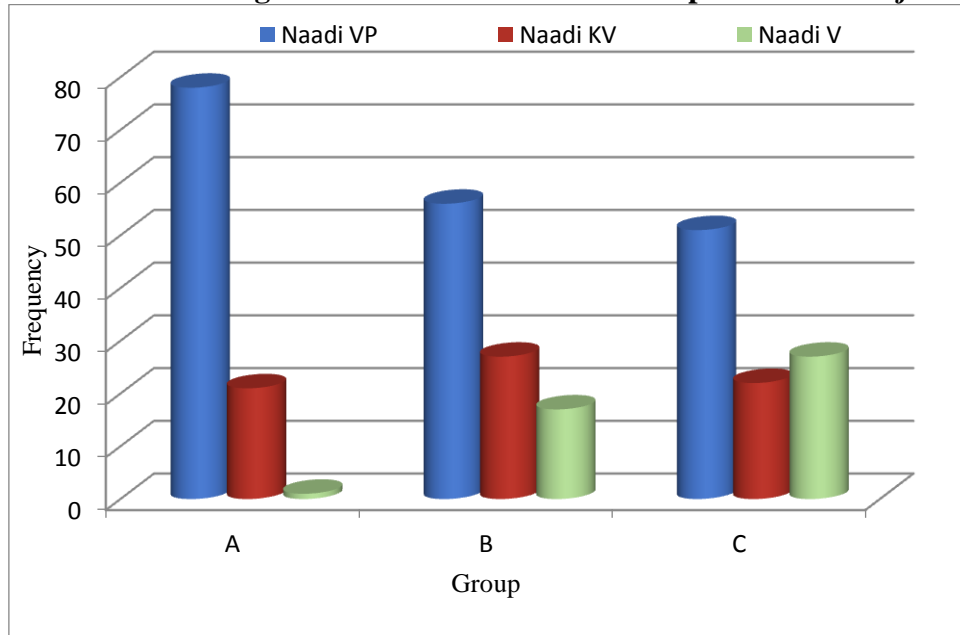
Graph No. 15 – Showing *prakruti* wise distribution of 300 patients in *Vataja Kasa*;
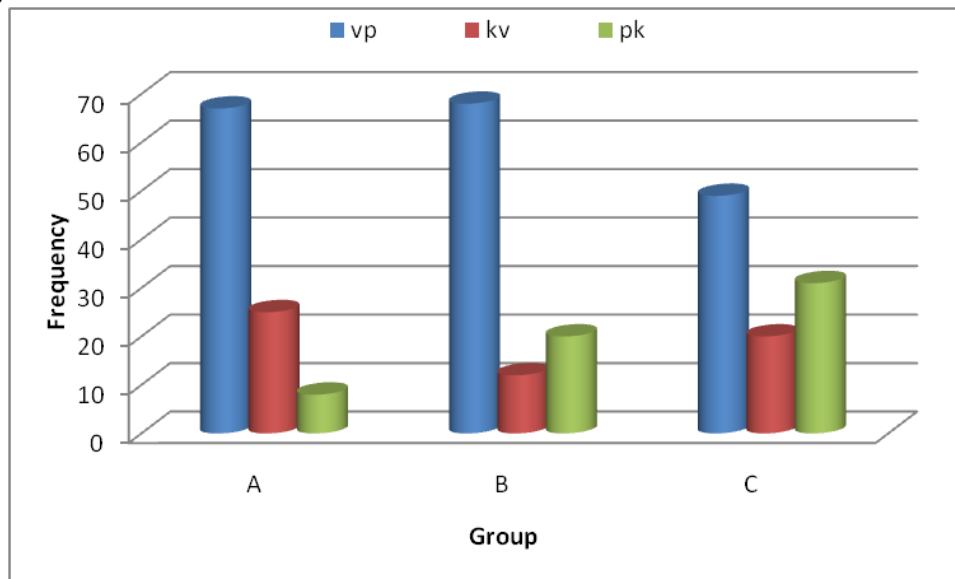
Graph No. 16 – Showing *rogi bala* wise distribution of 30 patients in *Vataja Kasa*;
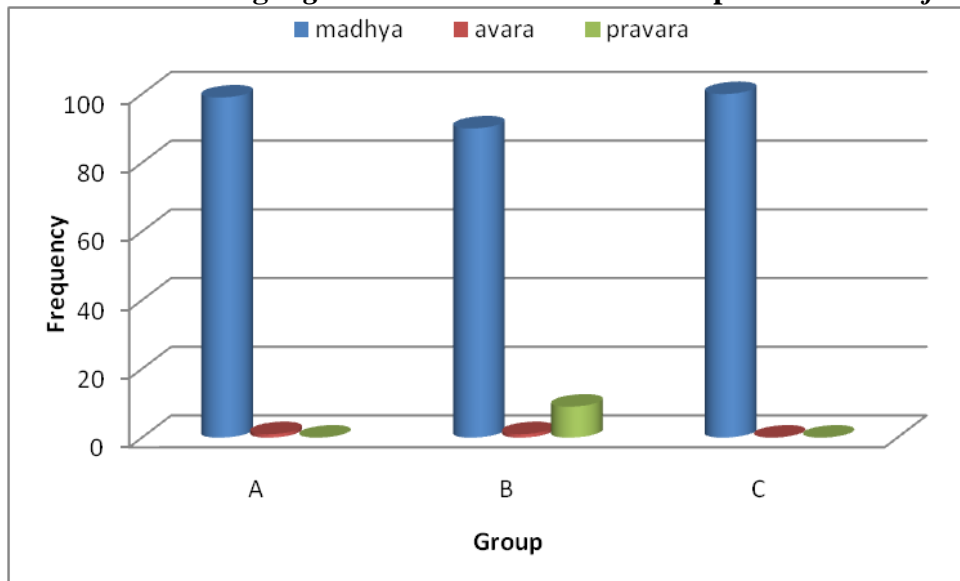
Observations during Intervention –

Group A -

♣ Medicine given was accepted with difficulty by some patients due to non-palatability.

♣ Some of the patients developed adverse effects like nausea, burning sensation in chest, burning sensation in abdomen and some had loose stools after consumption of *Duraalabhaadi yoga* with *tila taila* as Anupana.

♣ Most of the patients got relief from *vataja kasa* symptoms clinically and in laboratory findings, the results came to normal range after treatment as well as after follow up.

♣ No patients had other symptoms like *kanta kandu, pratishyaaya* and *kshavathu* etc.

♣ Some patients developed throat pain after taking *tila taila* as Anupana but continued the treatment.

Group B –

♣ Medicine given was accepted with difficulty by some patients due to non-palatability.

♣ Some patients developed adverse effects like nausea, burning sensation in chest, burning sensation in abdomen and some had loose stools after consumption of *Duraalabhaadi yoga* with *ushna jala*.

♣ Some of the patients got cured from the symptoms of *Vataja Kasa* clinically during treatment and after follow up also laboratory findings showed good improvement when compared to group C when *Duraalabhaadi yoga* is administered along with *ushna jala*.

♣ No patient had other associated symptoms like *kanta kandu* and *pratishyaaya* etc.

♣ One patient discontinued the treatment in the middle due to non palatability of the medicine.

Group C -

♣ Medicine given was accepted with difficulty due to non-palatability and patients were convinced with difficulty.

♣ Few patients complained some adverse effects like nausea, burning sensation in abdomen and chest, loose stool after taking the medicine.

♣ Most of the patients did not get relief from *Vataja Kasa* symptoms clinically, instead the *kasa vega* was increased after taking the *Duraalabhaadi yoga* with *jala*.

♣ Four patients discontinued the treatment in the middle of the course due to increase in the symptoms. The reason was elicited after communicating with the patients.

Results

Subjective parameters :-Table No. 89 - Frequency and percentage of patients in various grades of *shushka kasa vega* and *Hrut shoola* in different groups during various time durations of treatment and results of test statistics;

		Shushka kasa vega											
		Group A				Group B				Group C			
		G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3
Before	F	11	24	49	16	29	12	52	7	35	30	33	2
	%	11.0%	24.0%	49.0%	16.0%	29.0%	12.0%	52.0%	7.0%	35.0%	30.0%	33.0%	2.0%
After	F	73	20	7	0	35	56	9	0	35	21	30	14
	%	73.0%	20.0%	7.0%	0.0%	35.0%	56.0%	9.0%	0.0%	35.0%	21.0%	30.0%	14.0%
Follow up	F	90	10	0	0	38	60	2	0	37	28	32	3
	%	90.0%	10.0%	0.0%	0.0%	38.0%	60.0%	2.0%	0.0%	37.0%	28.0%	32.0%	3.0%
Test Statistics		CV=.536 ; p=.000 (HS)				CV=.444 ; p=.000 (HS)				CV= .163; p=.014 (S)			
		Hrut shoola											
		Group A				Group B				Group C			
		G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3
Before	F	21	44	27	8	11	60	28	1	29	44	26	1
	%	21.0%	44.0%	27.0%	8.0%	11.0%	60.0%	28.0%	1.0%	29.0%	44.0%	26.0%	1.0%
After	F	83	12	5	0	52	48	0	0	31	43	22	4
	%	83.0%	12.0%	5.0%	0.0%	52.0%	48.0%	0.0%	0.0%	31.0%	43.0%	22.0%	4.0%
Follow up	F	96	4	0	0	73	27	0	0	33	49	17	1
	%	96.0%	4.0%	0.0%	0.0%	73.0%	27.0%	0.0%	0.0%	33.0%	49.0%	17.0%	1.0%
Test Statistics		CV=.496 ; p=.000				CV=.436 ; p=.000				CV=.097 ; p=.471			

Shushka kasa vega -

In group A, before treatment 11 patients had grade 0 *shushka kasa vega*, 24 patients were presented with grade 1, 49 of them had grade 2 and remaining 16 of them had grade 3. After treatment, 73 patients attained grade 0, 20 grade 1 and 7 grade 2. After follow up, 90 patients attained grade 0 and 10 grade 1.

In group B, before treatment 29 patients had grade 0 *shushka kasa vega*, 12 grade 1, 52 grade 2 and 7 grade 3. After treatment, 35 patients attained grade 0, 56 grade 1 and 9 grade 2. After follow up, 38 patients attained grade 0, 60 grade 1 and 2 grade 2.

In group C, before treatment, 35 patients had grade 0 *shushka kasa vega*, 30 grade 1, 33 grade 2 and 2 grade 3. After treatment, 35 remained grade 0, 21 grade 1, 30 grade 2 and 14 grade 3. After follow up, 37 patients were with grade 0, 28 grade 1, 32 grade 2 and 3 grade 3.

When these values were subjected for association test, Groups A and B showed higher significance levels (P=.000) compared to group C (p=.014), where we find the effectiveness of drugs for *shushka kasa vega* was more for groups A and B compared to Group C.

Hrut shoola -

In group A, before treatment 21 patients had grade 0 *hrut shoola*, 44 grade 1, 27 grade 2 and 8 grade 3. After treatment, 83 attained grade 0, 12 grade 1 and 5 attained grade 2. After follow up 96 patients attained grade 0 and 4 grade 1.

In group B, before treatment 11 patients had grade 0 *hrut shoola*, 60 grade 1, 28 grade 2 and 1 grade 3. After treatment, 52 attained grade 0 and 48 grade 1. After follow up, 73 attained grade 0 *hrut shoola* and 27 grade 1.

In group C, before treatment 29 patients had grade 0 *hrut shoola*, 44 grade 1, 26 grade 2 and 1 grade 3. After treatment, 31 attained grade 0, 43 grade 1, 22 grade 2 and 4 grade 3. After follow up, 33 patients attained grade 0, 49 grade 1, 17 grade 2 and 1 grade 3.

The results of *hrut shoola* showed group A and B statistically highly significant with p value of .000 and group C is non significant with p value of .471.

Table No. 90 - Frequency and percentage of patients in various grades of *Parshwa shoola* and *Shira shoola* in different groups during various time durations of treatment and results of test statistics;

		Parshwa shoola											
		Group A				Group B				Group C			
		G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3
Before	F	40	42	17	1	64	30	6	0	48	37	14	1
	%	40.0%	42.0%	17.0%	1.0%	64.0%	30.0%	6.0%	0	48.0%	37.0%	14.0%	1.0%
After	F	91	8	1	0	85	15	0	0	49	36	13	2
	%	91.0%	8.0%	1.0%	0.0%	85.0%	15.0%	0.0%	0	49.0%	36.0%	13.0%	2.0%
Follow up	F	98	2	0	0	89	11	0	0	50	40	9	1
	%	98.0%	2.0%	0.0%	0.0%	89.0%	11.0%	0.0%	0	50.0%	40.0%	9.0%	1.0%
Test Statistics		CV=.433 ; p=.000				CV= .213 ; p= .000				CV= .057 ; p= .925			
		Shira shoola											
		Group A				Group B				Group C			
		G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3
Before	F	18	68	12	2	28	63	9	0	32	45	22	1
	%	18.0%	68.0%	12.0%	2.0%	28.0%	63.0%	9.0%	0.0%	32.0%	45.0%	22.0%	1.0%
After	F	89	9	2	0	75	25	0	0	37	47	11	5
	%	89.0%	9.0%	2.0%	0.0%	75.0%	25.0%	0.0%	0.0%	37.0%	47.0%	11.0%	5.0%
Follow up	F	98	2	0	0	83	17	0	0	44	44	11	1
	%	98.0%	2.0%	0.0%	0.0%	83.0%	17.0%	0.0%	0.0%	44.0%	44.0%	11.0%	1.0%
Test Statistics		CV=.544 ; p=.000				CV=.367 ; p=.000				CV=.142 ; p=.060			

Parshwa shoola -

In group A, before treatment 40 patients had grade 0 *parshwa shoola*, 42 grade with 1, 17 were of grade 2 and 1 with grade 3. After treatment, 91 attained grade 0, 8 grade 1 and 1 grade 2. After follow up, 98 patients attained grade 0 and 2 grade 1.

In group B, before treatment, 64 patients had grade 0 *parshwa shoola*, 30 grade 1 and 6 grade2. After treatment, 85 attained grade 0 *parshwa shoola* and 15 grade 1. After follow up 89 patients attained grade 0 *parshwa shoola* and 11 grade 1.

In group C, before treatment 48 patients had grade 0 *parshwa shoola*, 37 grade 1, 14 grade 2 and 1 grade 3. After treatment, 49 attained grade 0 *parshwa shoola*, 36 grade 1, 13 grade 2 and 2 grade 3. After follow up, 50 patients attained grade 0 *parshwa shoola*, 40 grade 1, 9 grade 2 and 1 grade 3.

The results of *parshwa shoola*, group A and B showed statistically highly significant with p value of .000, group C showed non significant with p value .925.

Shira shoola -

In group A, before treatmentn18 patients had grade 0 *shira shoola*, 68 grade 1, 12 grade 2 and 2 grade 3. After treatment, 89 attained grade 0, 9 grade 1 and 2 grade 2. After follow up, 98 *attained* grade 0 and 2 grade 1.

In group B, before treatment 28 patients had grade 0 *shira shoola*, 63 grade 1 and 9 grade 2. After treatment, 75 attained grade 0 and 25 grade 1. After follow up, 83 attained grade 0 and 17 grade 1.

In group C, before treatment 32 patients had grade 0 *shira shoola*, 45 grade 1, 22 grade 2 and 1 grade 3. After treatment, 37 attained grade 0, 47 grade grade1, 11 grade 2 and 5 grade 3. After follow up, 44 attained grade 0, 44 grade 1, 11 grade 2 and 1 grade 3.

In *shira shoola* patients, group A and B showed statistically highly significant with p value of .000. Group C showed non significant with p value .060.

Table No. 91 - Frequency and percentage of patients in various grades of *shankha shoola* and *udara shoola* in different groups during various time durations of treatment and results of test statistics;

		Shankha shoola											
		Group A				Group B				Group C			
		G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3
Before	F	47	46	7	0	46	47	7	0	51	33	15	1
	%	47.0%	46.0%	7.0%	0.0%	46.0%	47.0%	7.0%	0.0%	51.0%	33.0%	15.0%	1.0%
After	F	94	6	0	0	82	18	0	0	53	32	10	5
	%	94.0%	6.0%	0.0%	0.0%	82.0%	18.0%	0.0%	0.0%	53.0%	32.0%	10.0%	5.0%
Follow up	F	99	1	0	0	87	13	0	0	55	33	11	1
	%	99.0%	1.0%	0.0%	0.0%	87.0%	13.0%	0.0%	0.0%	55.0%	33.0%	11.0%	1.0%
Test Statistics		CV=.415; p=.000				CV=.300; p=.000				CV=.099; p=.433			
		Udara shoola											
		Group A				Group B				Group C			
		G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3	G 0	G 1	G 2	G 3
Before	F	99	1	0	0	90	9	1	0	93	6	1	0
	%	99.0%	1.0%	0.0%	0.0%	90.0%	9.0%	1.0%	0.0%	93.0%	6.0%	1.0%	0.0%
After	F	100	0	0	0	99	1	0	0	92	7	1	0
	%	100.0%	0.0%	0.0%	0.0%	99.0%	1.0%	0.0%	0.0%	92.0%	7.0%	1.0%	0.0%
Follow up	F	100	0	0	0	99	1	0	0	93	6	1	0
	%	100.0%	0.0%	0.0%	0.0%	99.0%	1.0%	0.0%	0.0%	93.0%	6.0%	1.0%	0.0%
Test Statistics		CV=.082; p=.367				CV=.154; p=.007				CV=.014; p=.998			

Shankhashoola -

In group A, before treatment 47 patients had grade 0 *shankha shoola*, 46 grade 1, 7 grade 2 and. After treatment, 94 attained grade 0, 6 grade 1. After follow up, 99 attained grade 0 and 1 grade 1.

In group B, before treatment 46 patients had grade 0 *shankha shoola*, 47 grade 1 and 7 grade 2. After treatment, 82 attained grade 0 and 18 grade 1. After follow up, 87 attained grade 0 and 13 grade 1.

In group C, before treatment 51 patients had grade 0 *shankha shoola*, 33 grade 1, 15 grade 2 and 1 grade 3. After treatment, 53 attained grade 0, 32 grade grade1, 10 grade 2 and 5 grade 3. After follow up, 55 attained grade 0, 33 grade 1, 11 grade 2 and 1 grade 3.

In the results of *shankha shoola*, group A and B showed statistically highly significant with p value of .000. Group C showed non significant with p value .433.

Udarashoola -

Udarashoola patients in group A, B and C showed statistically non significant.

Objective parameter :-

Table No. 92 – showing results of Absolute Eosinophil Count in different groups;

	Group A		Group B		Group C	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Before	588.5000	172.52653	619.5000	134.06899	539.5000	120.66629
After	374.0000	46.72615	513.7500	91.45119	629.0000	126.11723
After follow up	351.5000	41.25861	472.2500	62.45150	578.7500	97.72507
N=100 in all groups	p=.000		p=.000		p=.000	

Absolute Eosinophil Count -

In the present study it was observed that in group A, mean/average of AEC before treatment was 588.50, after treatment 374.00 and after follow up 351.50. In group B, mean of AEC before treatment were 619.50, after treatment 513.75 and after follow up 472.25. In group C, mean of AEC before treatment were 539.50, after treatment 629.00 and after follow up 578.75.

In relation to AEC, all the three groups showed statistically highly significant with p value of .000. But the mean of all the three groups indicating the group A significantly reduced in AEC before treatment, after treatment and after follow up from 588.5, 374.0 and 351.0 respectively which is absolutely in normal range in after treatment and after follow up. In group B, mean of AEC before treatment, after treatment and after follow up reduced from 619.5, 513.75 and 472.25 respectively which are not in the normal range of AEC. But in group C, mean of AEC before treatment, after treatment and after follow up reduced from 539.5, 629.0 and 578.75 respectively which are not in the normal range of AEC. So the comparison between the three groups, group A showed highly significant.

Observational parameters :-

Table No. 93 – showing results of *kapha shushkata Alpa kaphata* and *kapha krucchrata*;

		Kapha shushkata					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	11	89	29	71	31	69
	Percentage	11.0%	89.0%	29.0%	71.0%	31.0%	69.0%
After	Frequency	3	97	22	78	28	72
	Percentage	3.0%	97.0%	22.0%	78.0%	28.0%	72.0%
Follow up	Frequency	0	100	14	86	25	75
	Percentage	0.0%	100.0%	14.0%	86.0%	25.0%	75.0%
Test Statistics		CV=220.; p=.001		CV=.149; p=.036		CV=.055; p=.640	

		Alpa kaphata					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	11	89	29	71	31	69
	Percentage	11.0%	89.0%	29.0%	71.0%	31.0%	69.0%
After	Frequency	3	97	22	78	28	72
	Percentage	3.0%	97.0%	22.0%	78.0%	28.0%	72.0%
Follow up	Frequency	0	100	14	86	25	75
	Percentage	0.0%	100.0%	14.0%	86.0%	25.0%	75.0%
Test Statistics		CV=220.; p=.001		CV=.149; p=.036		CV=.055; p=.640	

		Kapha krucchrata					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	11	89	29	71	31	69
	Percentage	11.0%	89.0%	29.0%	71.0%	31.0%	69.0%
After	Frequency	3	97	22	78	28	72
	Percentage	3.0%	97.0%	22.0%	78.0%	28.0%	72.0%
Follow up	Frequency	0	100	14	86	25	75
	Percentage	0.0%	100.0%	14.0%	86.0%	25.0%	75.0%
Test Statistics		CV=220.; p=.001		CV=.149; p=.036		CV=.055; p=.640	

Kapha shushkata -

In group A, before treatment 11 patients had the presence of *kapha shushkata* and 89 were not having. After treatment, 3 patients had *kapha shushkata* and 97 were not having. After follow up, no patients were having *kapha shushkata*.

In group B, 29 patients had the presence of *kapha shushkata* and 71 were not having. After treatment, 22 patients had *kapha shuskata* and 78 were not having. After follow up, 14 patients had *kapha shushkata* and 86 were not having.

In group C, 31 patients had the presence of *kapha shushkata* and 69 were not having. After treatment, 28 had *kapha shushkata* and 72 were not having. After follow up, 25 patients had *kapha shushkata* and 75 were not having.

The symptom *kapha shushkata* in group A showed statistically highly significant with p value of .001, group B and C are statistically non significant.

Alpa kaphata -

In group A, before treatment 11 patients had the presence of *alpa kaphata* and 89 were not having *alpa kaphata*. After treatment, 3 patients had *alpa kaphata* and 97 were not having *alpa kaphata*. After follow up, no patients were having *alpa kaphata*.

In group B, 29 patients had the presence of *alpa kaphata* and 71 were not having *alpa kaphata*. After treatment, 22 patients had *alpa kaphata* and 78 were not having. After follow up, 14 patients had *alpa kaphata* and 86 were not having.

In group C, 31 patients had the presence of *alpa kaphata* and 69 were not having. After treatment, 28 had *alpa kaphata* and 72 were not having. After follow up, 25 patients had *alpa kaphata* and 75 were not having.

Alpa kaphata showed statistically highly significant with p value of .001 in group A, group B as well as C are statistically non significant.

Kapha krucchrata -

In group A, before treatment 11 patients had the presence of *kapha krucchrata* and 89 were not having *kapha krucchrata*. After treatment, 3 patients had *kapha krucchrata* and 97 were not having *kapha krucchrata*. After follow up, no patients were having *kapha krucchrata*.

In group B, 29 patients had the presence of *kapha krucchrata* and 71 were not having *kapha krucchrata*. After treatment, 22 patients had *kapha krucchrata* and 78 were not having. After follow up, 14 patients had *kapha krucchrata* and 86 were not having.

In group C, 31 patients had the presence of *kapha krucchrata* and 69 were not having. After treatment, 28 had *kapha krucchrata* and 72 were not having. After follow up, 25 patients had *kapha krucchrata* and 75 were not having.

In the symptom *kapha krucchrata* group A showed statistically highly significant with p value of .001, group B and C are statistically non significant in *kapha krucchrata* symptom.

Table No. 94 –showing results of *shushka ura, shushka kanta and shushka vaktra*;

		Shushka ura					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	1	99	4	96	0	100
	Percentage	1.0%	99.0%	4.0%	96.0%	0.0%	100.0%
After	Frequency	1	99	2	98	0	100
	Percentage	1.0%	99.0%	2.0%	98.0%	0.0%	100.0%
Follow up	Frequency	0	100	1	99	0	100
	Percentage	0.0%	100.0%	1.0%	99.0%	0.0%	100.0%
Test Statistics		CV=.058; p=.604		CV=.083; p=.359		-	

		Shushka kanta					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	15	85	26	74	20	80
	Percentage	15.0%	85.0%	26.0%	74.0%	20.0%	80.0%
After	Frequency	1	99	17	83	17	83
	Percentage	1.0%	99.0%	17.0%	83.0%	17.0%	83.0%
Follow up	Frequency	0	100	15	85	17	83
	Percentage	0.0%	100.0%	15.0%	85.0%	17.0%	83.0%
Test Statistics		CV=.305; p=.000		CV=.121; p=.111		CV=.037; p=.816	

		Shushka vaktra					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	0	100	2	98	3	97
	Percentage	0.0%	100.0%	2.0%	98.0%	3.0%	97.0%
After	Frequency	0	100	1	99	2	98
	Percentage	0.0%	100.0%	1.0%	99.0%	2.0%	98.0%
Follow up	Frequency	0	100	1	99	2	98
	Percentage	0.0%	100.0%	1.0%	99.0%	2.0%	98.0%
Test Statistics		-		CV=.041; p=.776		CV=.031; p=.864	

Shushka ura -

In group A, before and after treatment, 1 patient had the presence of *shushka ura* and after follow up no patient had the symptom.

In group B, 4 patient had *shushka ura* and 96 were not having. After treatment, 2 patients had *shushka ura* and 98 were not having. After follow up, only one had *shushka ura* and 99 were not having.

In group C, no patient had the symptom of *shushka ura* before treatment, after treatment and after follow up.

On observation all the three groups showed statistically non significant in *shushka ura* symptom.

Shushka kanta -

In group A, before treatment 15 patients had the presence of *shushka kanta* and 85 were not having. After treatment, 1 patient had *shushka kanta* and 99 were not having. After follow up, no patients were having *shushka kanta*.

In group B, 26 patients had the presence of *shushka kanta* and 74 were not having. After treatment, 17 patients had *shushka kanta* and 83 were not having. After follow up, 15 patients had *shushka kanta* and 85 were not having.

In group C, 20 patients had the presence of *shushka kanta* and 80 were not having. After treatment and after follow up, 17 had *shushka kanta* and 83 were not having.

In the symptom *shushka kanta* group A showed statistically highly significant with p value of .000, group B and C are statistically non significant in *shushka kanta* symptom.

Shushka vaktra -

In group A, no patient is reported with the symptom of *shushka vaktra*.

In group B, before treatment 2 patients had *shushka vaktra* and 98 were not having. After treatment and after follow up 1 patient had the symptom of *shushka vaktra* and 99 were not having.

In group C, before treatment 3 patients had *shushka vaktra* symptom and 97 were not having. After treatment and after follow up, 2 patients were having *shushka vaktra* symptom and 98 were not having.

Here, no group showed statistically significant in *shushka vaktra* symptom.

Table No. 95 – showing results of *nirghosha, swarabheda and lomaharsha*;

		Nirghosha					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	84	16	90	10	74	26
	Percentage	84.0%	16.0%	90.0%	10.0%	74.0%	26.0%
After	Frequency	18	82	49	51	66	34
	Percentage	18.0%	82.0%	49.0%	51.0%	66.0%	34.0%
Follow up	Frequency	1	99	27	73	61	39
	Percentage	1.0%	99.0%	27.0%	73.0%	61.0%	39.0%
Test Statistics		CV=.754; p=.000		CV=.525; p=.000		CV=.114; p=.143	

		Swarabheda					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	69	31	57	43	79	21
	Percentage	69.0%	31.0%	57.0%	43.0%	79.0%	21.0%
After	Frequency	13	87	21	79	64	36
	Percentage	13.0%	87.0%	21.0%	79.0%	64.0%	36.0%
Follow up	Frequency	2	98	14	86	59	41
	Percentage	2.0%	98.0%	14.0%	86.0%	59.0%	41.0%
Test Statistics		CV=.653; p=.000		CV=.409; p=.000		CV=.181; p=.007	

		Lomaharsha					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	2	98	18	82	31	269
	Percentage	2.0%	98.0%	18.0%	82.0%	10.3%	89.7%
After	Frequency	0	100	9	91	5	95
	Percentage	0.0%	100.0%	9.0%	91.0%	5.0%	95.0%
Follow up	Frequency	0	100	4	96	4	96
	Percentage	0.0%	100.0%	4.0%	96.0%	4.0%	96.0%
Test Statistics		CV=.116; p=.134		CV=.190; p=.004		CV=.023; p=.923	

Nirghosha -

In group A, before treatment 84 patients had *nirghosha* and 16 were not having. After treatment, only 18 had *nirghosha* and 82 were not having. After follow up, only one patient had *nirghosha* and 99 were not having.

In group B, 90 patients were having *nirghosha* symptoms and 10 were not having. After treatment, 49 had *nirghosha* and 51 were not having. After follow up, 27 had *nirghosha* and 73 were not having.

In group C, before treatment 74 had *nirghosha* as symptom and 26 were not having. After treatment, 66 had *nirghosha* and 34 were not having. After follow up, 61 had *nirghosha* as symptom and 39 were not having.

By seeing the results, group A and B showed statistically highly significant with p value of .000 and group C showed statistically non significant on *nirghosha* symptom.

Swarabheda -

In group A, before treatment 69 patients had *swarabheda* and 31 were not having. After treatment, only 13 had *swarabheda* and 87 were not having. After follow up, 2 patients had *swarabheda* and 98 were not having.

In group B, 57 patients were having *swarabheda* symptoms and 43 were not having. After treatment, 21 had *swarabheda* and 79 were not having. After follow up, 14 had *swarabheda* and 86 were not having.

In group C, before treatment 79 had *swarabheda* as symptom and 21 were not having. After treatment, 64 had *swarabheda* and 36 were not having. After follow up, 59 had *swarabheda* as symptom and 41 were not having.

In *swarabheda*, group A and B showed statistically highly significant with p value of .000 and group C showed statistically significant with p value .007.

Lomaharsha -

In group A, before treatment 2 patients had the presence of *lomaharsha* and 98 were not having *lomaharsha*. After treatment and after follow up, no patients were having *lomaharsha*.

In group B, 18 patients had the presence of *lomaharsha* and 82 were not having *lomaharsha*. After treatment, 9 patients had *lomaharsha* and 91 were not having. After follow up, 4 patients had *lomaharsha* and 96 were not having.

In group C, 5 patients had the presence of *lomaharsha* & 95 were not having. After treatment and after follow up, 4 patients had *lomaharsha* & 96 were not having.

It is observed that, Group B showed statistically significant in *lomaharsha* with p value of .004, group A and C showed statistically non significant.

Table No. 96 – showing results of *deenata, dourbalya and kshobha*;

		Deenata					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	13	87	32	68	17	83
	Percentage	13.0%	87.0%	32.0%	68.0%	17.0%	83.0%
After	Frequency	4	96	21	79	17	83
	Percentage	4.0%	96.0%	21.0%	79.0%	17.0%	83.0%
Follow up	Frequency	0	100	11	89	16	84
	Percentage	0.0%	100.0%	11.0%	89.0%	16.0%	84.0%
Test Statistics		CV=.235; p=.000		CV=.209; p=.001		CV=.013; p=.976	

		Dourbalya					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	17	83	40	60	41	59
	Percentage	17.0%	83.0%	40.0%	60.0%	41.0%	59.0%
After	Frequency	3	97	27	73	37	63
	Percentage	3.0%	97.0%	27.0%	73.0%	37.0%	63.0%
Follow up	Frequency	0	100	18	82	35	65
	Percentage	0.0%	100.0%	18.0%	82.0%	35.0%	65.0%
Test Statistics		CV=.297; p=.000		CV=.200; p=.002		CV=.051; p=.672	

		Kshobha					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
After	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
Follow up	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
Test Statistics		-		-		-	

Deenata -

In group A, before treatment 13 patients had the presence of *deenata* and 87 were not having. After treatment 4 patients had *deenata* and after follow up, no patients were having *deenata*.

In group B, 32 patients had the presence of *deenata* and 68 were not having. After treatment, 21 patients had *deenata* and 79 were not having. After follow up, 11 patients had *deenata* and 89 were not having.

In group C, before treatment and after treatment 17 patients had the presence of *deenata* and 83 were not having. After follow up, 16 patients had *deenata* and 84 were not having.

It is found that, *Deenata* symptom in group A showed statistically highly significant with p value of .000 and group B with p value of .001. Group C showed statistically non significant.

Dourbalya -

In group A, before treatment 17 patients had the presence of *dourbalya* and 83 were not having. After treatment 3 patients had *dourbalya* and 97 were not having. After follow up, no patients were having *dourbalya*.

In group B, 40 patients had the presence of *dourbalya* and 60 were not having. After treatment, 27 patients had *dourbalya* and 73 were not having. After follow up, 18 patients had *dourbalya* and 82 were not having.

In group C, before treatment 41 patients had the presence of *dourbalya* and 59 were not having. After treatment, 37 patients had *dourbalya* and 63 were not having. After follow up, 35 patients had *dourbalya* and 65 were not having.

By observing on results, group A showed statistically highly significant in *dourbalya* with p value of .000 and group B showed statistically significant with p value of .002. Group C showed statistically non significant.

Kshobha -

In all the three groups, no patients reported with *kshobha* symptoms.

Table No. 97 – showing results of *moha, mahavega and prataamyataa*;

		Moha					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	4	96	0	100	0	100
	Percentage	4.0%	96.0%	0.0%	100.0%	0.0%	100.0%
After	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
Follow up	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
Test Statistics		CV=.164; p=.017		-		-	
		Mahavega					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	66	34	49	51	35	65
	Percentage	66.0%	34.0%	49.0%	51.0%	35.0%	65.0%
After	Frequency	15	85	22	78	32	68
	Percentage	15.0%	85.0%	22.0%	78.0%	32.0%	68.0%
Follow up	Frequency	1	99	16	84	28	72
	Percentage	1.0%	99.0%	16.0%	84.0%	28.0%	72.0%
Test Statistics		CV=.627; p=.000		CV=.316; p=.000		CV=.062; p=.566	
		Prataamyata					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
After	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
Follow up	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
Test Statistics		-		-		-	

Moha -

In group A, 4 patients had the presence of *moha* as symptoms and 96 were not having. After treatment and after follow up no patient had *moha* as symptoms. Group A and B patients, did not report with *moha* as symptom.

On observation, group A showed statistically non significant.

Mahavega -

In group A, before treatment 66 patients had the presence of *mahavega* and 34 were not having. After treatment 15 patients had *mahavega* and 85 were not having. After follow up, 1 patient had *mahavega* and 99 were not having.

In group B, 49 patients had the presence of *mahavega* and 51 were not having. After treatment, 22 patients had *mahavega* and 78 were not having. After follow up, 16 patients had *mahavega* and 84 were not having.

In group C, before treatment 41 patients had the presence of *mahavega* and 59 were not having. After treatment, 32 patients had *mahavega* and 68 were not having. After follow up, 28 patients had *mahavega* and 72 were not having.

Here, group A and group B showed statistically highly significant in *mahavega* with p value of .000. Group C showed statistically non significant.

Prataamyata -

In all the three groups, no patients reported with *prataamyata* symptoms.

Table No. 98 – showing results of *kshamaanana*;

		Kshamaanana					
		Group A		Group B		Group C	
		Present	Absent	Present	Absent	Present	Absent
Before	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
After	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
Follow up	Frequency	0	100	0	100	0	100
	Percentage	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
Test Statistics		-		-		-	

In all the three groups, no patients reported with *kshamaanana* symptoms.

RESULTS

Results based on subjective parameter :-

Graph No. 17 – Showing results of *Kasa vega*;
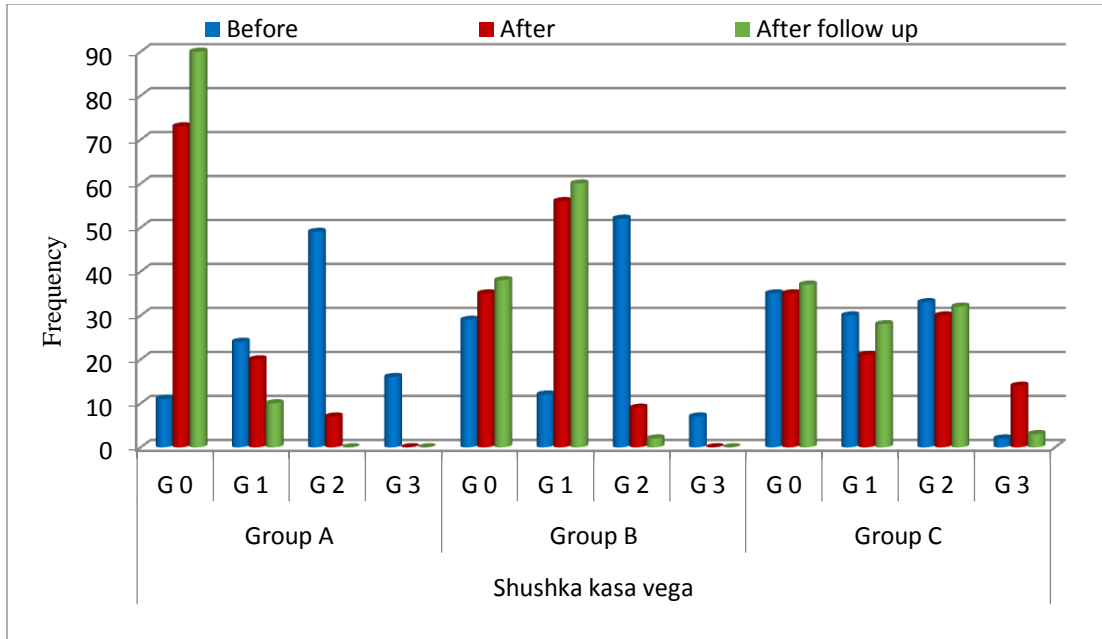
Graph No. 18 Showing results of *Hrut shoola*;
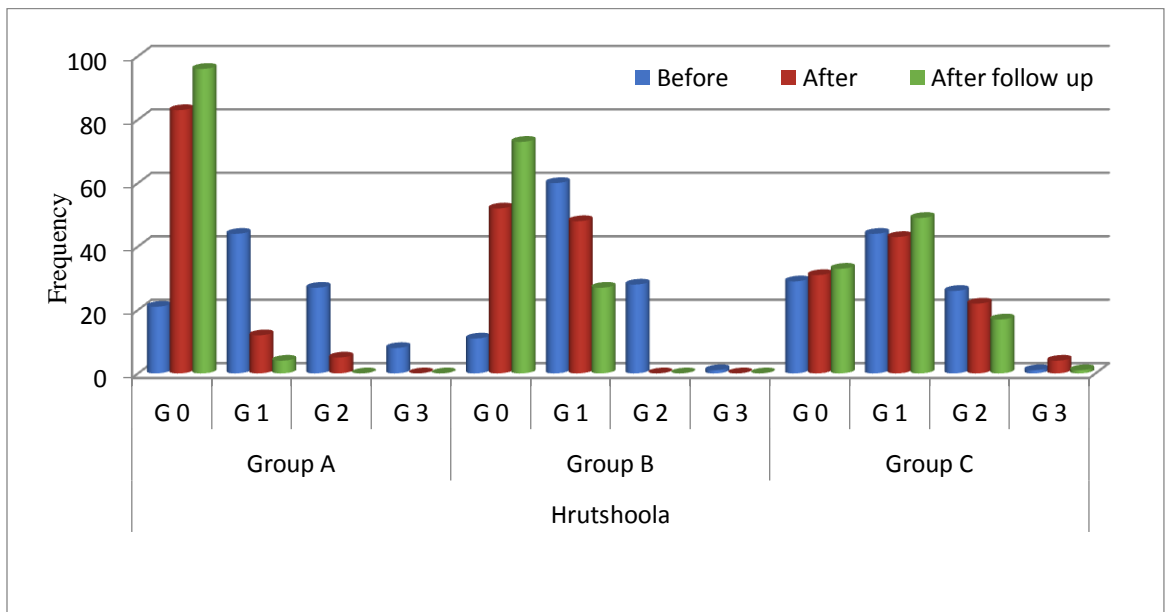
Graph No. 19 – Showing results of *Parshwa shoola*;
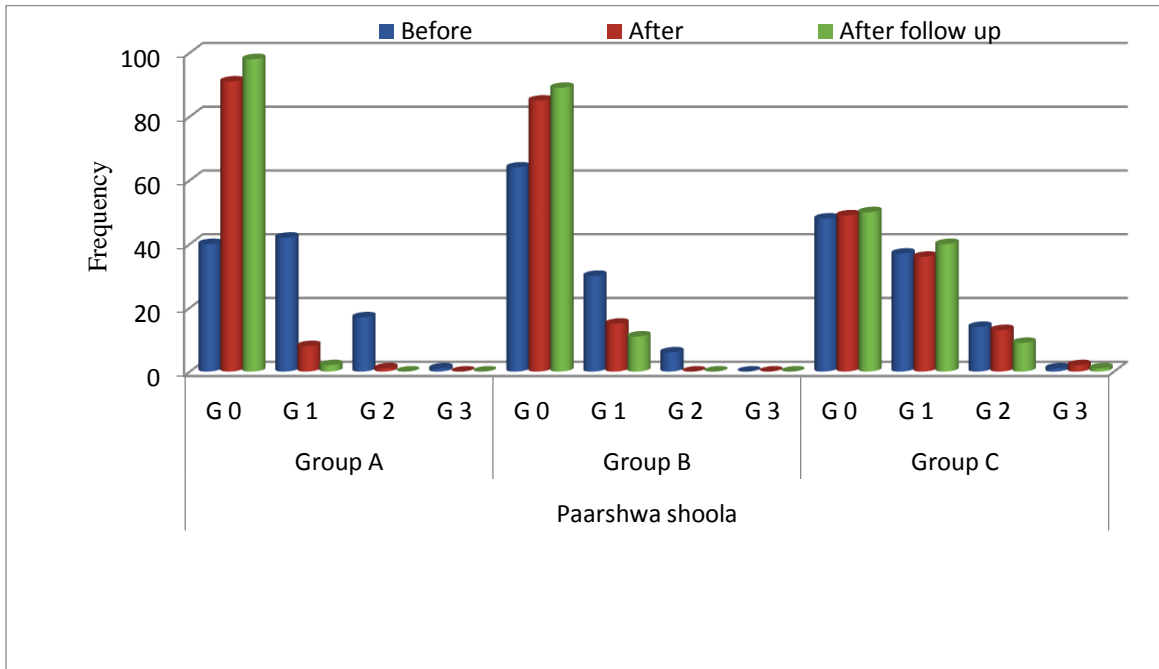
Graph No. 20 – Showing results of *Shira shoola*;
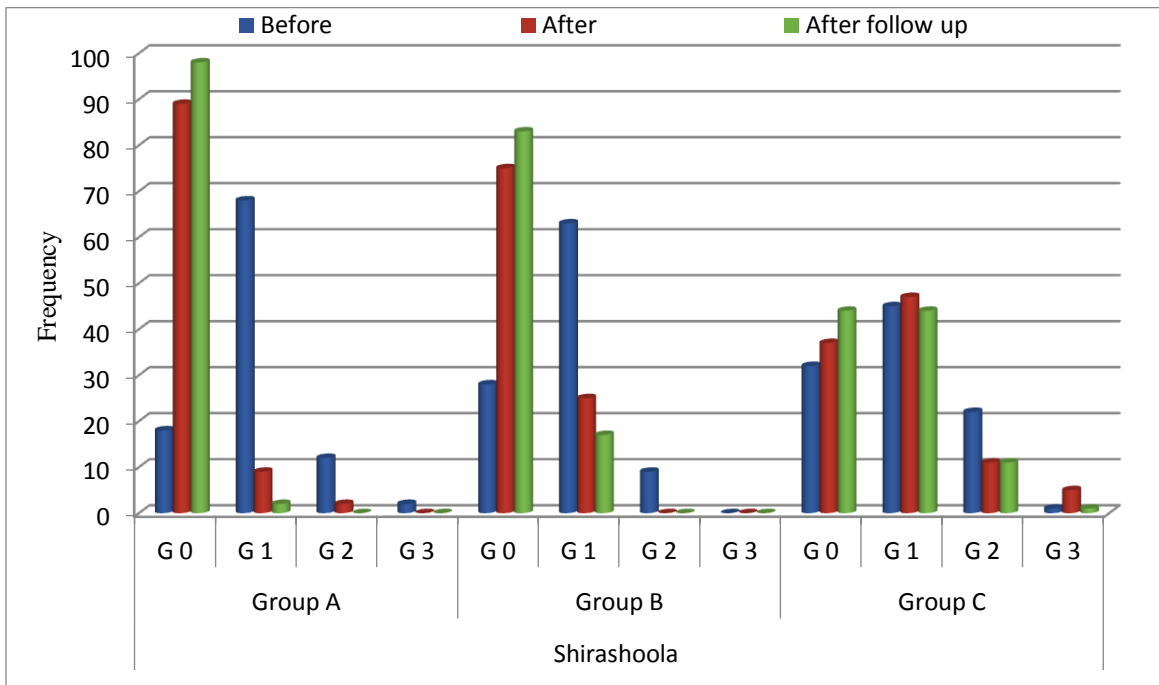
Graph No. 21 – Showing results of *Shankha shoola*;
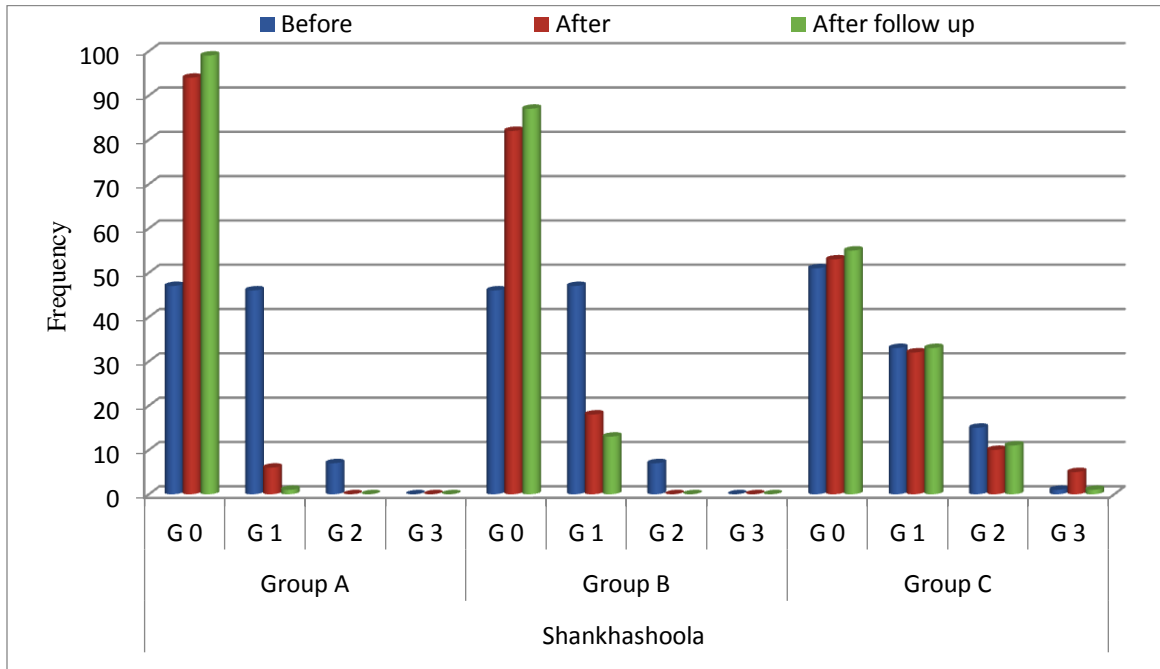
Graph No. 22 – Showing results of *Udara shoola*;
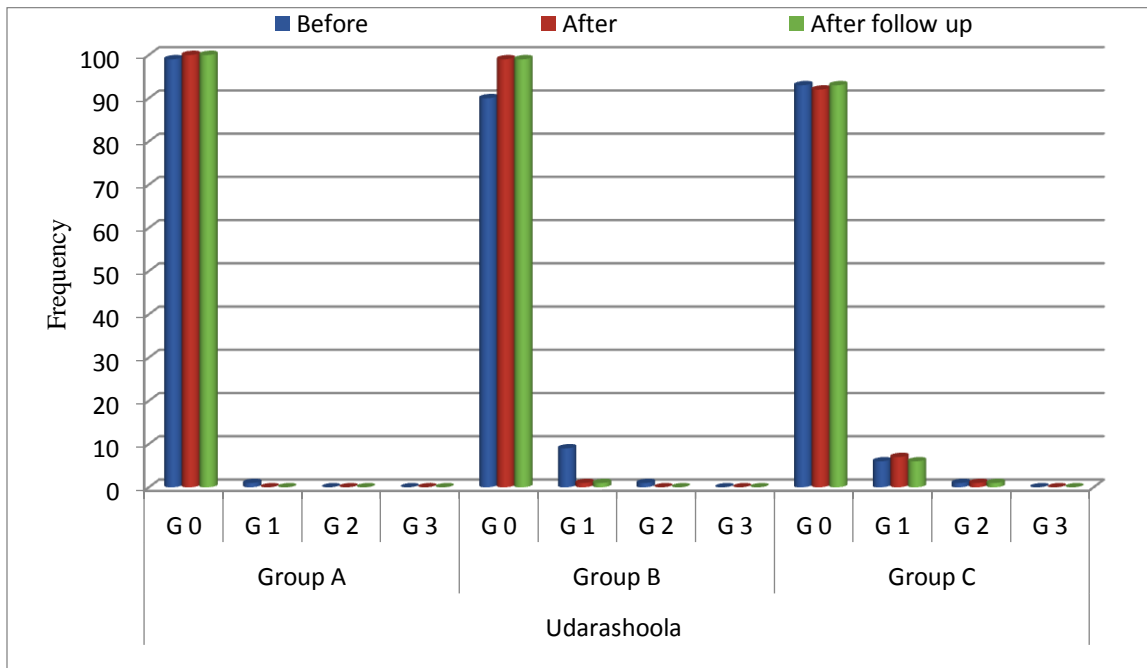
Results based on objective parameter :-

Graph No. 23 – Showing results of AEC;
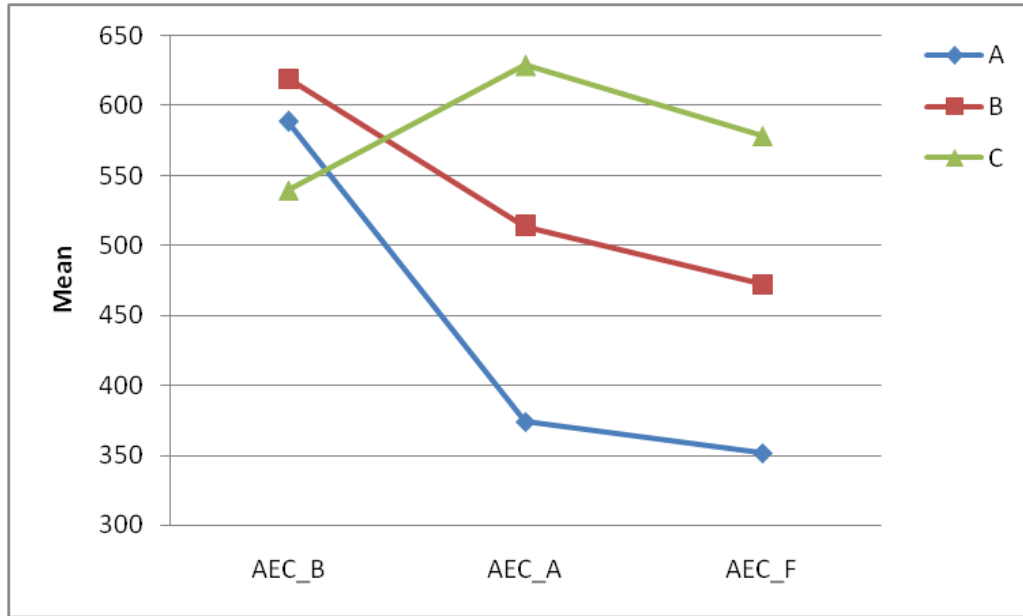
Graph No. 24 – Showing results of *Kapha shushkataa, alpa kaphataa* and *kapha krucchrataa*;
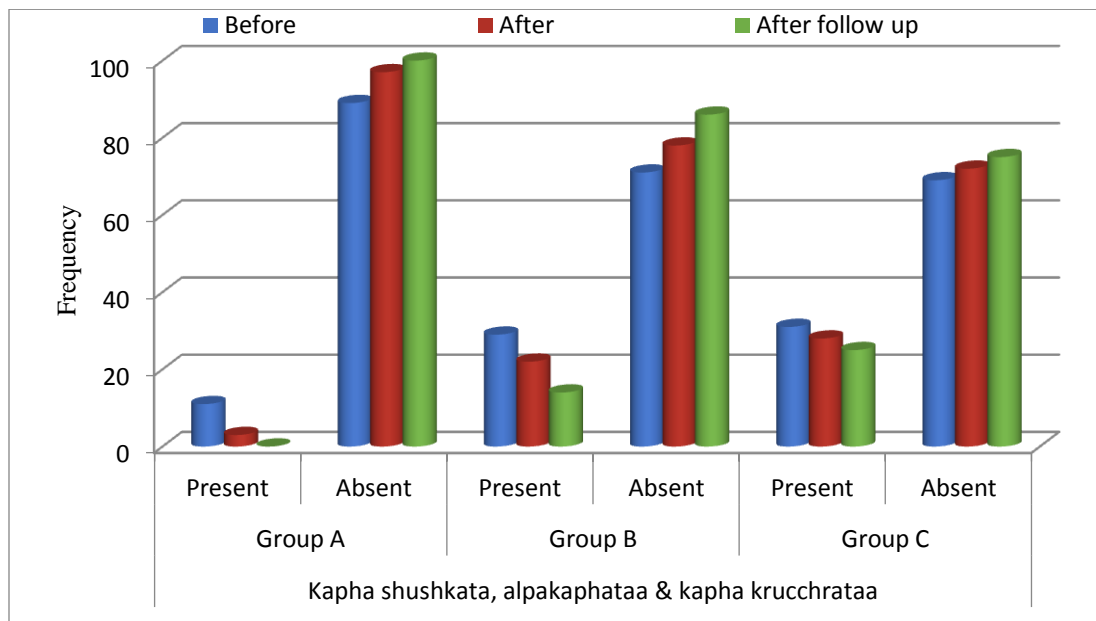
Graph No. 25 – Showing results of *shushka ura*;
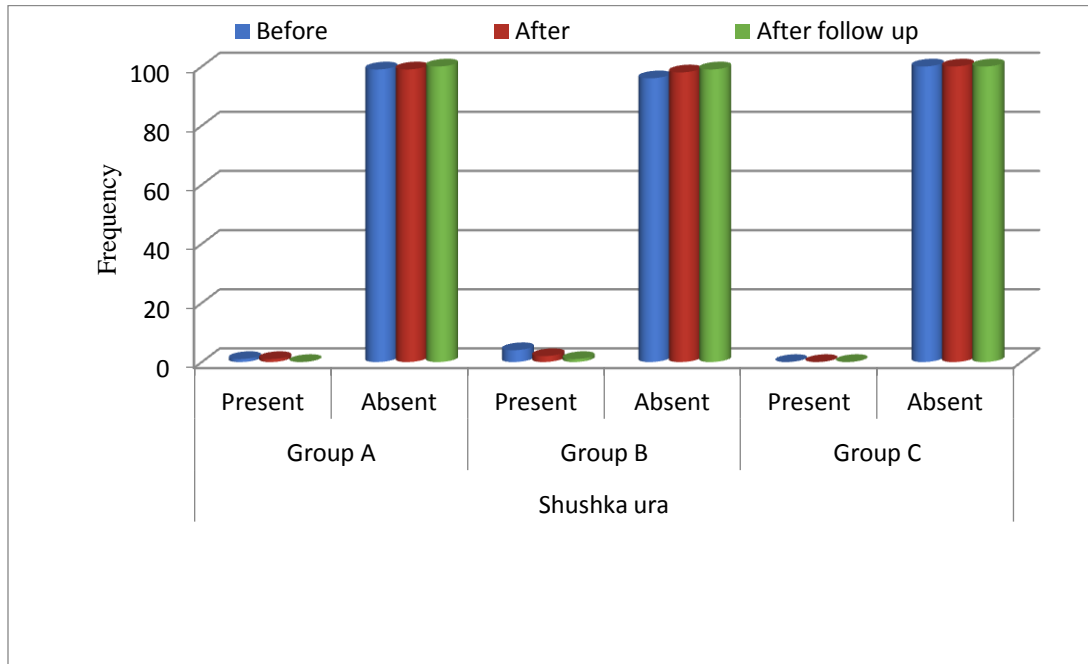
Graph No. 26 – Showing results of *shushka kanta*;
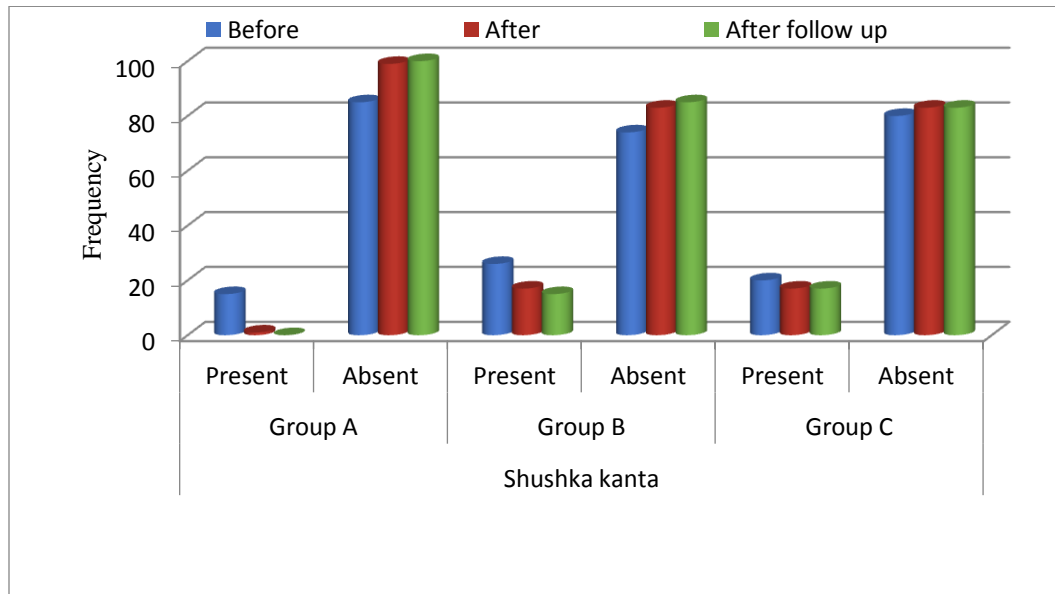
Graph No. 27 – Showing results of *shushka vaktra*;
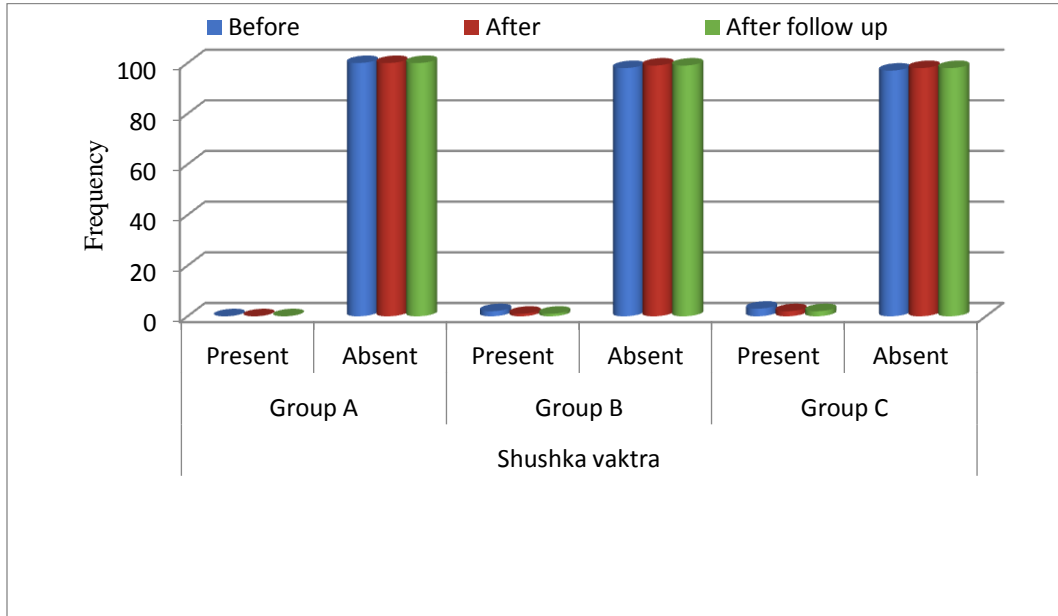
Graph No. 28 – Showing results of *nirghosha*;
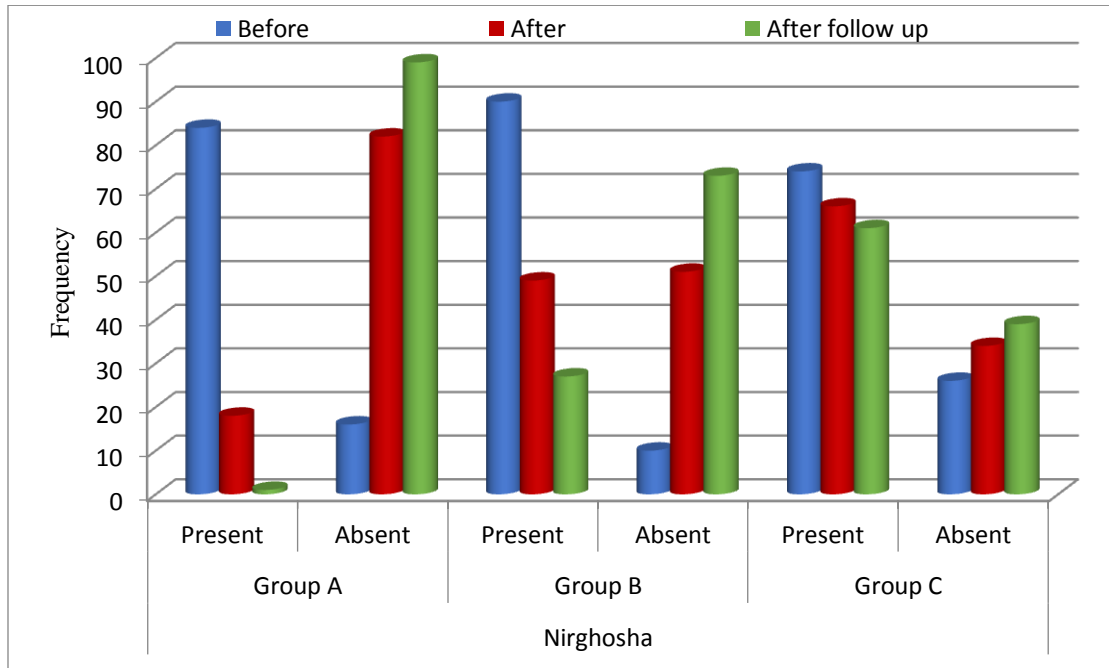
Graph No. 29 – Showing results of *swarabheda*;
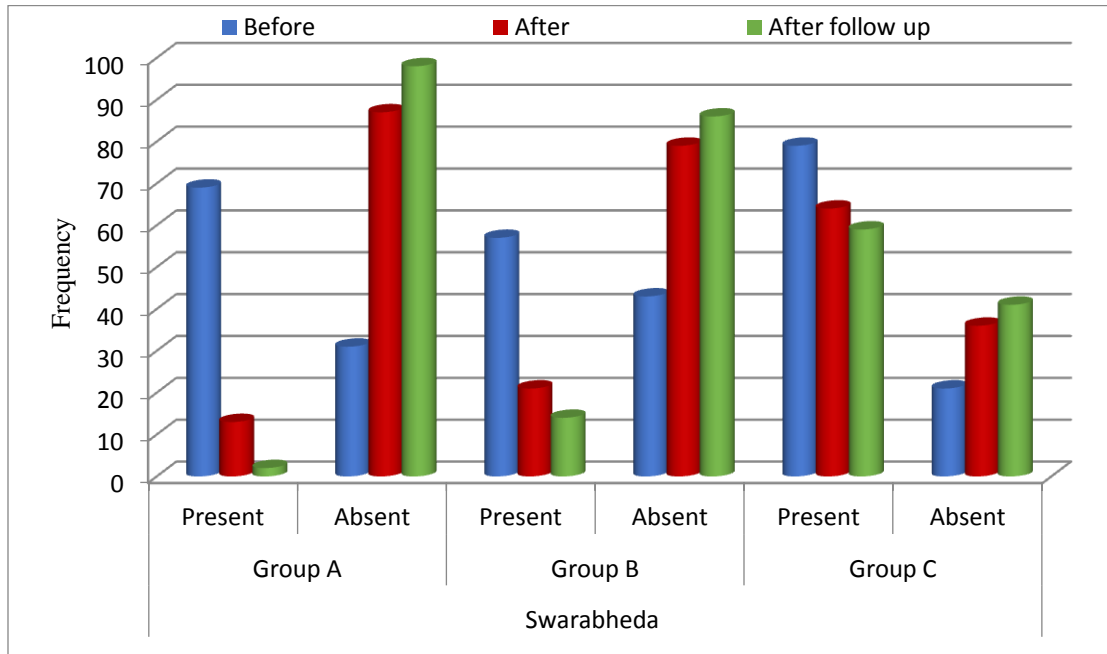
Graph No. 30 – Showing results of *lomaharsha*;
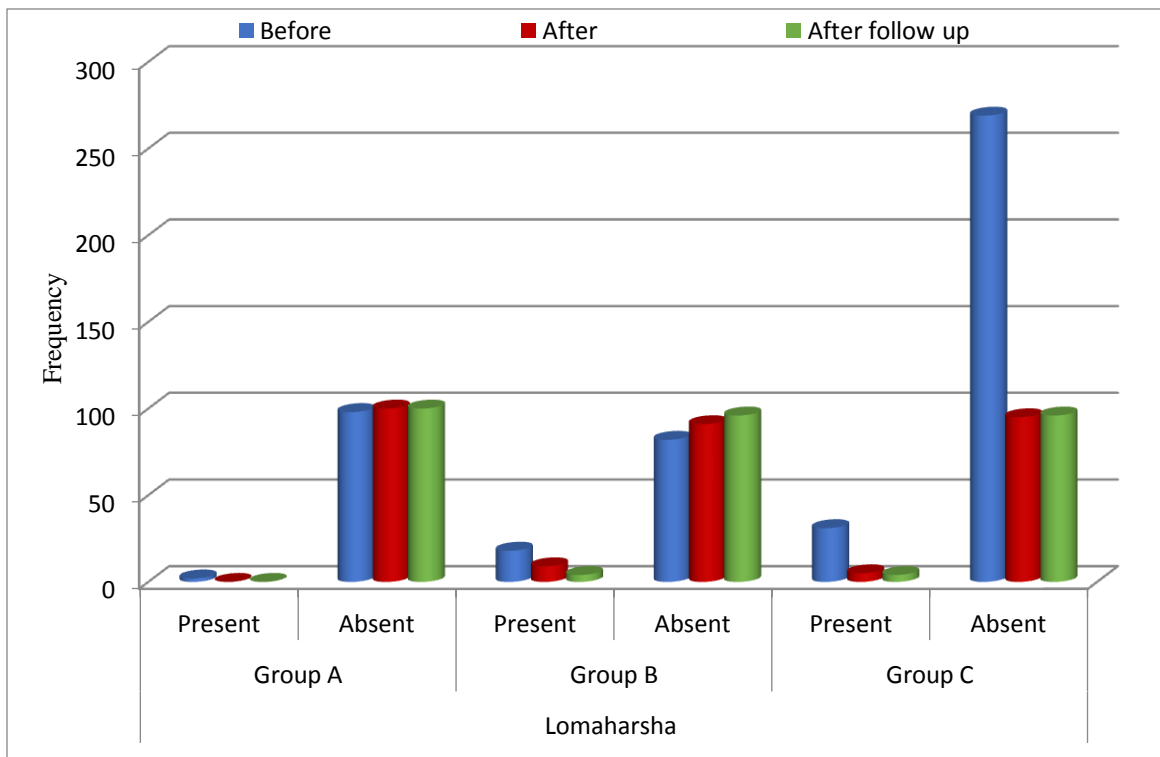
Graph No. 31 – Showing results of *deenataa*;
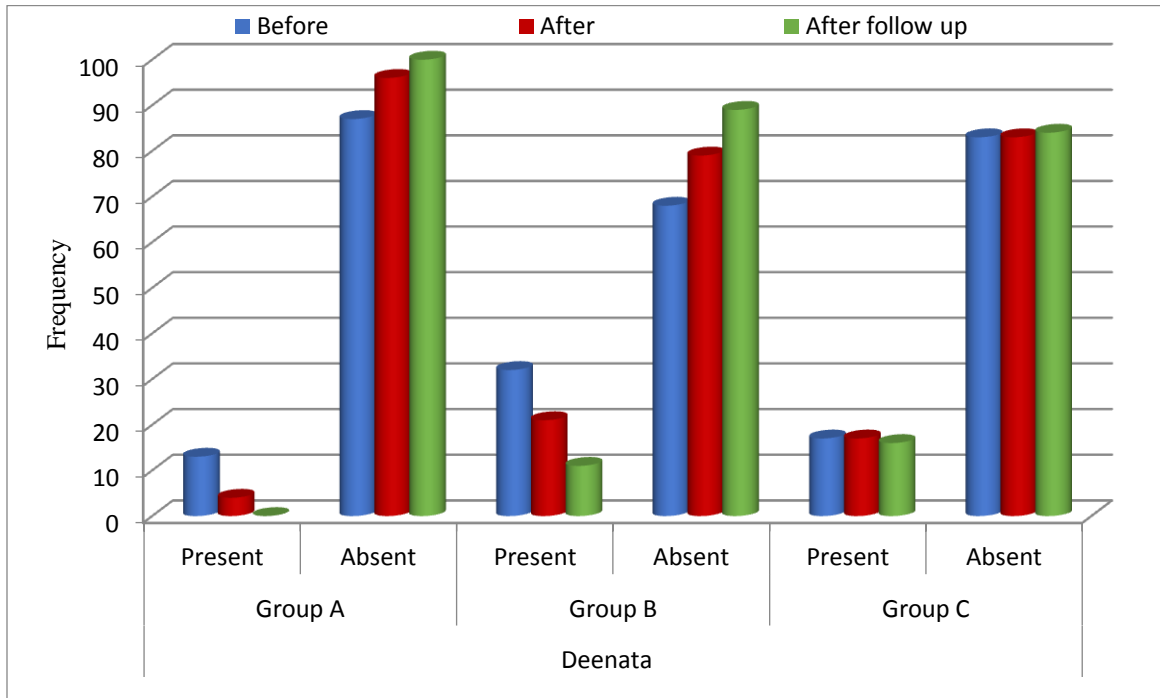
Graph No. 32 – Showing results of *dourbalya*;
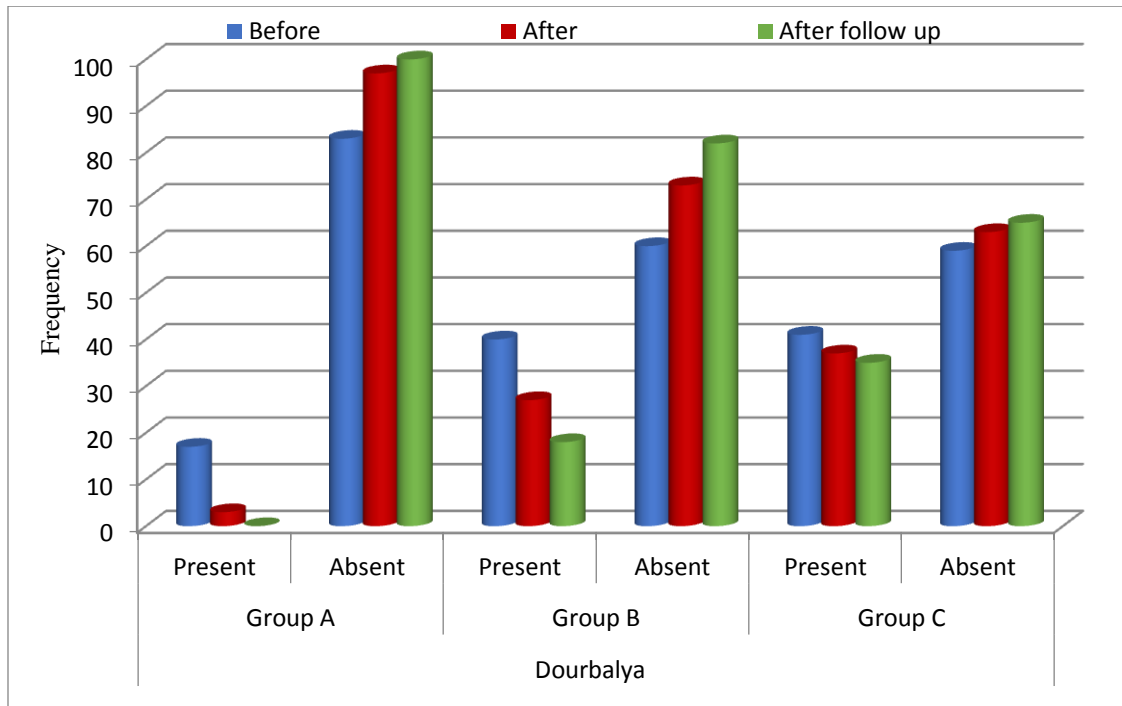
Graph No. 33 – Showing results of *kshobha*;
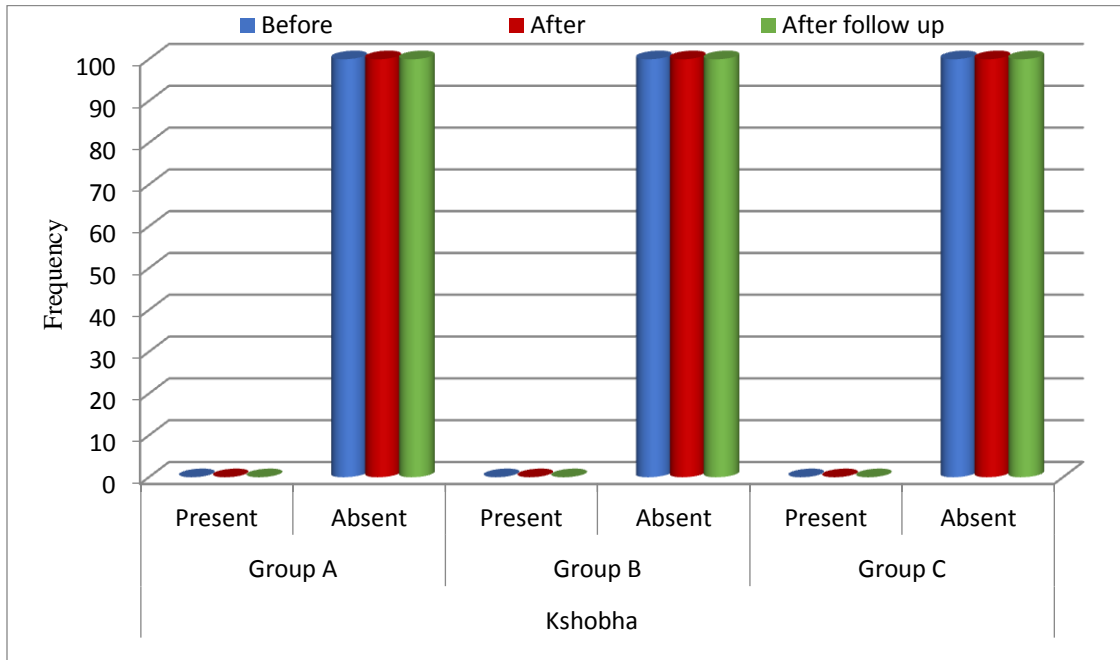
Graph No. 34 – Showing results of *moha*;
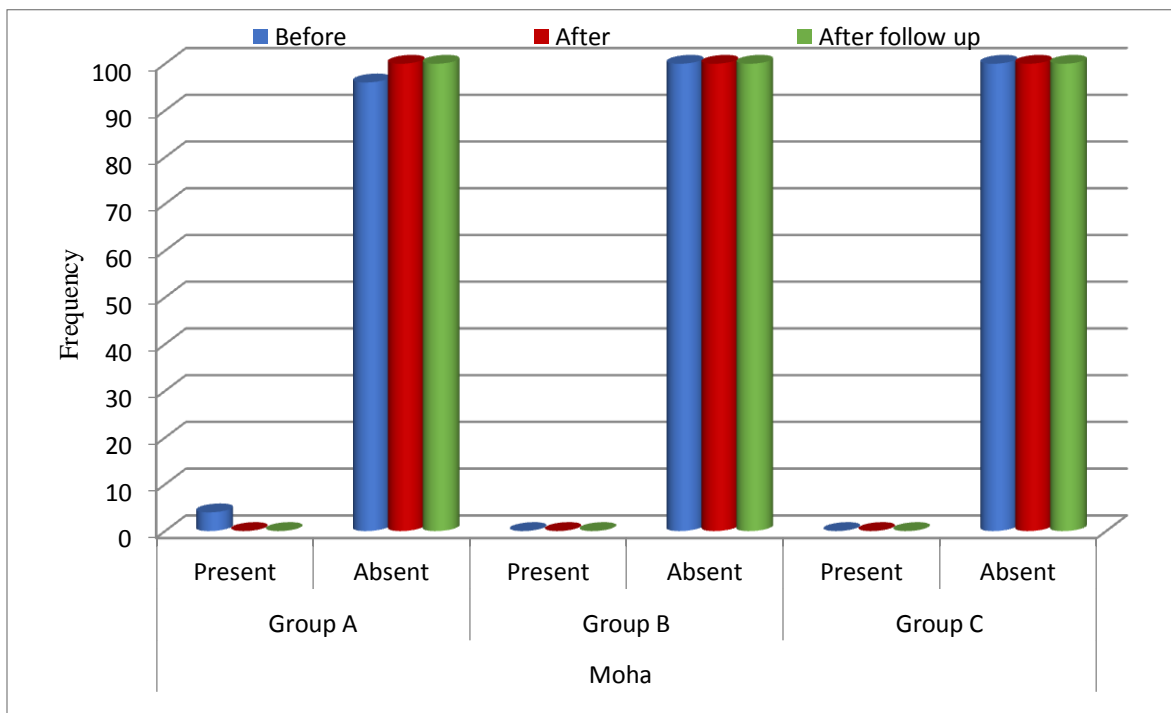
Graph No. 35 – Showing results of *mahavega*;

Mahavega
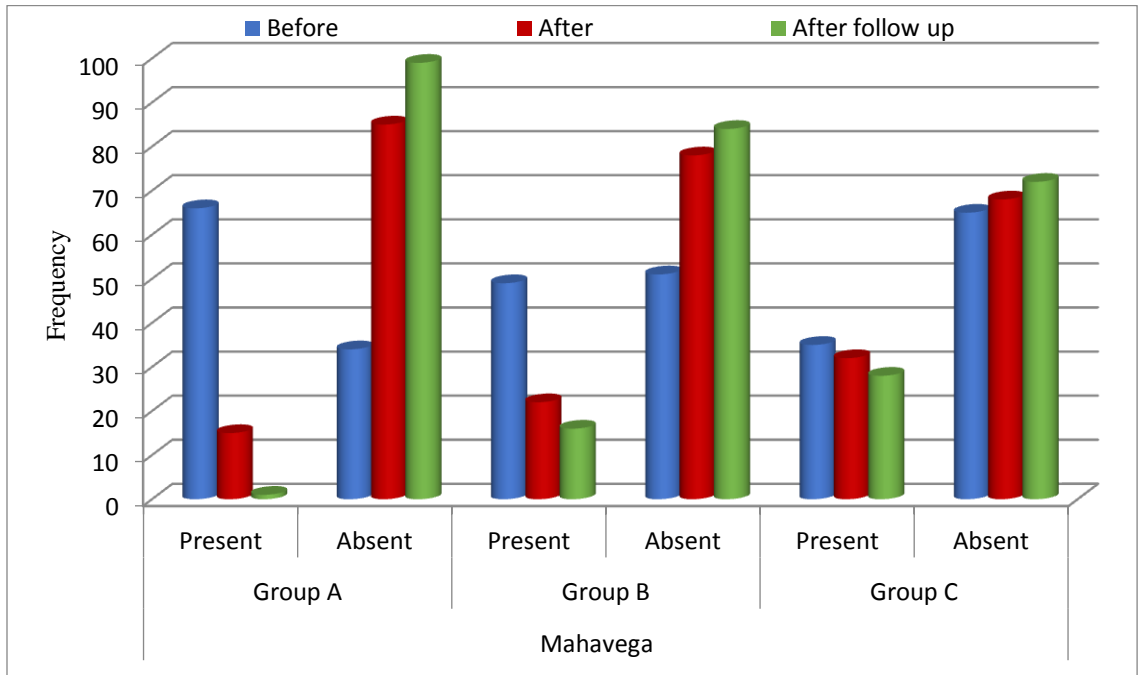
Graph No. 36 – Showing results of *prataamyataa*;

Prataamyataa
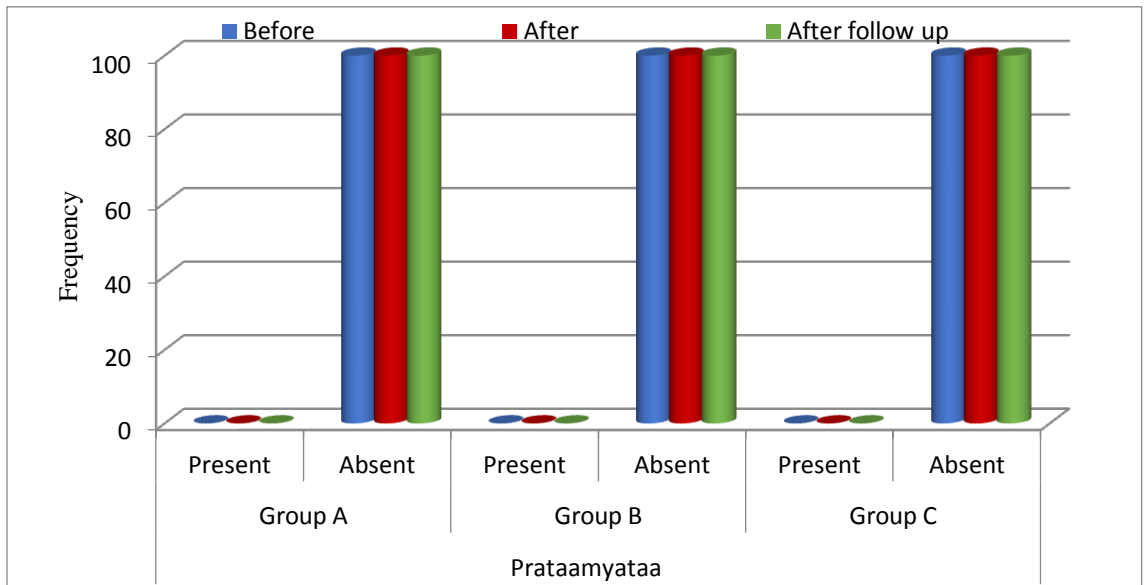
Graph No. 37 – Showing results of *kshamaanana*;
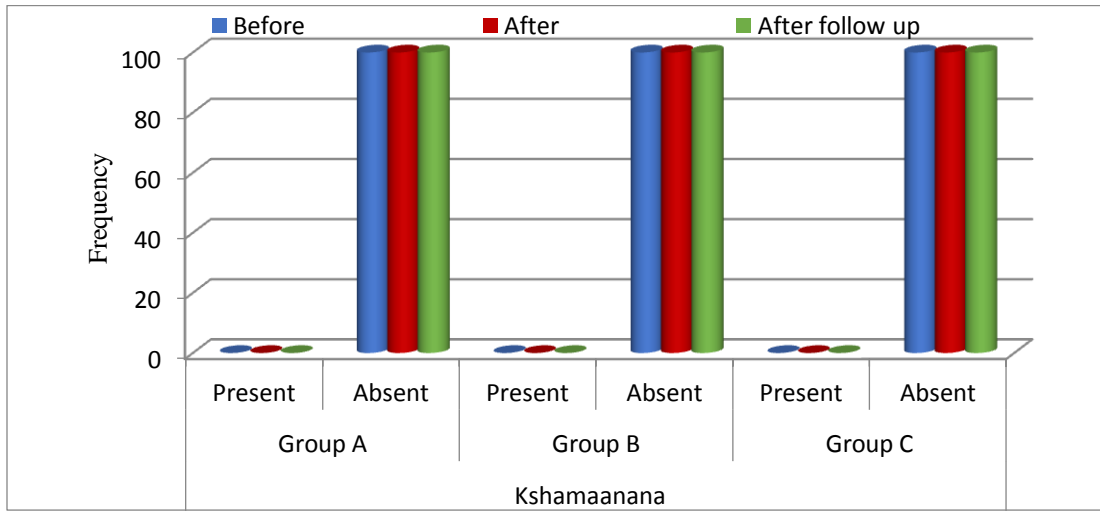
DISCUSSION

The discussion is the interpretation of observations and results obtained from the clinical study along of the review. So the relevant points are discussed here.

Discussion on title :-

"A clinical study on the concept of Anupana w.s.r. to *Snigdhoshnam maarute shastam* in *Vataja Kasa.*"

The entire science of Ayurveda has been framed upon "*Trisutraas*" i.e., *hetu, linga* and *oushadha*. Among them *oushadha* acts as an instrumental aid in curing the diseases as well as for the maintenance and for the promotion of good health. The administration of *oushadha* includes the consumption of *dravya* along with Anupana. There are several specific Anupana explained for specific *dosha* and *roga* in Ayurvedic classics. So it is necessary to throw light on the importance of Anupana in the clinical practice. *vataja kasa* is a trivial disease that everybody suffers at any stage of life. Hence this work is aimed to study the concept of Anupana and the role in *snigdhoshna* Anupana in *vataja kasa.*

Discussion on derivation of Anupana –

The term '*Anu*' in Anupana denotes two things- *Saha* and *Pashchaat* (along with and after). Hence Anupana term is commonly used to denote *Pashchaat pana* and *Sahapana*.

Discussion on definition of Anupana –

By compiling all the definitions, Anupana can be understood as a specific substance to be administered at proper time and in prescribed method along with or after *aahaara* and *oushadha* to get the desired effects.

The definition can been put forth as following *shloka*;

❖ औषेधेन, आहारेण सह पश्चाद्वा यद्विधिवशात्पीयते तदनुपानम् । (स्व)

❖ तथा च संग्रहः –

अनुपानं द्विधाप्रोक्तं पश्चात् सह विभेदतः ।

कस्मात्पश्चादिति चेदौषधाहारतस्स्मृतः ॥

तथा केनेति संप्राप्ते आहारेणौषधेन च ।

विधिवत्पीयते यत्तु तदनुपानमुदाहृतम् ॥ (स्व)

Discussion on *lakshana* of Anupana–

The characteristic feature of Anupana should be as follows-

Anupana should be in such a way that it synergizes the drug action but not produce any adverse reactions to the tissues. Thus the drug interactions should not produce any lethal effects.

Discussion on synonyms of Anupana –

Shabdaanvayatva Arthaashraya helps to understand the *paryayaas* that conveys the different features -

Based on *Padaartha tantrayukti* the synonyms of Anupana can be understood as follows- *sahayogi* and *maadhyama* denotes the *lakshana*, *vaahana* represents action and *oushadhaanga peya* refers to the mode of administration, *anupeya* and *anupaaneeya* indicates the time of administration.

Based on *Prakaranaadhikarana tantrayukti*, *anutarsha* indicates the one which is beneficial in thirst.

Based on *Vidyaa Kalpana* **and** *Paratantra pratyaya arthaashraya,* *Sahayogi* is a drug companion that acts like Adjuvant/Synergist by enhancing the action of principle ingredient.

Vaahana and *Maadhyama* denote Vehicle/excipient that carries the active ingredient in suspension. It also acts as a carrier thereby causes facilitated diffusion and active transport.

Oushadhaangapeya refers to adjuvant/drug companion/synergist/vehicle/carrier.

The synonyms have been put forth as following *shloka*;

❖ अनुपानस्य पर्यायाः नानाग्रन्थेषु गोचराः ।

वाहनं प्रापकत्वाच्च सहयोगि तथैव च ॥

माध्यमञ्चानुपानीयमनुपेयं तथैव च ।

औषधाङ्गतयापेयं अनुतर्षञ्च अष्टकम् ॥ (स्व)

The seven synonyms which are collected from different *granthaas* are *vaahana*, *sahayogi*, *maadhyama*, *anupaaneeya*, *anupeya*, *oushadhaanga peya* and *anutarsha*.

Discussion on types of Anupana –

1. *Kraamana* and *paachana* –

The classification *Kraamana* and *Paachana* can be understood based on Sanskrit *vyaakarana-*

❖ एतद् (अनुपानम्) विलम्ब्य क्रीयते चेत् क्रामणमीरितम् ।

एतद् (अनुपानम्) रात्रौ क्रीयते चेत् पाचनं ऊचिरे (उच्यते) ॥

The one which acts after some interval of time (*Vilambya*) is known as *Kraamana*. The Anupana which is given in the night is known as *Paachana*. By **Arthapatti tantrayukti** it can be said that *Kraamana* is the Anupana administered in the day time.

Eg for *Kraamana* – *Ushna jala* with *Eranda taila* in *Virechana*.

By **Ingita kalpana**, *Kraamana* acts as the controlled release, extended release, sustained release and prolonged action pharmaceutical preparation that is designed to prolong the effect and also to produce slow, uniform absorption of the drugs for longer time. *Paachana* can be equated to the Anupana which is administered in *nishi* (*oushadha sevanakaala*) hence it might be given for *urdhwa jatru vikaaraas*.

2. **Aadi, madhya and antahpaana -**

By *Uhya tantrayukti*, Anupana has been further classified. The classification *Aadi, Madhya, Antahpana* told in the context of *Aahaaravidhi* is made on the basis of time of administration. This can be applied in relation with *oushadha* also (*Hetwartha tantrayukti*).

This can be understood as;

❖ औषधाहारयोर्मध्ये आदावन्ते च युक्तितः ।

प्रयोगनिपुणैस्तत्राप्यनुपानं विधीयते ॥ (स्व)

3. *Sahapana* **and** *Pashchaatpana* **-**

Based on derivation, *Sahapana* and *Pashchaatpana* are taken as the types of Anupana.

4. *Drava* **and** *Shushka* **-**

Anupana is classified as *Drava* and *Shushka* Based on the form of the substance used. Because in Ayurvedic classics many references where the *guda, sharkara* are used as Anupana. The gross meaning of *paana* indicates the consumption of liquid or to drink but the actual meaning of '*paana'* indicates to drink or to consume so the Anupana can be a liquid or a solid. To avoid such confusion this classification is made.

5. *Aahaaropayogi* **and** *oushadhopayogi* **-**

In *bruhatrayees,* though the application of Anupana is in the context of *oushadha* and *aahaara,* but mainly explained in the context of *aahaaropayogi varga* which can be understood based on *Pradhaanena kalpanaa*. So based on its usage both with *oushadha* or *aahaara* and also for better demarcation, it is classified as *aaharopayogi* and *oushadopayogi*.

Discussion on *Maatraa* -

There is difference of opinion regarding *maatraa* of Anupana among *Aachaaryaas*. It may be due to the following reasons -

Based on the *agnibala*, for *Kapha* 1 *Pala* is recommended as they have either *samaagni* or *mandaagni*, for *Vata* 2 *Pala* as they possess *vishamaagni* and for *Pitta* 3 *Pala* as their *agni* is *teekshna*.

Moreover, these dosages are told in the chapter *Choorna kalpana* especially for *choorna, avaleha, gutika* and *kalka*. Probably this *maatraa* is told for the *drava* Anupana. Hence it might be for *Vata* which is *rooksha* 3 *Pala* of Anupana is needed to counteract the *rookshataa* of *choorna* etc., For *Pitta* 2 *Pala* is needed as it is *sasneha* and for *Kapha* which is already *snigdha* one *Pala* is sufficient to achieve the desired effects. This can also be understood based on the *Panchabhoutik* composition of each *doshaas*.

As the Anupana given along with *aahaara* or *oushadha* has to undergo *avasthaapaaka*, lesser quantity of Anupana (1 *Pala*) is sufficient to pacify *Kapha dosha* which is nourished during *madhura avasthaapaaka*. Moderate quantity (2 *Pala*) is sufficient to pacify *Pitta vikaaraas* in *amla avasthaapaaka* and more quantity (3 *Pala*) is needed to pacify *Vata vikaaraas* during *katu avasthaapaaka*.

Though different *maatraas* are specified in classics, based on **Yukti pramaana**, the physician should decide the dose by considering the nature of Anupana dravya.

Discussion on Anupana *Kaala* -

The time of administration of Anupana is nothing but the time in which medicine or food is administered. So *oushadha sevana kaala* can be adopted as Anupana *kaala* in case of administration with medicines. Similarly for *aahaara* it can be given based on *agni* of the individual, either prior or in between or at the end of food intake to achieve the desired effects.

Discussion on Anupana *Guna Karma* -

Several *Gunakarma* of Anupana have been depicted in the classics which can be understood by applying *Yukti pramaana* in the following manner-

1) Pertaining to *Aahaara - Paryaaptimabhinirvartayati, bhuktam avasaadayati, annasanghaatam bhinnatti, maardavam aapaadayati, kledayati, jarayati, sukha parinaamayati.*

2) Pertaining to *oushadha - Rochana, vyaaptikara, aashu vyavaayita, saatmyataam prayacchati.*

3) Pertaining to *Roga - Dosha sanghaata bhedana, shramahara, klamahara, deepana, vrushya, pipaasaa chedana.*

4) Pertaining to *Swastha - Tarpana, preenana, oorjaa, balakara, varnakara, apakarshayati.*

Discussion on different Anupana for different *doshaas* –

Generally *oushadha* or Anupana are given as they act antagonistic to the qualities of *doshaas*. Hence based on **Vishesha siddhaanta** (*visheshastu viparyayaha*) in *Vata snigdha, ushna* and *amla dravyaas* are chosen as Anupana. Similarly in *Pitta madhura* and *sheeta* and in *Kapha rooksha* and *ushna dravyaas* are given.

Discussion on contraindications of *jala* as Anupana –

As *jala* is most widely prescribed Anupana, the contraindications have been explained and probably these contraindications are told only in relation with *aahaara*. However in *Aananda Kanda* the same diseases are told as indication probably in relation with *oushadha*. As the diseases are enlisted in contraindications are in *oordhwa aamaashaya pradesha*, the *jala* as Anupana may hamper the *agni*. So in such conditions the Anupana which has *deepana paachana* can be administered.

If *jala* is taken in these contraindicated conditions then it vitiates the *aamaashaya* and thereby produces number of diseases such as *abhishyandaadi rogaas*.[111] It may be contraindicated because the *jala* which stays in the *kanta* and *uras,* will not move down so it causes vitiation of dosha.[112]

By observing the actions of *jala* in contraindicated conditions, it may be inferred based on **Apavarga tantrayukti** *jala* here refers to *sheeta jala* not *Ushna jala*.

Discussion on different Anupana *dravyaas* –

Several Anupanaas are enlisted as they have vivid applicability in specific *vyadhi, dosha, kaala, vaya* and *karma*. This can be understood by ***Tantra samjnaa arthaashraya***;

* In case of *dhaatu kshaya, maamsa rasa* given as Anupana to nourish the *dhaatu*, in *krusha* to do *brumhana suraa* is given as Anupana.

* In case of *Vata dosha, saghrita rasona* pacify *Vata* as they possess *snigdha* and *ushna guna* respectively.

* In *greeshma* rutu *sheetajala* as Anupana pacifies the *Ushnata*.

* In *vaya* it can be explained on the basis of the *avasthaa*- i.e, in *baalyaaavasthaa* (1-10 years) the Anupana such as *ksheera*, *madhu* are generally used because in *baalyaavasthaa* if Anupanaas are *tikta, katu,* then the *baala* will not consume it because of its non palatability. In *vruddhi avsthaa* (11-20 years) the Anupana such as *ksheera, ghrita* can be used because during this *avasthaa*, the *shareera uttarottara vruddhi* takes place. So similarly the proper Anupana can be selected in other *avasthaas* also.

* In case of *snehana*, ushna jala is taken as Anupana to facilitate easy absorption of fat.

* Generally different Anupana are given for different *dravyaas* so as to improve the dissolution and disintegration rate of the *dravya*. The disintegration rate and the dissolution are dependent on the size of the particles in the formulation. As the Anupana also posses the medicinal properties this concept is adopted from the western medical system by considering ***Samaana tantra pratyaya arthaashrya,*** for better understanding. Hence based on the ***Vikalpa tantrayukti,*** understanding of different Anupana *dravya* helps to select the Anupana for specific purposes.

Discussion on Importance of Anupana in chikitsaa -

The importance of Anupana can be understood using *Yukti Pramaana* in following manner-

1. *Roga naashakatwa* (disease pacifying) - A single drug with different Anupana gives different effects. By considering the applicability of *Gudoochi, Narayana choorna* and *Rasa sindhoora* with different Anupana in different diseases the *roga naashakatwa* quality of Anupana is understood.

2. *Guna vardhaka* (property enhancer) - Certain Anupana amplify the effects of the administered drugs. For an instance, Madhu along with *Sitopaladi churna* given in case of *Kasa* enhances *Kapha chedana* action of the *choorna*.

3. *Haaniprada guna naashaka* (counteract undesired properties) – Certain drugs produce ill effects if not purified properly. For such reasons Anupana that counteract the undesired properties has to be administered. Eg- *Gomootra* or *Ksheera* used as Anupana with *Shilajatu*, *Lashuna* with *Ksheera* and *Hingu* with *Ghrita* as it counteracts the undesired property.

4. *Aashukaaritaa* (quick absorption) – Anupana gains its importance by spreading the medicine to the target site rapidly.[36,37] By looking into the factors affecting bioavailability and drug absorption, Anupana acts as a base to form an appropriate medium to the drug and facilitates absorption in different phases (aqueous or lipid). Thus it helps in penetration of the drug into the specific site.

    Eg- *Aasava* and *arishta* Anupana acts as *vyavayi*.

5. *Gandha naashana* (mask the bad odour) – Certain drugs possess bad odour hence to mask it and to improve the palatability specific Anupana are adopted. For example, *Ksheera* given as Anupana with *Eranda taila*. Even in the allopathic system of medicine to mask the bad odour many modifications are made like hard and soft gelatin capsules.

6. *Ruchikaaraka* (Palatability) – In case of *oushadha* that is bitter in taste can be given along with Anupana which is sweet in taste to improve the palatability. For the same reason *Aachaaryaas* might have told *rochana* as one of the *gunakarma*. Eg-*Vaasa swarasa* with *Madhu.* For the same reason in Western

system of medicine lots of modifications are made in pharmaceutical preparations such as sugar coated tablets and gelatin capsules.

Probable mode of action of Anupana -

Based on **Sambhava tantrayukti,** probable mode of action of Anupana can be understood. Anupana when judiciously administered with *aahaara* and *oushadha* reaches the blood circulation there by reaches the target site. At times by *vyavaayi* and *vikaashi guna,* it arrives the specific target and cures the disease. The same concept can be explained in the following shloka;

❖ योग्यानुपानतः प्रोक्तं तर्पणं बृंहणं तथा ।

भेषजञ्चानुपानेन रक्तमेवानुगच्छति ॥

अनुपानं व्यवायित्वात् योग्याङ्गं परिधावति ।

यथावद्विनियोगेन सर्वरोग निवारकम् ॥ (स्व)

Discussion of *Sahapana* -

In *bruhatrayees* and later *granthaas* the word *Sahapana* has not been mentioned. Only in *Rasa Tarangini* the classification of Anupana and Sahapana are made. In previous *granthaas* to *Rasa Tarangini*, lots of Anupana are administered along with and after *oushadha*. Probably for better understanding such classification is made by the author. But the actual meaning of Anupana includes *saha* and *pashchaat*. Therefore *Pashchaatpana* and *Sahapana* may be ideal way of classification of Anupana.

Discussion on the concept of Anupana in other systems of medicine -

✤ In Naturopathy system of medicine, the fruit and vegetable juices are advised after or before the food intake. So this method can be considered as Anupana because the Anupana are used before, in the middle or after the food even in Ayurveda also.

✤ In Siddha system of medicine, the same formulation is used for different ailments with different Anupanam thus the therapeutic properties and potency

of the drug are enhanced. This concept is similar in Ayurvedic system of medicine also.

✧ In Unani system of medicine, *Badarakaa* or *Rahanuma* which means *Samrakshaka* or *pathapradarshaka* indicates the word Anupana. The classification *Moophrad (Asamsrushta)* and *Murakkab* (*Samsrushta*) is a newer thought in Unani system of medicine. Anupana help the drug in reaching specific target organs quickly.

✧ In Chinese system of medicine, the concept of Anupana is explained and it helps to enhance the action of a drug.

✧ In Homeopathic system of medicine, a research showed that in the absence of original drug molecules vehicle molecules bear the properties of drug molecules. The classification of vehicle told in this system i.e, solid and liquid which supports the classification which is made in present study as *shushka* and *drava* Anupana. The quality of an ideal vehicle and its benefits of vehicles explained in this system are similar to that explained in Ayurveda.

✧ In Western system of medicine, the Anupana may have little therapeutic effect or may not. The vehicles are added along with the drug during the preparation only. The preparations such as controlled release, sustained release, lozenge tablets, effervescent tablets and in other formulations the base which are added may be the modification of Anupana.

Discussion on *Vataja Kasa* -

In the previous works, *vataja kasa* has been compared with Tropical Pulmonary Eosinophilia by considering the AEC more than 400 cells/mm^3. So in the present study, the raised Eosinophil count above 400 cells/mm^3 has been adopted as one of the diagnostic criteria. In the present study, it was observed that the patient with AEC 400 – 2000 cells/mm^3 had the classical symptoms of *vataja kasa*. It was observed that when the AEC exceeds 2000, then patient developed with difficulty in breathing, exertional dyspnoea and wheezing on auscultation. Such patients are excluded from the present study. Based on this *vataja kasa* can be compared with Eosinophilia which produces cough as the symptom.

Table No. 99 - Showing the comparison of Vataja Kasa with Eosinophilia;

Factors	Vataja Kasa	Eosinophilia
Etiology	Asaathmya aahaara sevana	Allergic reactions due to filarial larvae into lungs infiltration
Signs and Symptoms	a) Shuska Kasa b) Hrut/Ura shoola c) Ksheenabala, Ksheenaoja d) Dourbalya	a) Dry cough b) Chest pain c) Weight loss d) Malaise
Pathology	a) Sanga is explained in the sampraapti of disease (Obstruction in normal pathway of air) b) Praanavahasrotas c) Rasadhatu supports the body in normal condition rasa and rakta together circulate in the body	a) Pulmonary functions reveal restricted ventilation defect with super imposed air way obstruction. b) It involves mainly lungs c) Eosinophil supports the body major basic protein granules present in Eosinophils act against the larvae.
Complication	Shwasa	Bronchial Asthma etc.

Discussion on Materials and Methods -

Present study is a Controlled Clinical Single Blind study with pre and post design where there are three groups. The Group A was treated with *Duraalabhaadi yoga* with *tila taila* as Anupana, Group B was treated with *Duraalabhaadi yoga* with *ushna jala* as Anupana and the Group C was treated with *Duraalabhaadi yoga* with *jala* as Anupana.

Reason for Selection of *Duraalabhaadi yoga* –

The ingredients of *Duraalabhaadi yoga* are *duraalabhaa, shati, draakshaa, shringavera, sitopalaa, karkatashringee* which are easily available. This was selected on the basis of **Aaptopadesha**, its indication in *Vataja Kasa* and majority of drugs in it have properties such as *kasahara, krimighna, Vata shamana* and *Rasaayana* i.e, it acts as anti-tussive, anti-inflammatory, anti-histaminic, anti-helminthic and immunomodulator action.

Reason for Selection of Anupana –

Tila taila, *ushna jala* and *jala* as Anupana were taken to highlight the importance of Anupana. *Tila taila* was selected based on **Upadesha tantrayukti** and the *taila* is one of the best *Vata shaamaka* as it has *snigdha* as well as *ushna* which even holds good for *snigdhoshnam maarute shastam*. *Ushna jala* was used as it is easy to prepare and everybody can take. The group *jala* as Anupana was selected so as to find the role of Anupana.

Discussion on Inclusion Criteria -

- Individuals of either sex between the age group of 31-60 years were selected, as the ingredients in *Duraalabhaadi yoga* are *teekshna* and *ushna*, to avoid *baala* and *vruddha* as they are more prone to get the complications. Assuming that *madhyama vayaska* person may have good *shaareerika* and *maanasika bala*, the *yoga* and the Anupana even if it is non palatable or the aggravation of symptoms may be convinced or tolerable.
- The individuals willing for the treatment were selected because of the palatability of the *yoga* and Anupana.

Discussion on Exclusion criteria -

- ✧ Pregnant and lactating women were excluded because to avoid complications in *garbhini* and *sootikaa*.
- ✧ Individuals with other systemic disorders and Eosinophilia with other respiratory problems like bronchial asthma etc. were excluded to avoid interference in the action of the treatment and also to avoid the complications.

Discussion on Diagnostic criteria -

- ✧ *Shushka kasa vega, kapha shushkata, alpa kaphata, kapha* which comes out with *krucchrata, hrut shoola/ura shoola* (chest pain) due to excess *kasa* were taken as the diagnostic criteria as these symptoms are more predominantly seen in previous research works.
- ✧ Raised Eosinophil count above 400 cells/mm^3 – As the several previous researchers compared *vataja kasa* with Tropical Pulmonary Eosinophilia, AEC (Absolute Eosinophil Count) more than the normal limit has been taken for objective assessment.

Discussion on Intervention –

The study is designed in such a way so as to get a clear picture regarding efficacies of each Anupana which is used in the present study. *Tila taila* is mentioned in the classics as Anupana along with *Duraalabhaadi yoga*. To revalidate the efficacy of specific Anupana the *tila taila* group is considered. The other two groups are made to compare the effect of Anupana which is not mentioned to this particular *yoga*.

Discussion on Dose fixation -

Four grams of *Duraalabhaadi yoga* in three divided dose were made based on *Aachaarya Shaarangadhara*'s view (*choorna maatraa* is 1 *karsha* i.e, 12gms).

Based on **Aaptopadesha Pramana**, the *taila* should be taken double the quantity with the *choorna* (in Sharangadhara Samhita). The quantity for *ushna jala* and *jala* has been fixed 30 ml because it can be consumed at a time without any problem. In case of *tila taila* apart from, the *taila* Anupana which is double to the *churna*, it can easily mix and form like *leha* consistency and can be easily lickable. Whereas *jala* and *ushna jala* may not come to this consistency. So *jala* and *ushna jala* Anupana is kept 30 ml for the easy consumption.

Discussion on Time of administration of medicine-

Udaana vata and *praana vata* are involving in the *sampraapti* of *vataja kasa*. *Muhurmuhu* may not be followed by all the patients in similar fashion and may lead to bias. So the *bhojanottara oushadha sevana kala* for *udaana vata* is considered in the present study.

Discussion on Observation –

Age – The age in relation with *Vataja Kasa* showed statistically non significant. This is probably due to the number of patients distributed in group A, B and C in relation with the age groups are near to identical.

Sex - The sex ratio showed more numbers of male (56.0%) are suffered with *Vataja Kasa*. This is probably due to males who work more outside and the most of the female patients in the present study were house-wives.

Occupational – Occupation of the patients showed statistically non significant in relation with *vataja kasa*. This may be due the patients are distributed with many

occupation. Among these business and house wife are found more in getting *vataja kasa* probably due to continuous exposure to smoke and dust.

Locality – Test showed statistically non significant in relation to locality may be due to almost equally distribution of the patients in both urban and rural. Urban (46.3%) and rural (53.7%) patients are almost equally distributed with *vataja kasa* probably due to different causes like environmental pollution in case of urban and the cold climate of the rural area.

Fresh-treated case – In the present study fresh case patients (95.3%) were reported when compared to treated. This is probably due to the awareness of Ayurveda in this area but the statistical test showed non significant.

Mode of onset – In the present study majority of the patients (92.7%) had acute mode of onset may be due to the patients approached with *vataja kasa* in the initial stage. Here the test showed non significant in mode of onset.

Course - In the present study majority of the patients (70.0%) had continuous course and the statistical test showed non significant.

Periodicity – In this study periodicity showed statistically highly significant with p value .000 and 71% of the patients reported with seasonal periodicity.

Occurrence – In the present study majority of the patients (90.3%) had more *Kasa vega* in the night. This is probably due to the *vata kaala* might have aggravated the condition. But statistically the test showed non significant in relation to occurrence of the disease.

Severity – Majority of the patients (65.0%) had moderate severity and which showed statistically highly significant with p value .000.

Koshta – *Madhyama koshta* patients are more prone (88.0%) to get *vataja kasa* and statistical test showed non significant.

Agni – *Vishama agni* persons (87.3%) are more like to suffer with *vataja kasa*. This is probably due to the vitiation of *vata*, there were more *vishama agni* patients are seen. But the statistical analysis showed non significant.

Nidraa – The patients suffering with *vataja kasa* have more likely (65.3%) to get *alpa nidraa*. This may be due to the occurrence of kasa vega seen more during night and might have disturbed the sleep. Here the statistical tests are non significant.

Vyasana – *Vyasana* in relation with *Vataja Kasa* showed statistically highly significant with p value of .000. Patients who consume more coffee, tea and tea smoke combination found more among the *vataja kasa* patients. This is may be due to the *kashaya rasa* of tea and coffee as well as smoke might have increased the *vata* intern *vataja kasa*.

Diet – The patient who are consuming mixed diet are more prone (68.7%) to get *vataja kasa*. This is probably due to the *ahita, viruddha aahaara* etc are more common in mixed diet. Statistical analysis showed significant with p value .002.

Naadi – Majority of the patients of *vataja kasa* (61.7%) had *vata-pitta naadi* and the statistics showed highly significant with p value of .000.

Prakruti – *Vata-Pitta prakruti* patients (61.3%) are more like to get *Vataja Kasa*.

Rogi bala – 96.3% of the patients had *madhyama roga bala* and statistics showed significant with p value .001.

Discussion on observation during intervention -

In the present it was observed that group A showed good results in the *vataja kasa* symptoms as well as in the AEC when compared the other two groups. This is probably due to the action of *tila taila* over *vata* and *vataja kasa* is a target site of action which is justifying the statement of *Sharangadhara Samhitaa.*

Group B also showed some improvement in symptoms of *vataja kasa* and AEC when compared to group C. This is probably due to the *ushnata* of *ushna jala* might have reduced the *sheeta guna* of *vata* thereby helped to reduce the symptoms to some extant rather than increasing the symptoms of *vataja kasa*.

Among the patients of group C, majority of them developed increase in the symptoms of *vataja kasa* as well as increase of AEC. This may be due to the *sheeta guna* aggravated the *vata* in turn *vataja kasa.* More over *jala* which is used in the place of work mostly the *nadee jala* which acts as *vatala.*

Discussion on Results –

In the present study it is observed that *Duraalabhaadi yoga* effectively reduced the signs and symptoms of *vataja kasa* in group A and B. But with regard to Absolute Eosinophil Count, *Duraalabhaadi yoga* showed good results statistically in all the groups. It was observed that in group A and B, the patients were improved from the symptoms of *vataja kasa* within 21 days after the commencement of treatment. But in group A the signs and symptoms of *vataja kasa* were reduced in many patients when compared to group B and also reduced within short duration. This is probably due to the target site action of *tila taila* as Anupana. The group B also showed statistically significant in many symptoms due to the *ushnata* of *ushna jala* might have helped to reduce the *vataja kasa*. The group C showed statistically non significant because of the *sheetatwa* of *jala* probably increased the *sheeta guna* of *vata* intern *vataja kasa*. Another reason is due to the patients of the research area usually consuming the *nadee jala* that acts as *vatala*. So may be there were no good improvement or increase of the symptoms of *vataja kasa*.

Subjective parameters -

Shushka kasa vega -

In the present study, group A and B showed statistically highly significant in *shushka kasa vega* with p value of .000. This is probably due to the *snigdha* and *ushna guna* of *tila taila* and *ushnata* of *ushna jala* might have reduced the *shushkataa* of *vata* based on **Saamaanya vishesha** theory, thereby reduced the symptom. But on observation on grading, more number of patients in group A attained to grade 0 after treatment and after follow up when compared to other groups. This may be due to the target oriented action of specific Anupana.

***Hrutshoola, paarshwashoola, shirashoola* and *shankhashoola* –**

In *Hrutshoola, paarshwashoola, shirashoola* and *shankhashoola* patients, group A and B showed statistically highly significant with p value of .000. As the *ruja* or *shoola* is because of *vata (naasti rujaat vaataha),* the *snigdha* and *ushna guna* of Anupana and *vatahara* properties of medicine might have reduced the *vata* based on **Saamaanya vishesha siddhaanta** there by decreased the symptoms.

Udarashoola –

Among the *udarashoola* patients, the result showed statistically non significant in all the groups. This is probably due to less number of patients approached with the *udarashoola* as a complaint.

Objective parameter :-

Absolute Eosinophil Count –

In results of AEC, all the three groups showed statistically highly significant with p value of .000. But in group A, mean of AEC before treatment was 588.50, after treatment 374.00 and after follow up 351.50. It shows the AEC attained to normal limit after treatment and even after follow up. This is probably due to the target oriented action of Anupana and the *snigdha* and *ushna guna* of *tila taila* reduced the symptom of *vataja kasa* there by reduction in AEC.

Observational parameters :-

***Kapha shushkata, alpa kaphata* and *kapha krucchrata* –**

In these symptoms, group A showed statistically significant with p value of .001 and group B and C did not show significant statistically. This may be due to the *ushna* and *snigdha guna* of *tila taila* reduced the *rooksha guna* and might have helped to do the *vilayana* of the thick sputum and also the target site action of the specified Anupana for specific *yoga* and the condition.

***Shushka ura, shushka vaktra* and *moha* –**

Here, all the groups showed statistically non significant. This is probably due to the less number patients came with these symptoms in the present study.

***Shushka kanta* –**

In *shushka kanta* symptoms, group A showed statistically highly significant with p value of .001 and other two groups remained non significant. This is probably due to the *tila taila* which has *snigdha* and *ushna guna* that reduced the *shushkata* of the *kanta*.

Nirghosha **and** *mahavega* **–**

In these two symptoms, the statistics showed highly significant with p value of .000 in group A and B. This may be due to the target site of action of specific Anupana, *tila taila* and *ushna jala* helped to reduce the *shushka kasa vega* intern helps in *nirghosha* and *mahavega*.

Swarabheda **–**

In group A and B, statistical analysis showed highly significant with p value of .000. This is probably be due the *ushna guna* of Anupana might have given soothening effect to *kanta* region thereby reduced the *swarabheda*.

Lomaharsha **–**

Here, group B showed statistically significant in *lomaharsha* with p value of .004 and other two groups showed non significant. This is probably the *ushnataa* of *ushna jala* Anupana in group B patients might have reduced the *sheeta guna* of *vata*.

Deenata **–**

Deenata patients of present study showed statistically significant in group B and other two groups showed non significant.

Dourbalya **–**

In the present study group A showed statistically highly significant with p value of .000, group B showed statistically significant with p value of .002 and group C showed non significant. The probable reason may be the majority of symptoms in group A were reduced clinically as well as statistically which in turn might have reduced the *dourbalya*. When compared to group C, the results were shown good in group B clinically and statistically but not as good as group A. So in group B, the results remained statistically significant.

Kshobha, prataamyataa **and** *kshamaanana* **–**

No patients were reported with the above symptoms as these are rare symptoms which are observed clinically.

Probable mode of action of *Duraalabhaadi yoga* -

The action of *Duraalabhaadi yoga* on *Vataja Kasa* w.s.r to cough with Eosinophilia can be analyzed as follows -

➢ Majority of the drugs possess *deepana* and *paachana* effect by which *agni* is corrected.

➢ *Shunti,* and *shati* possess anti-histaminic i.e, anti-allergic and anti-inflammatory properties, thus these drugs may act by counteracting the clinical symptoms which are resultant of allergic and inflammatory reactions.

➢ *Shunti* produce soothing effect on the throat there by it may be helpful in *swarabheda* and reducing the irritation by which it prevents the repeated *Kasa vega*. It also acts as immuno-modulator.

➢ *Draakshaa* is one of the best *vedanaa sthaapaka* and *vaataanulomaka* it has relaxant action on smooth muscles there by it may be helpful in *Hrut/ura* and *parshwa shoola*.

Thus over all *Duraalabhaadi yoga* can be said that it acts as anti-inflammatory, anti-histaminic and immune-modulator drug on *Vataja Kasa* w.s.r. to cough due to Eosinophilia.

Probable mode of action of *tila taila* on *vataja kasa* :-

As the *tila taila* is *snigdha*, it removes the *shushkataa* in *ura, kanta* and *vaktra pradesha,* *ushna* reduces the *sheeta guna* and it also acts as *agni deepaka*, corrects the *agni* thereby reduces *shushka kasa*.

Probable mode of action of *ushna jala* on *vataja kasa* :-

As *ushna jala* is having *madhura rasa* and *vipaaka*, it reduces *Vata* and does *agni deepana* thereby cures *kasa*.

CONCLUSION

Based on discussions, observations & deep study on literary aspect of the present study, Anupana denotes both *Pashchaatpana* and *Sahapana*

Statistical analysis and general observations in the study showed that both group A and B showed statistically highly significant in *shushka kasa vega, hrutshoola, paarshwashoola, shirashoola, shankhashoola,* AEC, *nirghosha, swarabheda, deenata* and *mahavega.* Apart from these symptoms, group A also showed statistically highly significant in *kapha shushkata, alpa kaphata, kapha krucchrata, shushka kanta* and *dourbalya.* Clinically group A showed good and quick results when compared to other two groups. So based on clinical study, *snigdhoshna* (*tila taila*) Anupana helps to cure the *vata* in turn *vataja kasa.*

SUMMARY

Anupana is a substance, which is taken along with or after the intake of *oushadha* or *aahaara* dravya. It helps not only for the palatability but mainly for carrying the *oushadha dravya* to the target place by which it increases its bioavailability and facilitates easy absorption. Hence this research is undertaken to study the concept of Anupana and to emphasize its role in *chikitsaa* w.s.r. to *tila taila* as Anupana in *Vataja Kasa.* The present study finds its place in providing efficacious intervention with regards to Anupana.

The present dissertation work was divided into 2 parts. The first chapter deals with the introduction, historical review, derivation of Anupana, definition, *lakshana*, synonyms, types, *maatraa, kaala, gunakarma* of Anupana, different Anupana *dravya* for different *dosha, roga,* importance of Anupana in *chikitsaa*, indications and contraindications of *jala* as Anupana, *Anupanaanantara nishiddha karma*, single formulation with different Anupana, Anupana in other systems of medicines and Sahapana are explained. In the second chapter, *Kasa roga* in brief and *Vataja Kasa* in detail were explained with related modern (western medicine) system. In the third chapter, Drug review (*Duraalabhaadi yoga, tila taila* and *Ushna jala* and *jala*) was dealt.

In the second part, Materials & Methods, Observation of clinical trials, Results, Statistical tables & graphs, Discussion, Conclusions and Summary were dealt. A total of 300 Patients in three groups (each group contains 100 patients each) were selected for the study.

In first group i.e, group A was administered with *Duraalabhaadi yoga* along with *tila taila*, group B with *Duraalabhaadi yoga* along with *ushna jala* and in group C *Duraalabhaadi yoga* was administered with *jala* as Anupana.

The different parameters of the study were observed and recorded before treatment, after treatment and after the follow-up. The Observations and Results were statistically analyzed for better interpretation. Based on statistical analysis and general observations the study showed that both group A and B showed statistically highly significant in *shushka kasa vega, hrutshoola, paarshwashoola, shirashoola, shankhashoola,* AEC, *nirghosha, swarabheda, deenata* and *mahavega.* Apart from these symptoms, group A also showed statistically highly significant in

kaphashushkata, alpa kaphata, kaphakrucchrata,shushka kanta and *dourbalya.* Clinically group A showed good results when compared to other two groups.

The conclusion was derived on the basis of detailed discussions, observations & deep study on literary aspect of the present study, Anupana denotes both *Pashchaatpana* and *Sahapana* and based on clinical study, *snigdhoshna* Anupana helps to cure the *Vataja kasa*.

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ANUPANA AND SAHAPANA :-

Historical review -

- ❖ आयतं पर्वणां कृत्वा गोकर्णाकृतिमत्करम् ।

  संहताङ्गुलीना तोयं गृहीत्वा पाणिना द्विजः ॥

  मुक्ताङ्गुष्ठकनिष्ठाभ्यां शेषेणाचमनं चरेत् ।

  माषमज्जनमात्रास्तु संगृह्य त्रिः पिबेत ॥ (श.कौ. Vol I)

- ❖ बातापिर्भक्षिततोयेन त्वगस्त्येन द्विजोत्तमा ।

  अनुपान कृतं तेन का कथा सर्वदेहिनाम् ॥ (महाभारत)

Derivation -

- ❖ अनु + पा + कर्मणि ल्युट् । (श.क.द्रू.)

- ❖ अनु भेषजेन सह पश्चाद्वा पीयते कर्मणि ल्युट् । (वाचस्पत्यम्)

- ❖ अनु सह पश्चाद्वा पीयते – अनु + पा (पाने) "ल्युट्" । (श.कौ. Vol I)

Definition -

- ❖ अनु भेषजेन सह पश्चाद्वा पीयते ।

  औषधेन सह तत् पश्चाद्वा पेये ॥ (वाचस्पत्यम्)

- ❖ औषधाङ्ग पेय विशेषः । (श.क.द्रू.)

- ❖ औषधेन सह तत् पश्चाद्वा पीयते यत् । (श.क.द्रू.)

❖ अनु सह पश्चाद्वा पीयते । (शब्दार्थ कौस्तुभ)

❖ अन्नादनु पश्चात् पीयत इत्यनुपानम् । (डल्हण–सु.सू.46/419)

❖ अनुपश्चात् पीयत इत्यनुपानम् ।

एतरच्च बाहुल्याभिप्रायेण । तद्धि मध्येऽप्यादावपि पीयते ।

(हेमाद्रि–अ.हृ.सू.8/47)

❖ यन्नियतकालं विधिवशात् पीयते तत् – अनुपानम् । (हेमाद्रि–अ.हृ.सू.8/47)

❖ अनुपाने भुक्तस्योपरिपाने । (इन्दु–अ.सं.सू.10/51)

❖ अनुपानमिति अनुपश्चात् पानम् । औषधभक्षणोपरि यत्पीतं तदनुपानमित्यर्थः ॥

(आढमल्ल–शा.म.6/5)

❖ अनुपानमिति अनुपश्चात् पानं तत् कृतः । (आढमल्ल–शा.म.8/4)

❖ अनुपानं नाम औषधिभक्षणात्पश्चात् सेवनीयं इत्यनयोर्भेदः ।

(प्रसारिणी व्याख्या– रस.तरं.6/112)

❖ अनु सह पश्चाद्वा पीयते इति अनुपानम् । (P.V.Sharma - द्र.गु.वि.)

❖ अनुगतं पानं अनुपानम् । (क.का.)

❖ अनुपानं नाम औषधभक्षणात् पश्चात् सेवनीयम् इत्यनयोर्भेदः ।

(रस.तरं.6/112–हरिदत्त शास्त्री टीका)

Lakshana -

❖ यदाहार गुणैः पानं विपरीतं तदिष्यते ।

अन्नानुपानं धातूनां दृष्टं यन्न विरोधि च ॥ (च.सू.27/319)

❖ विपरीतं यदन्नस्य गुणैः स्यान्नविरोधि च ।

अनुपानं समासेन सर्वदा तत्प्रशस्यते ॥ (अ.हृ.सू.8/51)

Synonyms -

❖ वाहयति– वह(प्रापणे) + स्वार्थे णिच् ल्युट् । (श. कौ.5)

❖ सह याति– या (प्रापणे) णिनः। (श.कौ.6)

❖ मध्ये भवम् मण्। (श.कौ.5)

❖ अनुतृष्यते–अनु+ त्रि तृषा (पिपासायाम्) "घञ्" । (श.कौ.1)

❖ अनुतृष्यते इदम्– कर्म "घञ्"| (श.कौ.1)

❖ अनुतृष्यतेऽनेन–कर "घञ्"| (श.कौ.1)

अनुपान काल/भेद –

❖ शीतोष्णतोय आसव मद्ययूषफलाम्लधान्याम्ल पयोरसानाम् ।

यस्यानुपानं तु हितं भवेद्यस्तस्मै प्रदेयं त्विह मात्रया तत् ॥

व्याधिं च कालं च विभाव्य धीरैर्द्रव्याणि भोज्यानि तानितानि ।

(सु.सू.46/420,421)

❖ तत्रादौ कर्शयेत्पीतं स्थापयेन्मध्यसेवितम् ।

पश्चात्पीतं बृंहयति तस्माद्वीक्ष्य प्रयोजत् ॥ (सु.सू.46/)

❖ तदादौ कर्शयेत्पीतं स्थापयेन्मध्यसेवितम् ।

पश्चात्पीतं बृंहयति तस्तमीक्ष्य प्रयोजत् ॥ (मा.द्र.गु.28/16)

❖ ज्ञेयं रसादि कथनादनन्तरं किलानुपानं कथयन्ति सूरयः ।

विलम्ब्य च क्रामणमेतदीरितं रात्रौ पुनः पाचनमेतदूचिरे ॥

(रा.नि.रोगादि वर्ग/43)

अनुपान मात्रा –

❖ अनुपानं प्रयोक्तव्यं व्याधौ श्लेष्म भवे पलम् ।

पलद्वयं त्वनिलजे पित्तजे तु पलत्रयम् ॥ (द्र.गु.सं.14/20)

❖ चूर्णावलेहगुटिकाकल्कानामनुपानकम् ।

वातपित्तकफातङ्केंत्रिद्व्येकपलमाहरेत् ॥ (शा.म.6/4)

❖ आतङ्को रोगः तेन वातातङ्के त्रिपलं, पित्तातङ्के द्विपलं, कफातङ्के पलैकमिति तात्पर्यार्थः । (दीपिका–शा.म.6/4)

❖ पित्तकफातङ्के पित्तादीनां त्रिद्व्येकपलं हरेत् पित्ते त्रिपलं वाते द्विपलं, कफ एक पलं । (गूढार्थ दीपिका–शा.म.6/4)

❖ तत्कफाऽनिलपित्तेषु चैकद्विंत्रिपलोन्मितम् । (म.वि. मिश्रवर्ग)

❖ अनुपानं प्रयोक्तव्यं व्याधौ श्लेष्मभवे पलम् ।

पलद्वयं त्वनिलजे पित्तजे च पालत्रयम् ॥ (मा.द्र.गु.28/21)

❖ दीप्ताग्नयोमहाकायाः स्नेहसात्म्याः महाबलाः ।

विसर्पोन्माद गुल्मार्ताः सर्पदंष्ट्रा विषार्दिताः ।

ज्येष्ठमात्रां पिबेयुस्ते पलान्यष्टौ विशिषतः ॥ (वैद्यक परिभाषा प्रदीप 3/99)

अनुपान श्रेष्ठता –

❖ यथा तैलं जलेक्षिप्तं क्षणेनैव प्रसर्पति।

अनुपान बलादङ्गे तथा सर्पति भेषजम् ॥ (शा. म. 6/5)

❖ यथा जलगतं तैलं तत्क्षणादेव सर्पति ।

तथा भेषजमङ्गेषु प्रसर्पत्यनुपानतः ॥ (मा.द्र.गु.28/3)

❖ यत्किंचित् औषधं वैद्यै: देयं रोगानुपानतः ।

तत्तद्गुणकरं ज्ञेयं अनुपानं बलादिह ॥ (यो.र. रसायन चिकित्सा)

अनुपान गुण कर्म –

अथानुपान कर्मगुणान् प्रवक्ष्यामः – अनुपानं तर्पयति, प्रीणयति, ऊर्जयति, बृंहयति, पर्याप्तिमभिनिर्वर्तयति, भुक्तमवसादयति , अन्नसङ्घातं भिनत्ति, मार्दवमापादयति, क्लेदयति जरयति, सुखपरिणामितामाशुव्यवायितां चाहारस्योपजनयति ॥ (च.सू.27/325)

❖ अनुपानं हितं युक्तं तर्पयत्याशु मानवम् ।

सुखं पचति चाहारमायुषे च बलाय च ॥ (च.सू.27/326)

❖ दोषवदूरु वा भुक्तमतिमात्रमथापि वा ।

यथोक्तानुपानेनसुखमन्नं प्रजीर्यति ॥

रोचनं बृंहणं वृष्यं दोषसङ्घातभेदनम् ।

तर्पणं मार्दवकरं श्रमक्लमहरं सुखम् ॥

दीपनं दोषशमनं पिपासाच्छेदनं परम् ।

बल्यं वर्णकरं सम्यगनुपानं सदोच्यते ॥ (सु.सू.46/235–237)

❖ अनुपानं खलु तर्पयति प्रीणयत्यूर्जयति बृंहयति देहस्य पर्याप्तिमभिनिर्वर्तयति भुक्तमवसादयत्यन्न सङ्घातं भिनत्ति मार्दवमापादयति क्लेदयति सुखपरिणामितामाशुव्यवायितां चाहारस्योपजनयति ॥ (अ.सं.सू.10/73)

❖ अनुपानं करोत्यूर्जां तृप्तिं व्याप्तिं दृढाङ्गताम् ।

अन्नसङ्घातसैथिल्य विक्लित्तिजरणानि च ॥ (अ.हृ.सू.8/52)

❖ सुखेन पाचयत्यन्नं रोचयत्यपकर्षति ।

अनुपानं मनुष्याणां सात्म्यतां च प्रयच्छति ॥ (भे.सू.27/38)

❖ स्थिरतां गतमक्लिन्नमद्रवपायिनाम् ।

भवत्याबाधजननमनुपानमतः पिबेत्॥

दोषलं गुरु वा भुक्तमतिमात्रमथापि वा।

यथोक्तेनानुपानेन सुखमन्न प्रजीर्यति ॥ (कै.नि. विहार वर्ग.291, 292)

❖ तत्र दोषघ्नं भैषज्यं भेषजस्यानुपीयते ।

यच्च सहाय्यकारिस्यादनुपानं तदुच्च्यते ॥ (रस.तरं. 6/200)

❖ स्निग्धोष्णं मारुते शस्तं पित्ते मधुर शीतलम् ।

कफेऽनुपानं रूक्षोष्णं ज्ञेये मांस रसः परम् ॥ (च.सू.27/321)

❖ स्निग्धोष्णं मारुते पथ्यं कफे रूक्षोष्णमिष्यते ।

अनुपानं हितं चापि पित्ते मधुर शीतलम् ॥ (सु.सू.46/430)

❖ वाते त्वम्लानि च पित्तेशर्करोदकम् ।

त्रिफलोदकं तु सक्षौद्रं श्लेष्मणि ॥ (अ.सं.सू.10/57–59)

❖ वाते सक्षौद्र पिप्पल्यपि च कफरुजि त्र्यूषणं साग्निचूर्णम् ।

पित्ते सैलं सितेन्दु व्रणवति तु वरागुग्गुलुश्चारुशुद्धः ।

चतुर्जातेन पुष्टौ हरनयनफला शाल्मली पुष्पवृन्तं ।

किं वा कान्ताललाटाभरणमनु रसे पानमेतद्वदन्ति ॥ (आ. प्र.1/404)

❖ उपवासाध्वभाष्यस्त्रीमारुतातपकर्मभिः ।

क्लान्तानामनुपानार्थं पयः पथ्यं यथाऽमृतम् ॥

सुराकृशानां पुष्ट्यर्थमनुपानं विधीयते ।

काश्र्यार्थं स्थूलदेहानामनु शस्तं मधूदकम् ॥

अल्पाग्निनामनिद्राणां तन्द्राशोकभयक्लमैः ।

मद्यमांसोचितानां च मद्यमेवानुशस्यते ॥ (च.सू.27/322–324)

❖ उष्णोदकानुपानं तु स्नेहानामथ शस्यते ।

ऋते भल्लातकस्नेहात् स्नेहात्तौरकात्तथा ॥

अनुपानं वदन्त्येके तले यूषाम्लकाञ्जिकम् ।

शीतोदकं माक्षिकस्य पिष्टान्नस्य च सर्वशः ॥

दधिपायसमद्यार्तिविषजुष्टे तथैव च ।

केचित् पिष्टमयस्याहुरनुपानं सुखोदकम् ॥

पयोमांसरसो वाऽपि शालिमुद्गादिभोजिनाम् ।

युद्धाध्वातप संतापविषमद्यरुजासु च ॥

माषादेरनुपानं तु धान्याम्लं दधिमस्तु वा ।

मद्यं मद्योचितानां सर्वमांसेषु पूजितम् ॥

अमद्यपानामुदकं फलाम्लं वा प्रशस्यते ।

क्षीरं घर्माध्वभाष्यस्त्रीक्लान्तानाममृतोपमम् ॥

सुरा कृशानां स्थूलानामनुपानं मधूदकम् ।

निरामयानां चित्रं तु भुक्तमध्ये प्रकीर्तितम् ॥ (सु.सू.46/422–429)

❖ अनुपानेतु सलिलमेव श्रेष्ठं सर्वरसयोनित्वात् सर्वभूतसात्म्यत्वाज्जीवनादि गुणयोगाच्च ।

तच्छीतं दधिमधुयवगोधूम मद्यविशेषु सर्वेषु च विदाहिषु शरद्ग्रीष्मयोश्च ॥

उष्णं पिष्टमयेष्वन्नेषु दुर्जरेषु हेमन्ते च ।

क्षीरंशालिशष्टिकयोस्तथैवोपवासाध्व भाष्य स्त्रीव्यायामक्लान्तबालवृद्धेषु ॥

मांस रसः शोषादिषु ।

.... मस्त्वेव वा दध्निकूर्चिकाकीलाटयोश्च ।

धान्याम्लं मस्तु तक्रं वा शर्करावरान्नेषु ॥

मद्यमांसेषु फलाम्लमम्बु वाऽऽसर्वाश्च विविधान् विभज्य प्रयोजयेत् ।

विशेषतस्तु मद्ध्वासवान् ग्राम्येषु, तीक्ष्णान्त्रिफलासवान् वन्येषु ॥

न्यग्रोधादि फलासवान् विष्किरेषु ।

अर्कशेलुशिरीषकपित्थासवान् विलेशयेषु, दिग्ध हतेषु च अम्लफलासवन् प्रसहेषु ।

काशेक्षुपद्मबीज शृङ्गाटक कशेरुक मृद्वीकाखदिरासवान् क्षोद्रयुक्तं वा शीतमुदकमुदाश्रिद्धा महामृगेष्वौदकेषु च ॥

सुरां प्रतुदेषु तथा श्रमार्तेषु कृशेषु च ।

मधूदकं स्थूलेषु मद्यं मद्यमांससात्म्येष्वल्पाग्निषु । (अ.सं.सू.10/51–71)

❖ अनुपानानि वक्ष्यामि येषु यानि हितानि वै ।

आजे कषायशीतस्तु हायने चोदकं तथा ॥

अनुपानं विधातव्यं वराहे खदिरिदकम् ।

दधि चुक्रं च धान्यानामनुपानं प्रदापयेत् ॥

शीतोदकं बिसग्रन्थि सेवनानां तथासवान् ॥

तद्द्वारिजाना सत्वानामनुपानं प्रदापयेत् ।

त्रिफला शीधुमार्द्वीकं कदम्बपनसोदकम् ॥

सुरद्रजम्बूप्लक्षाणां फलस्कन्धासवान्पृथक् ।

मुद्रादिसूपधान्यानामनुपानं प्रदापयेत् ॥

बिल्वपिण्डकल्कानां कपित्थस्वाथवासवान् ।

गुहाशयानां सत्वानामनुपानं प्रदापयेत् ॥

न्यग्रोधादिगणस्याथ स्कन्धशाखाफलासवान् ।

विष्किराणांविहङ्गानामनुपानं प्रदापयेत् ॥

कुकुभस्यानुपानं तु स्निग्धानां चापि वारुणीम् ।

चतुर्विधस्य स्नेहस्य तोयमुष्णं प्रदापयेत् ॥

द्राक्षाकाश्मर्यखर्जूरयववाच्यांस्तथासवान् ।

प्रतुदानाण् विहङ्गानामनुपानं प्रदापयेत् ॥

अश्वगन्ध कषायं तु वारुणीमण्डमेव च । (भे.सू.27/29–38)

❖ हितं शोणितपित्तिभ्यः क्षीरमिक्षुरसस्तथा ।

अर्कशेलु शिरीषाणामासवास्तु विषार्तिषु ॥ (सु.सू.46/431)

जल अनुपान योग्य –

❖ पीनसोरःक्षतश्वासकासतन्द्रप्रध्वरोगहृत् ।

गीताध्ययनसंभाष्यस्वरसादे च तद्धितम् ॥ (आ.कं.18/238)

जल अनुपान अयोग्य –

❖ नोर्ध्वाङ्गमारुतातिष्ठा न हिक्का श्वासकासिनः ।

न गतिभाष्याध्ययन प्रसक्ता नोरसि क्षताः॥

पिबेयुरुदकं भुक्त्वा तद्धि कण्ठोरसि स्थिरम् ।

स्नेहमाहारजं हत्वा भूयो दोषाय कल्पते ॥ (च.सू. 27/327,328)

❖ न पिबेच्छवास कासार्तो रोगे चाप्यूर्ध्व जतृगे ।

क्षतोरस्कः प्रसेकी च यस्य चोपहृतः खरः ॥ (सु.सू.46/440)

❖ वर्ज्यं   तूर्ध्वजत्रुगदश्वासकासप्रसेककहिध्मास्वरभेदोरःक्षतिभिर्गीतभाष्यप्रसक्तैश्च ।

(अ.सं.सू.10/74)

❖ नोर्ध्वजत्रुगदश्वासकासोरःक्षतपीनसे ।

गीतभाष्यप्रसङ्गे च स्वरभेदे च तद्धितम् ॥ (अ.हृ.सू.8/53)

❖ न पिबेच्छवासकासार्तो रोगे चाप्यूर्ध्वजत्रुगे ।

क्षतोरस्क प्रसेकी च यस्य चोपहतः स्वरः ॥

प्रक्लिन्नदेहमेढ्राक्षिगलरोग व्रणातुरः ।

पीत्वाऽध्व भाष्याध्यनगेयस्वप्नान्न शीलयेत् ॥

प्रदूष्यामाशयं तद्धि तस्य कन्ठोरसि स्थितम् ।

स्यन्दाग्निसादच्छर्द्यादीनामयाञ्जनयेद् बहून् । (कै.नि.विहारवर्ग. 298–300)

❖ न पिबेत् श्वासकासार्तो न रोगेतूओर्ध्वजतृगे ।

क्षतोरस्कप्रसेकी च यः स्याच्चोपहतस्वरः ॥

पीत्वाध्वभाष्याध्ययनगेयस्वप्नान्न शीलयेत् ।

प्रदूष्यामाशयं तद्धि तस्य कण्ठोरसिस्थितम् ॥

मन्दाग्निसादच्छर्द्यादीन् जनेयदामाशयान् बहून् । (मा.द्र.गु.28/18–20)

❖ उष्णोदकानुपानं तु स्नेहानामथ शस्यते ।

ऋते भल्लातकस्नेहात् स्नेहात्तौरकात्तथा ॥ (सु.सू.46/423)

❖ पयसि दधनि मधुमये तूक्रे नोष्णोदकं भवेत् पथ्यम् ।

पित्ते रक्तस्रावे गर्भच्यवने च गर्भदाहे च ॥ (का.सू.22/14)

❖ पीत्वाऽध्वभाष्याध्ययनगेयस्वप्नान्न शीलयेत् ।

प्रदूष्यमामाशयं तद्धि तस्य कण्ठोरसि स्थितम् ॥ (सु.सू.46/441)

❖ पीत्वा च भाष्यगेयाध्वस्वप्नान्नशीलयेत् । (अ.सं.सू.10/12)

❖ व्यायामयानप्लवनकर्माणि परिवर्जयेत् ।

विषयुक्तं भक्ष्यभोज्यलेह्यचोष्यादि वर्जयेत् ॥ (आ.कं.8/250)

❖ स्थिरतां गतमक्लिन्नमद्रवपायिनाम् ।

भवत्याबाधजननमनुपानमतः पिबेत् ॥ (सु.सू.46/439)

सहपान :–

❖ सहपानं यत्रौषधं मिश्रयित्वा खाद्यते । (रस.तरं.6/112–हरिदत्त शास्त्री टीका)

❖ यद्योगेन रसादीनां विभक्ताः परमाणवः ।

दूतमङ्गेषु सर्पन्ति सहपानं तदुच्यते ॥ (रस.तरं.6/199)

प्रसङ्गात् सहपानानुपानलक्षणम् । सर्पन्ति व्याप्नुवन्ति ।

सहपानं तथा मधु प्रभृति ॥ (हरिदत्त शास्त्री टीका)

❖ सहपानानुपानाभ्यां भेषजं परिबृंहयेत् ।

येन रोगहरा शक्तिर्भवेत् गुणवती सदा ॥

अलाभेऽत्यर्थमेवात्र सहपानानुपानयोः ।

मधुना वा जलेनैव भैषज्यं वितरेद्भिषक् ॥ (रस.तरं.6/201,202)

KASA AND VATAJA KASA –

विषय प्रवेश :–

❖ तपसा यशसा धृत्या धिया च परयान्वितः ।

आत्रेयः कासशान्त्यर्थं प्राह सिद्धं चिकित्सितम् ॥ (च.चि.18/3)

व्युत्पत्ति :–

❖ कुत्सित शब्दे (रोग हेतु भेदे) भा आत्य अक सेट् ।

❖ क्विप् का । यत्वं सितोऽथरुदः सह कासा वेपयः अव्य भावे घञ् ।

❖ कस हिंसने कर्तरि ण ।

❖ कसतेऽनेन कास करणे घञ् ।

निरुक्ति :–

❖ कसनात् कास उच्यते । (च.चि.18/8)

❖ कसनादितीति यथोक्तगतिमत्वात् तथा उरः प्रभृतिशातनाच्च कास
इत्यन्वर्थसंज्ञयोच्यते । (चक्रपाणि)

❖ कस गतिशातनयोः इत्यस्य धातोरयं प्रयोगः । (चक्रपाणि)

निदान :–

❖ धूमोपघाताद्रजसस्तथैव व्यायामरूक्षान्ननिषेवणाच्च ।

विमार्गगत्वादपि भोजनस्य वेगावरोधात् क्षवथोस्तथैव ॥ (सु.उ.52/4)

❖ धूमोपघाताद्रजसस्थैव व्यायामरूक्षान्ननिषेवणाच्च ।

विमार्गगत्वदपि भोजनस्य वेगावरोधात् क्षवथैव ॥

प्राणो ह्युदानानुगतः प्रदुष्टः सम्भिन्नकांस्यस्वनतुल्यघोषः ।

निरेति वक्त्रात् सहसा सदोषो मनिषिभिः कास इति प्रदिष्टः ॥

((वं.से.–कासाधिकार//2)

❖ उदावर्तादभिघाताद् व्यायामाच्चापि कर्शनात् ।

संभोजनाद्विवास्वप्नाद् द्रुतपानात्प्रलम्बनात् ॥

कर्शितानां च रोगेभ्यो दोषासात्म्यकृतात्क्षयात् ।

तीदणोष्णगुरुसेवाभिर्नृणां कासा भवन्ति ते ॥ (भे.चि.20/2,3)

पूर्वरूप :–

❖ पूर्वरूपं भवेत्तेषां शूकपूर्णगलास्यता ।

कण्ठे कण्डूश्च भोज्यानामवरोधाश्च जायते ॥

(च.चि.18/5) & (वं.से.–कासाधिकार/4)

❖ शूकैरिव पूर्णः गल आस्यं च यस्य तस्य भावः शूकपूर्ण गलास्यता ।

भोज्यानामवरोधः अरुचिः । अशक्तिर्वाऽभ्यवरणे ॥ (चक्रपाणि)

❖ भविष्यतस्तस्य तु कण्ठकण्डूर्भोज्योपरोधो गलतालुलेपः ॥

स्वशब्दवैषम्यमरोचकोऽग्निसादश्च लिङ्गानि भवन्त्यमूनो ॥ (सु.उ.52/7)

दल्हण – भोज्योपरोधः ग्रासस्य गले सङ्गः । स्वशब्दवैषम्यमिति ईषत्प्रकृतिस्वरवैकृतम् । अग्निसादः अग्निमान्द्यम् ।

संप्राप्ति :–

❖ अधःप्रतिहतो वायुरुर्ध्वस्रोतः समाश्रितः ।

उदानभावमापन्नः कण्ठे सक्तस्तथोरसि ॥

आविश्य शिरसः खानि सर्वाणि प्रतिपूरयन् ।

आभञ्जन्नाक्षिपन् देहं हनुमन्ये तथाऽक्षिणी ॥

नेत्रे पृष्ठमुरःपर्श्वे निर्भुज्य स्तम्भयंस्ततः ।

शुष्को वा स कफो वाऽपि कसनात्कास उच्यते ॥ (च.चि.18/6–8)

❖ धूमोपघाताद्रज...........

प्राणो ह्युदानानुगतः प्रदुष्टः संभिन्नकांस्यस्वनतुल्यघोषः ॥

निरेति वक्त्रात् सहसा सदोषः कासः स विद्वद्भिरुदाहृतस्तु ॥ (सु.उ.52/5)

कास भेद :-

❖ वातादिजास्त्रयो ये च क्षतजः क्षयजस्तथा ।

पञ्चैते स्युर्नृणां कासा वर्धमानाः क्षयप्रदाः ॥ (च.चि.18/4)

❖ पञ्चकासाः स्मृता वातपित्तश्लेष्मक्षतक्षयैः ।

क्षयायोपेक्षिताः सर्वे बलिनश्चोत्तरम् ॥ (वं.से.-कासाधिकार/3)

वातज कास निदान :–

❖ रूक्षशीतकषायाल्पप्रमितानशनं स्त्रियाः ।

वेगधारणमायासो वातकासप्रवर्तकाः ॥ (च.चि.18/10)

❖ कुपितो वातलैर्वातः । (अ.हृ.नि.3/22)

❖ यस्सदा वातलो जन्तुरसात्म्यं वै निषेवेत ।

रूक्षमश्नाति पिबति रूक्षं हि बहु खादति ॥ (भे.नि.4/2)

वातज कास संप्राप्ति :–

❖ तस्य वातः प्रकुपितो गृहीत्वा हृदयं ततः ।

ऊर्ध्वं संप्राप्य धमनीरथ कासायकल्पते ॥ (भे.नि.4/3)

वातज कास लक्षण :–

❖ हृत्पार्श्वोरःशिरःशूलस्वरभेदकरो भृशम् ।

शुष्कोरकण्ठवक्त्रस्य हृष्टलोम्नः प्रताम्यतः ॥

निर्घोषदैन्यस्तनदौर्बल्यक्षोभमोहकृत् ।

शुष्ककासः कफं शुष्कं कृच्छ्रान्मुक्त्वाऽल्पतां व्रजेत् ॥

स्निग्धाम्ललवणोष्णैश्च भुक्तपीतैः प्रताम्यति ।

ऊर्ध्ववातस्य जीर्णेऽन्ने वेगवान्मारुतो भवेत् ॥ (च.चि.18/11–13)

❖ हृच्छङ्खमूर्धोदरपार्श्वशूली क्षमानानः क्षीणस्वरबलौजाः ॥

प्रसक्तमन्तः कफमीरणेन कासेतु शुष्कं स्वरभेदयुक्तः ।

(सु.उ. 52/8) & (मा.नि.11/5)

❖ शुष्कोरःकण्ठकक्त्रताम् ॥

हृत्पार्श्वोरःशिरःशूलं मोहक्षोभस्वरक्षयान् ।

करोति शुष्कं कासं च महावेगरुजास्वनम् ॥

सोऽङ्गहर्षी कफं शुष्कं कृच्छ्रान्मुक्त्वाऽल्पतां व्रजेत् ।

(अ.हृ. कास निदान/22,23)

❖ हृच्छङ्खमूर्ध्योदरपार्श्वशूली क्षमानानः क्षीणबलःस्वरौजः ।

प्रसक्तवेगस्तु समीरणेन भिन्नस्वरः कासति शुष्कमेव ॥ (वं.से.–कासाधिकार/5)

❖ उरःशूलं पार्श्वशूलं पृष्ठस्तम्भस्य जायते ।

आटोप्यतेऽस्योदरं च शिरश्चास्यातिमन्थ्यते ॥

उरोभिघातात्पार्श्वे च गृह्यते इव देहिनः ।

नकफः काशमानस्य मुहुः कासो रुणद्धि हि ॥

इत्येभिर्लक्षणैर्विद्याद्वातकासं शरीरिणाम् । (भे.नि.4/4–6)

❖ मारुतात्कासते शुष्कं शूकपूर्णगलो यथा ॥

निष्ठीवति च शुष्कं च तत्र मुक्ते न कासते ।

प्रताम्येत्कासमानस्य हृदय चावकृष्यते ॥

पार्श्वे च रुजतोऽत्यर्थं श्वासेन च विकूजति ।

सञ्चयोज्जायते शूलं तालुशोषस्तथैव च ॥

श्यावे नेत्रे च वीक्ष्येते स्वरो वर्णश्च भिद्यते ।

विशेषादग्निकं कोष्ठश्च कासते वात पीडितः ॥ (भे.चि.20/4–7)

वातज कास चिकित्सा :–

❖ रूक्षस्यानिलजं कासमादौ स्नेहैरुपाचरेत् ।

सर्पिभिर्बस्तिभिः पेया क्षीर यूष रसादिभिः ॥

वातघ्नसिद्धैः स्नेहाद्यैर्धूमैर्लेहैश्च युक्तितः ।

अभ्यङ्गैः परिषेकैश्च स्निग्धैः स्वेदैश्च बुद्धिमान् ॥

बस्तिभिर्बद्धविद्वातं शुष्कोर्ध्वं चोर्ध्वभक्तिकैः ।

घृतैः सपित्तं सकफं जयेत् स्नेहविरेचनैः ॥ (च.चि.18/32-34)

❖ रूक्षस्यानिलजं कासमादौ स्नेहैरुपाचरेत् ।

सर्पिभिर्बस्तिभिः ॥ (वं.से.-कासाधिकार/6)

कासे घृत प्रधानता :-

❖ घृतं तु पित्तेऽभ्यधिके लिह्याद्वातेऽधिके पिबेत् ।

लीढं निर्वापयेत्पित्तमल्पत्वाद्धन्ति नानलम् ।

आक्रामात्यनिलं पीतमुष्णं निरुणद्धि च ॥ (अ.हृ.चि.3//110,111)

पित्तेऽभ्यधिके घृतं लिह्यात् । वातेऽधिके घृतं पिबेत् ।

लीढं घृतं पित्तं निर्वापयेत्-संशमयेत् । अनलं च न हन्ति लीढं घृतम् ।

(अरुणदत्त)

वातज कास पथ्यापथ्य :-

❖ पेया क्षीर यूष रसादिभिः ॥

वास्तुको वायसीशाकं मूलकं सुनिषण्णकम् ।

स्नेहतैलादयो भक्ष्याः क्षीरेक्षुरसगौडिकाः ॥

दध्यारनालाम्लफलं प्रसन्नापानमेव च ।

शस्यते वातकासेषु स्वाद्वाम्ललवणानि च ॥

ग्राम्यानूपोदकैः शालियवगोधूमषष्टिकान् ।

रसैः मांसात्मगुप्तानां यूषैर्वा योजयेद्दितान् ॥

DURAALABHAADI YOGA –

❖ दुरालभां शटीं द्राक्षां शृङ्गवेरं सितोपलाम् ।

   लिह्यात् कर्कटशृङ्गीं च कासे तैलेन वातजे ॥ (च. चि. 18/50)

❖ दुरालभां शृङ्गवेरं शठीं द्राक्षां सितोपलाम् ।

   लिह्यात्कर्कटशृङ्गीं च कासे तैलेन वातजे ॥ (अ. हृ. चि. 3/13,14)

TILA TAILA –

❖ नास्ति तैलात् परं किञ्चिदौषधं मारुतापः ।

   व्यवाय्युष्ण गुरु स्नेहात् संस्कारादबलवत्तरम् ॥

   गुणैर्वातहरैस्तस्माच्छतशोऽथ सहस्रशः ।

   सिद्धं क्षिप्रतरं हन्ति सूक्ष्म मार्ग स्थितान् गदान् ॥ (च.चि. 28)

JAJA –

❖ वातलं रूक्षं कटुकं च तदादिशेत् । (अ.सं.सू.6)

❖ शीतं मदात्यय ग्लानि मूर्छा छर्दि श्रम भ्रमान् ।

   तृष्णा उष्ण दाह पित्तासृग्विषाणि च निहन्ति तत् ॥ (अ.सं.सू.6)

USHNA JALA -

❖ कफमेदोऽनिलामघ्नं दीपनं बस्तिशोधनम् ॥

   श्वासकासज्वरहरं पथ्यमुष्णोदकं सदा ।

                              (सु.सू.45/39,40) & (यो.र.– जल प्रकरण)

❖ दीपनं कफविच्छेदि पित्तवातानुलोमनम् ।

कफवातज्वरार्तेभ्यो हितमुष्णाम्बु तृट्छिदम् ॥

तद्धि मार्दवकृद्दोषस्रोतसां ॥ (सु.उ.39/106,107)

❖ पाके स्वादु हिमं वीर्ये तदुष्णमपि योजितम् ।

तस्मादयोगपानेन लाघवान्न वियोजयेत् ॥

आमविष्टब्धयोः कोष्णं निष्पिपासोऽप्यपः पिबेत् ।

यावत्यः क्लेदयन्त्यन्नमितिक्लेदोऽग्निनाशनः ॥

विबद्धः कफवाताभ्यां मुक्तामाशयबन्धनः ।

पच्यते क्षिप्रमाहारः कोष्णतोयद्रवीकृतः ॥ (अ.सं.सू.6/34−36)

❖ दीपनं पाचनं कण्ठ्यं लघूष्णं बस्तिशोधनम् ॥

हिघ्माध्मानानिलश्लेष्मदघ्नःशुद्धिनवज्वरे ।

कसामपीनसश्वासपार्श्वरुक्षु च शस्यते ॥ (अ.हृ.सू.5/16, 17)

❖ शूलकफानिलतृष्णाहिकारोचकविबन्धगुल्मघ्नम् ।

व्रणधातुमृदुकरणं दीपनमुष्णोदकमुशन्ति ॥ (का.सू.22/12)

❖ अष्टमेनांशशेषेण चतुर्थेनार्धकेन च ।

अथवा क्वथनेनैव सिद्धमुष्णोदकं वदेत् ॥

श्लेष्मामवातमेदोघ्नं बस्तिशोधनदीपनम् ।

कासश्वासज्वरहरं पीतमुष्णोदकं निशी ॥ (शा.म.खं.2/159,160)

❖ ज्वरकासकफश्वास पित्तवाताममेदसाम् ।

नाशनं पाचनञ्चैव पथ्यमुष्णोदकं सदा ॥ (भा.प्र.चि.1/64)

List of ingredients of *Duraalabhaadi yoga*;

| *Duraalabhaa* | *Shati* | *Draakshaa* |

| *Shrungavera* | *Sitopalaa* | *Karkatashrungee* |
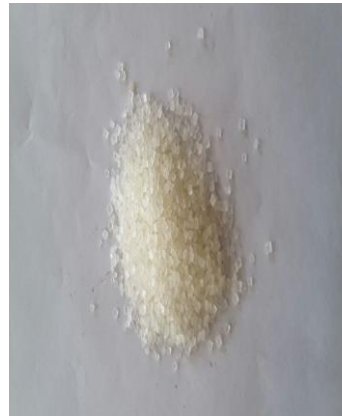
Mixture of all *churnas*   *Tila taila*

Sample selection based on lottery method

Sl. No.	Group A	Group B	Group C
1.	1	2	3
2.	10	5	4
3.	11	8	6
4.	12	15	7
5.	14	16	9
6.	18	24	13
7.	22	29	17
8.	23	32	19
9.	26	33	20
10.	30	38	21
11.	34	42	25
12.	55	43	27
13.	57	45	28
14.	58	48	31
15.	62	49	35
16.	67	50	36
17.	71	54	37
18.	78	59	39
19.	83	60	40
20.	84	61	41
21.	85	64	44
22.	87	69	46
23.	88	76	47
24.	90	77	51
25.	92	79	52
26.	99	81	53
27.	101	86	56
28.	102	95	63
29.	103	96	65
30.	107	104	66
31.	110	105	68
32.	113	109	70
33.	114	111	72
34.	122	115	73
35.	126	120	74
36.	127	121	75
37.	128	125	80
38.	129	130	82
39.	131	132	89
40.	133	134	91
41.	150	136	93
42.	153	138	94
43.	155	139	97
44.	157	140	98

45.	158	142	100
46.	159	144	106
47.	162	145	108
48.	168	149	112
49.	172	151	116
50.	176	152	117
51.	178	165	118
52.	180	169	119
53.	184	170	123
54.	186	173	124
55.	189	179	135
56.	190	181	137
57.	191	183	141
58.	193	188	143
59.	194	195	146
60.	196	198	147
61.	197	199	148
62.	200	207	154
63.	201	208	156
64.	202	209	160
65.	203	210	161
66.	204	211	163
67.	206	213	164
68.	212	216	166
69.	214	217	167
70.	218	228	171
71.	219	230	174
72.	221	231	175
73.	222	232	177
74.	225	233	182
75.	226	234	185
76.	229	235	187
77.	237	236	192
78.	239	238	205
79.	240	242	215
80.	247	243	220
81.	248	246	223
82.	251	249	224
83.	254	253	227
84.	258	255	241
85.	260	261	244
86.	262	265	245
87.	263	266	250
88.	271	268	252
89.	274	269	256
90.	277	270	257
91.	279	272	259

92.	281	275	264
93.	283	278	267
94.	286	280	273
95.	289	282	276
96.	291	284	292
97.	294	285	293
98.	295	287	297
99.	296	288	298
100.	299	290	300

"A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa"

Proforma of case sheet for the study of "A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa"

Part A	**:-**	History Taking & Clinical Examination.
Part B	**:-**	Interpretation.
Part C	**:-**	Observation and Assessment.

Researcher :- Dr. Rajesh Bhat

H.O.D. **:-** Dr. Abhijit H. Joshi

Guide **:-** Dr. Abhijit H. Joshi

Part A
History Taking & Clinical Examination

Name : -   OPD. No. :-

Age :-   Date of commencement :-

Sex :- Male/Female   Date of completion :-

Religion :- Hindu/Muslim/Christian/Others

Occupation :-

Socio-economic status :- P /M /R

Place :-

Phone No. :-

Locality :- Urban/Rural

Diagnosis :-   Case :- Fresh/Treated

Group :-

Chief complaints :-   **Duration :-**

   ☼   Shushka Kasa Vega
   ☼   Kapha shushkata
   ☼   Alpa kaphata
   ☼   Kapha which comes out with krucchrata
   ☼   Hrut shoola/Ura shoola (chest pain) due to excess Kasa

"**A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa**"

Associated complaints :-   **Duration :-**

→ Shushka ura

→ Shushka kantha

→ Shushka vaktra

→ Nirghosha

→ Shira shoola

→ Swarabheda

→ Parshwa shoola

→ Shankha shoola

→ Udara shoola

→ Lomaharsha

→ Deenata

→ Dourbalya

→ Maha vega

→ Others

History of present illness :-

1. Shuska Kasa :-

a) Mode of onset : Acute/Gradual

b) Course :   Continuous/Intermittent

c) Periodicity :   Seasonal/Irregular

d) Occurrence :   Day/Night/Persistent

e) Predisposing factors : Allergens/Smoke/Dust/Food -

/Cold items/Drenching in rain/Paint/Season/Others -

f) Severity :   Mild/Moderate/Severe

2. Kapha shushkata or alpa kaphata which comes out with krucchrata :-

Expectoration :- Present/Absent

Quantity :- Little/Nil

Colour :- White/Greenish/Yellowish/Mixed with blood

Consistency :- Thick/Semisolid/Watery

Sputum comes out :- Easily/With difficulty

"**A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa"**

3. Hrit Shoola (chest pain) due to excess Kasa : -   Present/Absent

Severity :- Mild/Moderate/Severe

Duration :- Shorter/Longer

Other symptoms :-

History of past illness :-

Treatment history :-

Family history :-

> **Personal history :-**

> **Koshta :-** Mrudu/Madhyama/Kroora

> **Agni :-** Sama/Vishama/Manda/Teekshna

Mootra :-

Frequency -   D/N
Colour – Normal/Abnormal
Burning sensation –Absent/Present
Pain –Absent/Present

Mala :-

Frequency -   /Day

Colour – Normal/Abnormal

Burning sensation –Absent/Present

Bleeding –Absent/Present

Pain –Absent/Present

Nidra :-

> Prakruta/Ati/Alpa/Anidra

> Hours of sleep in night -   hrs.

> Hours of sleep in day   -   hrs.

Vyasana :-

	Quantity	Duration	Regular	Occasional	Stopped since
Coffee					
Tea					
Tobacco					
Smoking					
Alcohol					
Others					

XL

"**A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa"**

Diet :-

- Veg/Mixed
- Predominant rasa – Madhura/Amla/Lavana/Katu/Tikta/Kashaya
- Predominant guna –
- Other details –

Activity :-

- Nature of work-
- Working environment -
- Working hours -
- Previous occupation -
- Other details -

Menstrual history :- Menstruating/ Attained Menopause

Duration :- ------ days   Regular/Irregular

Bleeding :- Normal/Scanty/Excess/Absent

Complication :- Absent/Present

EXAMINATION OF THE PATIENT

General examination :-

Built : Sthoola/Madhyama/Krusha   Temperature : Afebrile/Febrile

Height :   cms.   Nail bed : Normal/Abnormal

Weight :   kgs.   Conjunctiva : Pink/Pale/Blue

Pulse :   /min.   Lymph nodes : Normal/Enlarged

BP :   mm of Hg.   Other findings :

Respiratory rate :   /min.

SYSTEMIC EXAMINATION

Examination of Respiratoy System :-

Nasal Cavity :- Polyps : Absent/Present

           Nasal septum : Normal/Deviated

Oral Cavity :- Tonsillitis : Absent/Present

           Pharyngitis : Absent/Present

Chest :-

        Inspection :-

           Shape - Normal/Abnormal
           Size - Normal/Abnormal
           Movement of the chest – Normal/Abnormal
           Respiratory rate - /min
           Symmetrical/Nonsymmetrical

"A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa"

Palpation :-

Symmetrical/Nonsymmetrical
Lymph nodes – Normal/Enlarged
Vocal fremitus –
Trachea – Normally placed/Abnormal
Tenderness –Absent/Present

Percussion :- Resonant/Dullness

Auscultation :-

Breathing sounds –
Normal
Abnormal -

- Ronchi/Wheezing – Absent/Present
- Creptations – Absent/Present- Fine/Course
- Pleural rub –Absent/Present

Cardio-vascular system :- Normal/Abnormal

Gastro-Intestinal System :- Normal/Abnormal

Central Nervous System :- Normal/Abnormal

Locomotor System :- Normal/Abnormal

Ashta Sthana Preeksha :-

→ Nadi- V/P/K/VP/PK/KV/Sama   → Shabda-Prakruta/Vaikruta
→ Mala – Prakruta/Vaikruta   → Sparsha - Prakruta/Vaikruta
→ Mootra – Prakruta/Vaikruta   → Dhruk - Prakruta/Vaikruta
→ Jihwa –Alipta/Lipta   → Akruti - Prakruta/Vaikruta

Dashavidha Pareeksha:-

▸ Prakruti - V/ P/ K/ VP/ PK/ KV/ Sama
▸ Vikruti –   Dosha –
                       Dhatu –
                       Mala –
▸ Sara – Pravara/Madhyama/Avara
▸ Samhanana – Balavanta/Madhyama/Alpa bala
▸ Pramana – Pravara/Madhyama/Avara
▸ Satwa – Pravara/Madhyama/Avara
▸ Satmya – Pravara/Madhyama/Avara
▸ Ahara Shakti – Abhyavaharana Shakti - Pravara/Madhyama/Avara
                          Jarana Shakti - Pravara/Madhyama/Avara
▸ Vyayama Shakti – Pravara/Madhyama/Avara
▸ Vaya –   Years

* Rogi bala: Pravara/Madhyama/Avara

"**A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa**"

Laboratory investigation :-

Blood for **Absolute Eosinophil Count** (AEC) :-   cells/mm^3

<div align="center">

Part B

(Interpretation)

</div>

Nidana Panchaka :-

- Nidana :-

- Purvarupa :-

- Rupa :-

- Upashaya :-

- Anupashaya :-

- Samprapti :-

- Samprapti Ghataka :-
  - Dosha :
  - Dushya :
  - Srotas :
  - Dushtiprakara :
  - Rogamarga :
  - Utpatttisthana :
  - Sancharasthana :
  - Vyaktasthana :
  - Agni :
  - Ama :
  - Adhisthana

Vyadhi Vinishchaya :-

"**A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa**"

Intervention :-

	Group A	Group B	Group C
Yoga	Duraalabhaadi yoga	Duraalabhaadi yoga	Duraalabhaadi yoga
Anupana	Tila Taila	Ushna jala	Jala
Maatra	4gms thrice in a day	4gms thrice in a day	4gms thrice in a day
Sevana Kala	Bhojanottara (After food)	Bhojanottara (After food)	Bhojanottara (After food)
Duration	7 days	7 days	7 days
Follow up	15 days	15 days	15 days
Pathya apathya	As per classics	As per classics	As per classics

Part-C

Observation & Assessment

Subjective :-

Lakshanas	1st day	7th day	15th day
Shushka Kasa Vega			
Hrut shoola/Ura shoola (chest pain) due to excess Kasa			
Parshwa shoola			
Shira shoola			
Shankha shoola			
Udara shoola			

Objective :-

	1st day	7th day	15th day
Raised Eosinophil count			

"**A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa"**

Observational :-

Lakshanas	1st day	7th day	15th day
Kapha shushkata			
Alpa kaphata			
Kapha which comes out with krucchrata			
Shushka ura			
Shushka kantha			
Shushka vaktra			
Nirghosha			
Swarabheda			
Lomaharsha			
Deenata			
Dourbalya			
Kshobha			
Moha			
Maha vega			
Pratamyata			
Kshamanana			
Others –			

Result :-

Signature of Researcher :-

Signature of Guide :-   **Signature of HOD**

<u>ರೋಗಿಯ ಒಪ್ಪಿಗೆ ಪತ್ರ</u>

ರೋಗಿಯ ಹೆಸರು : –––––––––––––––––––

ವೈದ್ಯರ ಹೆಸರು : –––––––––––––––––––

ಆಸ್ಪತ್ರೆಯ ಹೆಸರು : –––––––––––––––––––

––––––––––––––––––– ಆದ ನಾನು ಈ ಅರ್ಜಿಯಲ್ಲಿ ಹೇಳಿರುವ ಎಲ್ಲಾ ಮಾಹಿತಿಗಳನ್ನು ಓದಿರುತ್ತೇನೆ (ಅಥವಾ ಓದಲ್ಪಟ್ಟಿರುತ್ತದೆ). ನನಗೆ ಯಾವುದೇ ಪ್ರಶ್ನೆಗಳನ್ನು ಕೇಳಬಹುದು ಮತ್ತು ಅದನ್ನು ಉತ್ತರಿಸಲಾಗಿದೆ. ನಾನು 18 ವರ್ಷ ಮೇಲ್ಪಟ್ಟವನಾಗಿದ್ದು ಈ ಕೆಳಗೆ ಹೇಳಿರುವ ವಿಷಯದ ಮೇಲೆ ಸಂಶೋಧನೆ ನಡೆಸುವ ಸಲುವಾಗಿ ನನ್ನನ್ನು ಸೇರಿಸಿಕೊಳ್ಳಬಹುದೆಂದು ದೃಢೀಕರಿಸುತ್ತೇನೆ.

ವಿಷಯ – "A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa"

1. ನಾನು ಈ ಒಪ್ಪಿಗೆ ಪತ್ರವನ್ನು ಓದಿ ಅರ್ಥ ಮಾಡಿಕೊಂಡಿರುತ್ತೇನೆ ಮತ್ತು ವಿಷಯದ ಬಗ್ಗೆ ತಿಳಿಸಲಾಗಿದೆ.
2. ಒಪ್ಪಿಗೆ ಪತ್ರದ ಬಗ್ಗೆ ತಿಳಿಸಿಕೊಡಲಾಗಿದೆ.
3. ಚಿಕಿತ್ಸಾ ಕ್ರಮದ ಬಗ್ಗೆ ವಿವರಣೆ ನೀಡಲಾಗಿದೆ.
4. ನನ್ನ ಜವಾಬ್ದಾರಿಗಳನ್ನು ಅರ್ಥೈಸಲಾಗಿದೆ.
5. ಚಿಕಿತ್ಸಾ ಸಮಯದಲ್ಲಿ ಆಗುವ ಆಗುಹೋಗುಗಳ ಬಗ್ಗೆ ವಿವರಿಸಲಾಗಿದೆ.
6. ವೈದ್ಯರಿಗೆ ನಾನು ಈ ಹಿಂದೆ ತೆಗೆದುಕೊಂಡಿರುವ ಆಯುರ್ವೇದ, ಎಲೋಪಥಿ, ಹೋಮಿಯೋಪಥಿ ಮುಂತಾದ ಚಿಕಿತ್ಸೆಗಳ ಬಗ್ಗೆ ತಿಳಿಸಿರುತ್ತೇನೆ.
7. ವೈದ್ಯರ ಸಂಶೋಧನೆಗಾಗಿ ಸಂಪೂರ್ಣವಾಗಿ ಸಹಕಾರ ನೀಡಲು ಒಪ್ಪಿರುತ್ತೇನೆ ಮತ್ತು ಔಷಧದಿಂದಾಗುವ ಅನಾಹುತಗಳನ್ನು ವೈದ್ಯರಿಗೆ ಕೂಡಲೆ ತಿಳಿಸುತ್ತೇನೆ.
8. ನನ್ನ ಹೆಸರು, ವಿಳಾಸ ಇತ್ಯಾದಿ ಯಾವುದೇ ಗುರುತನ್ನು ಬಹಿರಂಗಗೊಳಿಸಲಾಗುವುದಿಲ್ಲ.
9. ನನ್ನ ತೃಪ್ತಿಗನುಸಾರವಾಗಿ ಪ್ರಶ್ನೆ ಮತ್ತು ಉತ್ತರಗಳನ್ನು ನೀಡಿ, ಔಷಧದ ಪರಿಣಾಮ ಮತ್ತು ತೊಂದರೆಗಳನ್ನು ತಿಳಿಸಿರುತ್ತೇನೆ.

ನನ್ನ ಹಸ್ತಾಕ್ಷರವನ್ನು ನೀಡಿ, ಮೇಲೆ ಹೇಳಿರುವ ಎಲ್ಲಾ ವಿವರಗಳನ್ನು ಸರಿಯಾದ ರೀತಿಯಲ್ಲಿ ನನಗೆ ವಿವರಿಸಿ ಅರ್ಥಮಾಡಿಕೊಡಲಾಗಿದೆ ಎಂದು ದೃಢೀಕರಿಸುತ್ತೇನೆ. ಈ ಒಪ್ಪಿಗೆ ಪತ್ರದ ಪ್ರತಿಯನ್ನು ನೀಡಲಾಗಿದೆ.

ರೋಗಿಯ ಸಹಿ : –––––––––––––––

ಹೆಸರು : –––––––––––––––––

ಸ್ಥಳ : –––––––––––––   ದಿನಾಂಕ : –––––––––––   ಸಮಯ : –––––––––––––––

Format of patient consent form

Name of the patient : –––––––––––––––––––––––––

Name of the physician : –––––––––––––––––––––––

Name of the institution : ––––––––––––––––––––––––

The Informed Consent

I,--, have read the information in this form (or it has been read to me). I was free to ask any questions and they have been answered. I am over 18 years of age and, exercising my free power of choice, hereby give my consent to be included as a patient for "A clinical study on the concept of Anupana w.s.r. to Snigdhoshnam maarute shastam in Vataja Kasa"

1. I have read and understood this consent form and the information provided to me.
2. I have had the consent document explained to me.
3. I have been explained about the nature of the treatment.
4. My responsibilities have been explained to me by the investigator.
5. I have been advised about the risks associated with the treatment(s).
6. I have informed the physician of all the treatments I am taking or have taken in the past month(s) including allopath, Ayurvedic, homeopathic or any household treatments.
7. I agree to cooperate with the physician and I will inform him/her immediately if I suffer unusual symptoms.
8. My identity will be kept confidential if my data are publicly presented.
9. I have had my questions answered to my satisfaction regarding expected results as well as unwanted effects of the procedure(s)/medication(s).

By signing this consent form, I attest that the information given in this document has been clearly explained to me and apparently understood by me. I will be given a copy of this consent document.

Patient's sign : –––––––––––––––––––––––––

Name : –––––––––––––––––––––––––––––––

Place :–––––––––––––––––––   Date : –––––––––––––––––   Time : –––––––––––––––––

Key to master chart

Rel – religion

M – male

F - female

Occup – occupation

HW – house wife

Agri – agriculturist

SES – sicio economical status

Loc -locality

Fr/Tr – fresh/treated

MOO – mode of onset

Occ – occurrence

Sev – severity

Mod – moderate

Continu – continuous

Intermit – intermittent

Cof – coffee

Alc – alcohol

Madhya – madhyama

v- vata

p-pitta

k-kapha

vp –vata pitta

pk- pitta kapha

kv – kapha vata

SKV – shushka kasa vega

HS - hrutshoola

PS - parshwashoola

SS - shirashoola

Sha S – shankha shoola

US – udara shoola

AEC – absolute eosinophil count

K.Shu – kapha shushkata

Alp.K – alpa kaphata

K.Kru – kapha krucchrata

Sh.u – shushka ura

Sh.K – shushka kanta

Sh.V – shushka vaktra

Ni - nirghosha

Sw.Bh - swarabheda

Lo.H – loma harsha

Deen - deenata

Dour - dourbalya

M.Vega – maha vega

Pratamya - prataamyataa

Master chart

Group A :-

Sl.No.	Name	Age	Sex	Rel	Occup	SES	Loc	Fr/Tr	MOO	Course	Period	Occ	Sev	Koshta	Agni	Nidra	Vyasana	Diet	Nadi	Prakruti	Rogi bala
1.	Y.B.Nagaraj	47	M	H	agri	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
2.	Gireesh m.s	36	M	H	business	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea, smoke	mix	vp	vp	madhya
3.	Ramesh	33	M	H	business	mid	urban	fr	acute	continu	season	night	severe	madhya	vishama	alpa	tea, smoke, alc	mix	vp	kv	madhya
4.	Devaraj	39	M	H	engineer	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof, smoke, alc	mix	vp	kv	madhya
5.	Suresh	37	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea, smoke	veg	vp	vp	madhya
6.	Thimme gouda	49	M	H	cooli	poor	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	tea, alc	mix	kv	kv	madhya
7.	Sanna basavaih	60	M	H	business	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	alpa	tea, smoke	mix	vp	vp	madhya
8.	Jayappa	31	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea, tobac	mix	vp	pk	madhya
9.	Shashikala T.	56	F	H	teacher	mid	urban	fr	acute	intermit	season	night	severe	madhya	vishama	alpa	cof	veg	vp	kv	madhya
10.	Prema	40	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	sama	alpa	cof	veg	vp	vp	madhya
11.	S.n.nagarajachar	60	M	H	business	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	cof	veg	vp	vp	madhya
12.	Sannamma	50	F	H	HW	mid	urban	fr	acute	continu	season	night	severe	madhya	vishama	alpa	cof	mix	vp	kv	madhya
13.	Tharesha	51	M	H	business	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	tea, alc	mix	vp	vp	madhya
14.	Umesh	35	M	H	business	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof, smoke	mix	vp	kv	madhya
15.	Basavaraja	50	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	tea, smoke	mix	vp	vp	madhya
16.	Lakshmi	50	F	H	HW	mid	urban	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	tea	mix	kv	kv	madhya
17.	Kavitha	36	F	H	HW	mid	rural	fr	acute	continu	season	night	severe	madhya	vishama	alpa	tea	veg	vp	kv	madhya
18.	Raje gowda	60	M	H	business	mid	urban	fr	acute	continu	season	night	severe	madhya	vishama	alpa	tea, tobac	mix	kv	vp	madhya
19.	Mohan m.k	33	M	H	business	mid	urban	fr	acute	intermit	irregular	night	severe	krura	vishama	alpa	tea, smoke	mix	vp	kv	madhya
20.	Krishnappa	44	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea, alc	mix	vp	vp	madhya
21.	Manjula	42	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	krura	vishama	alpa	tea	mix	vp	kv	madhya
22.	Raje gouda	50	M	H	cooli	poor	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	tea, smoke, alc	mix	kv	kv	madhya
23.	Sharath kumar	31	M	H	engineer	mid	urban	fr	acute	continu	season	night	severe	madhya	vishama	alpa	tea, smoke	mix	vp	kv	madhya
24.	Sheela	31	F	H	HW	mid	rural	fr	acute	continu	season	night	severe	krura	vishama	alpa	tea	mix	vp	vp	madhya
25.	Madhu	40	M	H	business	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	alpa	cof, smoke	mix	kv	vp	madhya
26.	Shankar shetty	59	M	H	merchant	mid	urban	fr	acute	continu	season	night	severe	madhya	vishama	alpa	alc	mix	vp	vp	madhya
27.	Kaveramma	45	F	H	HW	mid	rural	fr	acute	continu	season	night	severe	madhya	vishama	alpa	cof	mix	vp	vp	madhya
28.	Gowramma	56	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
29.	Shantamma	55	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
30.	Suresh	48	M	H	agri	mid	rural	fr	acute	continu	season	night	severe	madhya	vishama	alpa	smoke	mix	vp	vp	madhya
31.	Umesh p.m	44	M	H	business	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	smoke, alc	mix	vp	vp	madhya
32.	Parwathi	35	F	H	teacher	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	tea	veg	vp	vp	madhya

No.	Name	Age	Sex	Religion	Occupation	SES	Area		Onset	Course			Severity				Diet/Habit				
33.	Chandre gouda	60	M	H	merchant	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	alc	mix	vp	vp	madhya
34.	Susheelamma d.t	46	F	H	HW	mid	rural	fr	acute	continu	season	night	severe	madhya	vishama	alpa	cof	mix	vp	kv	madhya
35.	Pradeep j.	36	M	H	clerk	mid	urban	fr	acute	continu	season	night	mod	madhya	sama	prakruta	tea, smoke	mix	kv	vp	madhya
36.	Parvathi	31	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	krura	vishama	alpa	cof	mix	kv	vp	madhya
37.	Shreekanth	36	M	H	engineer	rich	urban	fr	acute	continu	season	night	mod	krura	sama	prakruta	tea, smoke, alc	veg	vp	vp	madhya
38.	Khadeeja	32	F	MUS	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	kv	pk	madhya
39.	B.c.pradeep kumar	35	M	H	merchant	mid	rural	fr	acute	continu	season	persistant	mod	madhya	vishama	alpa	tea, smoke	veg	vp	pk	madhya
40.	Sharadamma	52	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea	mix	vp	pk	madhya
41.	Ramesh	51	M	H	business	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea, smoke,	mix	vp	vp	madhya
42.	Krishnappa	51	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea, smoke	mix	vp	vp	madhya
43.	Nanjamma	44	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	veg	vp	vp	madhya
44.	Sumadevi. H	38	F	H	teacher	mid	rural	fr	acute	continu	season	night	severe	madhya	vishama	alpa	cof	veg	vp	vp	madhya
45.	Uche gouda	60	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea, alc	mix	vp	vp	madhya
46.	Jayamma	55	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	veg	vp	vp	madhya
47.	Puttappa r.	58	M	H	merchant	mid	rural	fr	acute	continu	season	night	severe	madhya	vishama	alpa	tea, smoke	mix	vp	vp	madhya
48.	Naveen kumar	32	M	H	clerk	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	alpa	tea	mix	vp	vp	madhya
49.	K.n mayanna	60	M	H	ex-military	mid	rural	fr	gradual	continu	season	night	mild	madhya	vishama	alpa	tea, alc	mix	vp	vp	madhya
50.	Asha b.t	40	F	H	HW	poor	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	veg	vp	vp	madhya
51.	Parwathi	35	F	H	teacher	mid	rural	fr	acute	intermit	season	night	mild	madhya	vishama	alpa	tea	mix	kv	kv	madhya
52.	Rangaswamy k.l	43	M	H	business	mid	urban	fr	acute	intermit	season	night	severe	madhya	vishama	alpa	tea, smoke	veg	vp	vp	madhya
53.	Eerappa	60	M	H	agri	poor	rural	fr	acute	continu	season	night	mod	krura	sama	alpa	tea, smoke	mix	vp	vp	madhya
54.	Lokesh	36	M	H	engineer	rich	urban	fr	acute	intermit	season	night	mild	madhya	vishama	alpa	tea	mix	v	pk	madhya
55.	Malle gowda	37	M	H	business	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea, smoke	mix	vp	vp	madhya
56.	Renuka devi	33	F	JN	HW	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof	veg	kv	pk	madhya
57.	Geetha	31	F	H	HW	mid	urban	fr	acute	intermit	season	persistant	mod	krura	sama	prakruta	cof	mix	vp	vp	madhya
58.	Umesh	36	M	H	business	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea	mix	vp	vp	madhya
59.	Boranne gowda	58	M	H	business	mid	urban	fr	acute	continu	season	night	severe	madhya	vishama	alpa	tea, tobac, smoke	mix	vp	pk	madhya
60.	Bhaskar s.b	49	M	H	business	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea, smoke	mix	vp	vp	madhya
61.	H.r ranganath	60	M	H	priest	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	alpa	tea	veg	vp	vp	madhya
62.	Somashekhar	45	M	H	business	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea, smoke	mix	kv	kv	madhya
63.	Md. Yusuf	55	M	MUS	business	mid	urban	tr	acute	intermit	season	persistant	mild	madhya	sama	alpa	tea, smoke	mix	vp	vp	madhya
64.	Shantamma	44	F	H	HW	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
65.	Jayaprasad a.n	60	M	H	driver	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea, smoke	mix	vp	vp	madhya
66.	Hemavathi	49	F	H	HW	mid	urban	fr	gradual	continu	irregular	persistant	severe	madhya	vishama	alpa	cof	mix	vp	vp	madhya
67.	Nagamani m.	38	F	H	HW	mid	urban	fr	gradual	continu	irregular	persistant	severe	madhya	vishama	alpa	cof	mix	vp	vp	madhya
68.	Anasuya	44	F	H	HW	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
69.	H.s.basavaraja	45	M	H	business	mid	rural	fr	acute	continu	irregular	persistant	mild	madhya	sama	alpa	tea, smoke	mix	vp	vp	madhya
70.	Chandramathi	31	F	H	HW	mid	urban	fr	acute	continu	irregular	persistant	mild	madhya	vishama	alpa	cof	mix	vp	vp	madhya

No.	Name	Age	Sex	Rel	Occupation																
71.	Rathnamma	45	F	H	HW	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
72.	Vedavathi bhat	39	F	H	HW	poor	rural	fr	gradual	continu	irregular	persistant	mod	madhya	vishama	anidra	cof	veg	vp	vp	avara
73.	Narasimha raju	50	M	H	business	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea	mix	vp	vp	madhya
74.	Narasimha murthy	57	M	H	business	mid	urban	fr	gradual	continu	irregular	persistant	mild	madhya	vishama	alpa	tea, smoke	mix	vp	vp	madhya
75.	S.r. Prakash	39	M	H	engineer	rich	urban	fr	acute	intermit	season	night	severe	madhya	vishama	anidra	tea, smoke	mix	vp	vp	madhya
76.	Kumar h.j	40	M	H	business	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof, smoke, alc	mix	vp	vp	madhya
77.	Jayanthi	40	F	H	teacher	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea	mix	kv	kv	madhya
78.	Vedamoorthy	41	M	H	mechanic	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea, smoke, alc	veg	vp	pk	madhya
79.	Sudha m.b	48	F	H	teacher	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
80.	Girijakshi	58	F	H	HW	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	prakruta	tea	mix	kv	kv	madhya
81.	Vishwanath	32	M	H	business	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea, smoke, alc	mix	vp	vp	madhya
82.	Padma	50	F	H	garments	poor	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	cof	mix	kv	kv	madhya
83.	Rame gowda s.	42	M	H	agri	mid	rural	fr	acute	intermit	season	night	mild	madhya	vishama	prakruta	cof, smoke, alc	mix	vp	vp	madhya
84.	Puttaraju	60	M	H	agri	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof, tobac, smoke, alc	mix	vp	vp	madhya
85.	Nagamani	32	F	H	HW	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	prakruta	tea	mix	vp	vp	madhya
86.	Palaksha	40	M	H	cooli	poor	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof, smoke, alc	mix	vp	vp	madhya
87.	Gurumurthy k.s	60	M	H	watchman	poor	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof, smoke, alc	mix	vp	vp	madhya
88.	Susheelamma	56	F	H	HW	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea	mix	vp	vp	madhya
89.	Lekhana	36	F	H	garments	poor	urban	fr	acute	intermit	irregular	night	mild	madhya	vishama	prakruta	cof, tea	mix	vp	vp	madhya
90.	Sumithra	50	F	H	teacher	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
91.	Meena	42	F	H	teacher	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
92.	Ramesh	48	M	H	business	mid	urban	tr	acute	intermit	season	night	severe	madhya	vishama	anidra	cof, smoke, alc	mix	vp	vp	madhya
93.	Ganga	31	F	H	HW	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof, tea	mix	kv	kv	madhya
94.	Shrinivas	40	M	H	teacher	mid	rural	tr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea, smoke, alc	veg	kv	kv	madhya
95.	Muneera banu	60	F	MUS	HW	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea	mix	kv	kv	madhya
96.	Rasheeda	45	F	MUS	HW	mid	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	tea	mix	kv	kv	madhya
97.	Lolakshamma	58	F	H	HW	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	tea	mix	kv	kv	madhya
98.	Some gowda	43	M	H	agri	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof, smoke, alc	mix	kv	kv	madhya
99.	Thangyamma	50	F	H	HW	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
100.	H.S. Nagaraju	57	M	H	mechanic	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof, smoke, alc	mix	kv	kv	madhya

Data Assessment in Vataja Kasa Before, After treatment and After Follow up;

Group A		Before treatment							After treatment							After follow up						
Sl.No.	Name	SKV	HS	PS	SS	Sha S	US	AEC	SKV	HS	PS	SS	Sha S	US	AEC	SKV	HS	PS	SS	Sha S	US	AEC
1.	Y.B.NAGARAJ	0	0	0	1	1	0	625	0	0	0	0	0	0	400	0	0	0	0	0	0	325
2.	GIREESH M.S	2	1	1	1	1	0	725	0	0	0	0	0	0	425	0	0	0	0	0	0	375
3.	RAMESH	3	0	2	2	2	0	625	0	0	0	0	0	0	400	0	0	0	0	0	0	375
4.	DEVARAJ	2	0	1	1	1	0	850	0	0	0	0	0	0	400	0	0	0	0	0	0	400
5.	SURESH	2	1	1	1	1	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	325
6.	THIMME GOUDA	1	1	1	1	0	0	450	0	0	0	0	0	0	325	0	0	0	0	0	0	325
7.	SANNA BASAVAIH	1	0	1	0	0	0	425	0	0	0	0	0	0	375	0	0	0	0	0	0	375
8.	JAYAPPA	2	0	1	1	0	0	625	0	0	0	0	0	0	400	0	0	0	0	0	0	375
9.	SHASHIKALA T.	3	2	1	1	1	0	825	0	0	0	0	0	0	400	0	0	0	0	0	0	425
10.	PREMA	2	0	1	0	0	0	650	0	0	0	0	0	0	425	0	0	0	0	0	0	400
11.	S.N.NAGARAJACHAR	0	0	1	1	0	0	525	0	0	0	0	0	0	375	0	0	0	0	0	0	375
12.	SANNAMMA	3	2	1	1	1	0	925	0	0	0	0	0	0	425	0	0	0	0	0	0	400
13.	THARESHA	1	0	1	0	0	0	425	0	0	0	0	0	0	375	0	0	0	0	0	0	325
14.	UMESH	2	0	1	1	1	0	575	0	0	0	0	0	0	350	0	0	0	0	0	0	350
15.	BASAVARAJA	1	0	0	0	0	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	325
16.	LAKSHMI	0	0	2	1	0	0	725	0	0	0	0	0	0	400	0	0	0	0	0	0	375
17.	KAVITHA	3	2	2	2	1	0	450	1	1	1	0	0	0	450	0	0	0	0	0	0	375
18.	RAJE GOWDA	3	3	2	2	1	0	925	1	1	1	1	1	0	400	0	0	0	0	0	0	375
19.	MOHAN M.K	0	0	2	2	0	0	825	0	0	1	1	0	0	425	0	0	0	0	0	0	400
20.	KRISHNAPPA	2	0	1	0	0	0	625	0	0	0	0	0	0	200	0	0	0	0	0	0	375
21.	MANJULA	2	1	1	1	0	0	550	0	0	0	0	0	0	425	0	0	0	0	0	0	375
22.	RAJE GOUDA	0	0	2	1	0	0	825	0	0	0	0	0	0	375	0	0	0	0	0	0	350
23.	SHARATH KUMAR	3	2	2	1	1	0	750	1	1	1	0	0	0	425	0	0	0	0	0	0	400
24.	SHEELA	3	3	2	2	2	0	850	1	1	0	0	0	0	425	0	0	0	0	0	0	350
25.	MADHU	1	0	1	0	0	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	350
26.	SHANKAR SHETTY	3	3	2	2	2	0	1100	2	2	1	1	1	0	450	1	1	1	0	0	0	400
27.	KAVERAMMA	3	3	2	2	2	0	825	2	2	2	1	1	0	375	1	1	1	1	1	0	350
28.	GOWRAMMA	2	2	2	1	1	0	650	0	0	0	0	0	0	400	0	0	0	0	0	0	400
29.	SHANTAMMA	2	2	2	1	0	0	575	0	0	0	0	0	0	375	0	0	0	0	0	0	375
30.	SURESH	3	3	2	2	2	0	850	2	1	1	1	1	0	425	1	0	0	0	0	0	400
31.	UMESH P.M	2	2	1	1	1	0	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
32.	PARWATHI	2	2	2	1	1	0	600	0	0	0	0	0	0	425	0	0	0	0	0	0	400
33.	CHANDRE GOUDA	2	2	2	0	0	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
34.	SUSHEELAMMA D.T	3	3	3	2	0	0	825	2	1	1	1	0	0	400	1	0	0	0	0	0	375
35.	PRADEEP J.	2	2	2	1	1	0	600	0	0	0	0	0	0	425	0	0	0	0	0	0	400
36.	PARVATHI	2	2	0	1	0	0	650	0	0	0	0	0	0	400	0	0	0	0	0	0	375
37.	SHREEKANTH	2	2	0	1	1	0	450	0	0	0	0	0	0	375	0	0	0	0	0	0	350
38.	KHADEEJA	2	2	0	1	1	0	425	1	1	0	0	0	0	325	0	0	0	0	0	0	275
39.	B.C.PRADEEP KUMAR	2	2	0	1	1	0	550	0	0	0	0	0	0	275	0	0	0	0	0	0	275
40.	SHARADAMMA	2	2	0	1	1	0	475	1	1	0	0	0	0	325	0	0	0	0	0	0	325
41.	RAMESH	2	2	0	1	1	0	600	0	0	0	0	0	0	425	0	0	0	0	0	0	400
42.	KRISHNAPPA	2	0	0	1	0	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
43.	NANJAMMA	2	2	1	0	0	0	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
44.	SUMADEVI. H	3	3	0	2	2	0	950	1	1	0	1	1	0	400	1	0	0	0	0	0	350
45.	UCHE GOUDA	2	2	0	0	1	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	350
46.	JAYAMMA	2	0	0	0	0	0	575	0	0	0	0	0	0	350	0	0	0	0	0	0	325
47.	PUTTAPPA R.	2	2	0	1	1	0	750	1	1	0	0	0	0	375	0	0	0	0	0	0	325
48.	NAVEEN KUMAR	1	1	0	1	1	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	350
49.	K.N MAYANNA	1	1	0	1	1	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
50.	ASHA B.T	2	2	0	1	1	0	600	0	0	0	0	0	0	425	0	0	0	0	0	0	400

#	Name																					
51.	PARWATHI	2	1	0	1	1	0	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
52.	RANGASWAMY K.L	3	2	0	1	0	0	1050	1	0	0	0	0	0	400	0	0	0	0	0	0	375
53.	EERAPPA	2	1	0	0	0	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
54.	LOKESH	1	1	0	1	1	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	350
55.	MALLE GOWDA	2	1	1	0	0	0	450	0	0	0	0	0	0	375	0	0	0	0	0	0	350
56.	RENUKA DEVI	2	2	1	1	0	0	550	1	0	0	0	0	0	400	0	0	0	0	0	0	375
57.	GEETHA	2	1	1	1	0	0	600	1	0	0	0	0	0	425	0	0	0	0	0	0	400
58.	UMESH	2	1	0	1	0	0	750	0	0	0	0	0	0	350	0	0	0	0	0	0	350
59.	BORANNE GOWDA	3	2	0	1	0	0	825	2	1	0	0	0	0	425	1	0	0	0	0	0	375
60.	BHASKAR S.B	2	1	0	1	0	0	625	1	0	0	0	0	0	450	1	0	0	0	0	0	400
61.	H.R RANGANATH	1	1	0	1	0	0	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
62.	SOMASHEKHAR	2	1	0	0	0	0	525	0	0	0	0	0	0	350	0	0	0	0	0	0	375
63.	Md. YUSUF	1	1	0	1	0	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
64.	SHANTAMMA	2	1	0	0	0	0	450	1	0	0	0	0	0	350	0	0	0	0	0	0	350
65.	JAYAPRASAD A.N	2	1	0	0	0	0	500	1	0	0	0	0	0	425	0	0	0	0	0	0	400
66.	HEMAVATHI	0	0	0	3	0	0	725	0	0	0	2	0	0	450	0	0	0	1	0	0	375
67.	NAGAMANI M.	0	3	0	3	0	0	850	0	2	0	2	0	0	400	0	1	0	0	0	0	375
68.	ANASUYA	2	2	0	2	0	0	625	1	2	0	1	0	0	425	1	0	0	0	0	0	400
69.	H.S.BASAVARAJA	0	0	0	1	0	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
70.	CHANDRAMATHI	0	1	1	0	0	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	350
71.	RATHNAMMA	2	1	0	1	0	0	525	0	0	0	0	0	0	375	0	0	0	0	0	0	350
72.	VEDAVATHI BHAT	0	0	0	1	0	0	875	0	0	0	0	0	0	450	0	0	0	0	0	0	375
73.	NARASIMHA RAJU	1	1	0	1	0	0	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
74.	NARASIMHA MURTHY	0	0	0	1	0	0	475	0	0	0	0	0	0	400	0	0	0	0	0	0	350
75.	S.R. PRAKASH	3	2	0	1	0	0	950	2	2	0	0	0	0	450	1	1	0	0	0	0	400
76.	KUMAR H.J	1	1	1	1	1	0	575	0	0	0	0	0	0	400	0	0	0	0	0	0	350
77.	JAYANTHI	2	1	1	1	1	0	600	1	0	0	0	0	0	425	0	0	0	0	0	0	400
78.	VEDAMOORTHY	1	1	1	1	1	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
79.	SUDHA M.B	2	2	1	1	1	0	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
80.	GIRIJAKSHI	2	1	1	1	1	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	350
81.	VISHWANATH	2	1	1	1	1	0	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
82.	PADMA	2	1	1	1	1	0	675	1	0	0	0	0	0	400	0	0	0	0	0	0	350
83.	RAME GOWDA S.	1	1	1	1	1	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
84.	PUTTARAJU	2	1	1	1	1	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	350
85.	NAGAMANI	2	1	1	0	0	0	600	1	0	0	0	0	0	425	0	0	0	0	0	0	400
86.	PALAKSHA	1	1	1	1	1	1	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
87.	GURUMURTHY K.S	2	1	1	0	0	0	675	0	0	0	0	0	0	375	0	0	0	0	0	0	400
88.	SUSHEELAMMA	1	1	1	1	1	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
89.	LEKHANA	2	1	1	1	1	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	350
90.	SUMITHRA	2	1	1	1	0	0	600	1	0	0	0	0	0	425	0	0	0	0	0	0	400
91.	MEENA	1	1	0	1	1	0	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
92.	RAMESH	3	2	2	2	2	0	925	2	1	1	1	1	0	425	1	0	0	0	0	0	400
93.	GANGA	1	1	0	1	1	0	425	0	0	0	0	0	0	300	0	0	0	0	0	0	275
94.	SHRINIVAS	1	1	1	1	1	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275
95.	MUNEERA BANU	1	1	1	1	1	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	350
96.	RASHEEDA	1	1	1	1	1	0	475	0	0	0	0	0	0	325	0	0	0	0	0	0	325
97.	LOLAKSHAMMA	1	1	0	1	0	0	425	0	0	0	0	0	0	350	0	0	0	0	0	0	300
98.	SOME GOWDA	1	1	1	1	1	0	475	0	0	0	0	0	0	350	0	0	0	0	0	0	325
99.	THANGYAMMA	2	1	1	1	1	0	600	1	0	0	0	0	0	425	0	0	0	0	0	0	400
100.	H.S. NAGARAJU	1	1	1	1	1	0	425	0	0	0	0	0	0	325	0	0	0	0	0	0	275

Group B :-

Sl.No.	Name	Age	Sex	Rel	Occup	SES	Loc	Fr/Tr	MOO	Course	Period	Occ	Sev	Koshta	Agni	Nidra	Vyasana	Diet	Nadi	Prakruti	Rogi bala
1.	PUSHPA	50	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof, tea	mix	kv	vp	madhya
2.	LALITHAMMA	59	F	H	HW	mid	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof, tobac	mix	vp	vp	madhya
3.	RATHNAMMA	39	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
4.	SHEKHAR	32	M	H	business	mid	rural	fr	acute	continu	season	night	mod	krura	vishama	alpa	tea, smoke, alc	mix	kv	vp	madhya
5.	VENKATESH	56	M	H	business	mid	rural	fr	acute	continu	season	night	mod	krura	vishama	alpa	tea, tobac, smoke, alc	mix	kv	vp	madhya
6.	HARI RAO	39	M	H	business	mid	urban	fr	acute	continu	season	night	severe	krura	vishama	alpa	cof, smoke, alc	veg	kv	vp	madhya
7.	SHARADAMMA	33	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	sama	alpa	tea	mix	vp	vp	madhya
8.	R.BASAVARAJU	31	M	H	business	mid	urban	fr	gradual	continu	irregular	night	mod	krura	vishama	alpa	tea, smoke, alc	mix	vp	vp	madhya
9.	SUDHA	45	F	H	HW	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof	mix	kv	vp	madhya
10.	RANGASWAMY G.S	38	M	H	agri	mid	rural	fr	acute	continu	season	persistant	mod	krura	vishama	prakruta	tea, tobac, alc	mix	kv	kv	madhya
11.	SHASHIKALA	49	F	H	HW	mid	rural	tr	gradual	continu	irregular	night	mod	madhya	vishama	alpa	cof, tobac	mix	vp	vp	madhya
12.	HUSSAIN	60	M	MUS	contractor	rich	rural	fr	acute	continu	season	night	mod	krura	vishama	alpa	tea, tobac, smoke	mix	kv	vp	madhya
13.	MADESH	40	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	krura	sama	anidra	tea, tobac, smoke, alc	mix	kv	vp	madhya
14.	K.T. RAME GOWDA	60	M	H	agri	mid	rural	fr	acute	intermit	season	night	severe	madhya	vishama	alpa	tea, tobac, smoke, alc	mix	kv	vp	madhya
15.	SHARATH	41	M	H	teacher	mid	urban	fr	acute	continu	season	night	mod	krura	vishama	prakruta	tea, smoke	mix	vp	kv	madhya
16.	USHA KUMAR	35	F	H	bank	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea	veg	kv	kv	madhya
17.	ANANDA	51	M	H	business	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	alpa	tea, tobac, smoke, alc	mix	vp	vp	madhya
18.	SANTHOSH	35	M	H	business	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof, smoke, alc	veg	vp	vp	madhya
19.	PRASHANT H.J	36	M	H	business	rich	rural	fr	acute	continu	season	night	mod	madhya	sama	prakruta	tea, smoke	mix	vp	vp	madhya
20.	K.G. HANUMANTHE GOWDA	58	M	H	agri	mid	rural	fr	gradual	continu	season	night	mod	madhya	vishama	alpa	tea, smoke, alc	mix	kv	pk	madhya
21.	MUDDAPPA	55	M	H	business	rich	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof, smoke, alc	mix	vp	vp	madhya
22.	KAMALA	45	F	H	HW	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
23.	KUMAR	38	M	H	business	mid	rural	fr	acute	continu	irregular	night	mild	madhya	vishama	alpa	cof, alc	mix	kv	vp	madhya
24.	RENUKA	35	F	H	HW	mid	rural	fr	acute	continu	irregular	persistant	mild	madhya	vishama	alpa	cof, tobac	mix	vp	vp	madhya
25.	RENUKA PRASAD	44	M	H	business	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	anidra	tea, smoke, alc	veg	kv	vp	madhya
26.	MUDDARAJU M.	51	M	H	business	mid	rural	fr	acute	continu	season	night	mod	krura	vishama	alpa	tea, smoke, alc	mix	vp	vp	madhya
27.	KAMALAMMA	50	F	H	HW	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	cof, tea	mix	vp	vp	madhya
28.	MALLIKAMMA	55	F	H	HW	mid	rural	fr	acute	intermit	season	night	mild	madhya	vishama	alpa	cof	mix	v	vp	madhya
29.	POORNIMA H.	41	F	H	clerk	mid	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof	veg	v	vp	madhya
30.	NASEEMA	49	F	MUS	HW	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea	mix	vp	kv	madhya
31.	SHASHIKUMAR	34	M	H	teacher	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	smoke, alc	mix	vp	vp	madhya
32.	NATARAJ	38	M	H	business	mid	urban	fr	acute	continu	season	night	severe	madhya	vishama	alpa	smoke	mix	vp	vp	madhya
33.	KUBERA	45	M	H	merchant	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	alc	mix	kv	vp	madhya
34.	BASAVARAJ S.M	33	M	H	merchant	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	alpa	smoke, alc	mix	vp	vp	madhya
35.	SHAMALA	47	F	H	HW	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	tea	veg	kv	pk	avara
36.	FATHIMA	60	F	MUS	HW	rich	urban	tr	gradual	intermit	irregular	persistant	mild	krura	sama	prakruta	tea	mix	kv	pk	pravara
37.	CHANDRA KUMAR	42	M	H	business	rich	urban	tr	gradual	intermit	irregular	persistant	mild	krura	sama	prakruta	alc	veg	v	pk	pravara
38.	SOME GOUDA	47	M	H	agri	poor	rural	tr	acute	continu	irregular	persistant	mod	krura	vishama	prakruta	tea, smoke,	mix	kv	vp	pravara

No.	Name	Age	Sex		Occupation												Habits				
																	alc				
39.	DHARMACHAND	37	M	JN	merchant	mid	urban	fr	acute	continu	irregular	persistant	mild	madhya	sama	prakruta	smoke	veg	kv	pk	madhya
40.	SIDDIQUE PASHA	50	M	MUS	mechanic	mid	urban	fr	gradual	intermit	irregular	night	mod	madhya	vishama	anidra	smoke	mix	kv	pk	pravara
41.	NISHANTH JAIN	35	M	JN	merchant	rich	rural	tr	gradual	intermit	season	persistant	mod	krura	sama	anidra	tea	veg	kv	pk	pravara
42.	NINGAPPA K.R	60	M	H	agri	poor	rural	fr	gradual	continu	irregular	night	mod	madhya	vishama	anidra	tea, smoke	mix	vp	pk	pravara
43.	RAVI	32	M	H	teacher	mid	urban	tr	acute	intermit	irregular	night	mild	madhya	sama	prakruta	tea, smoke	veg	kv	vp	madhya
44.	PARAPPA	47	M	H	agri	poor	rural	fr	acute	continu	irregular	night	mild	madhya	sama	prakruta	tea, smoke	mix	kv	vp	pravara
45.	VEERABHADRE GOUDA	48	M	H	agri	poor	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	tea, tobac, smoke, alc	mix	vp	pk	madhya
46.	LAKSHMANA	40	M	H	engineer	rich	urban	fr	acute	intermit	season	night	mod	krura	sama	prakruta	tea, smoke	veg	vp	pk	pravara
47.	ALVELAMMA	45	F	CRST	HW	poor	urban	tr	gradual	intermit	season	night	mod	krura	sama	alpa	tea	mix	kv	vp	madhya
48.	HEMALATHA	35	F	H	HW	mid	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	prakruta	tea	veg	vp	kv	madhya
49.	KHIZAR MOHAMMAD	42	M	MUS	mechanic	mid	urban	fr	acute	continu	season	night	mod	madhya	sama	prakruta	tea, smoke	mix	vp	vp	pravara
50.	GEETHA RAMESH	45	F	H	teacher	mid	urban	fr	acute	continu	season	persistant	severe	madhya	vishama	anidra	cof	veg	vp	vp	madhya
51.	RATHNAMMA R.	38	F	H	HW	mid	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	tea	mix	vp	vp	madhya
52.	YASHODAMMA	58	F	H	HW	mid	urban	fr	acute	continu	irregular	night	mild	madhya	vishama	alpa	cof, tobac	veg	vp	vp	madhya
53.	JAYARAJ R.	33	M	H	business	mid	urban	fr	acute	intermit	irregular	night	mod	madhya	vishama	anidra	tea, smoke, alc	mix	vp	vp	madhya
54.	BANAPPA	60	M	H	agri	mid	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof, smoke	mix	vp	vp	madhya
55.	RANGASWAMY	31	M	H	agri	mid	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof, tobac, alc	veg	v	kv	madhya
56.	JAYASHRI CHAKRAVARTHY	31	F	H	HW	mid	urban	fr	acute	intermit	season	night	mild	madhya	vishama	alpa	tea	veg	vp	vp	madhya
57.	NAVEEN KUMAR	31	M	H	business	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof, smoke	veg	v	pk	madhya
58.	SUKANTH SAHA	36	M	JN	business	mid	urban	fr	acute	continu	season	night	severe	madhya	vishama	alpa	cof, smoke, alc	mix	vp	vp	madhya
59.	JAYALAKSHMI	31	F	H	HW	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof	veg	vp	vp	madhya
60.	NANDEESH	32	M	H	teacher	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea	veg	v	pk	madhya
61.	CHANDRAKALA	31	F	H	HW	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	prakruta	tea	veg	kv	kv	madhya
62.	DHARMA	32	M	H	agri	mid	urban	fr	acute	intermit	irregular	night	mod	krura	vishama	prakruta	tea, smoke	veg	vp	vp	madhya
63.	MADHU PRAKASH	31	F	H	HW	mid	rural	fr	acute	continu	season	night	severe	madhya	sama	alpa	cof, smoke	veg	kv	kv	madhya
64.	SHANTAMMA	60	F	H	HW	mid	rural	fr	acute	intermit	season	night	mild	madhya	vishama	prakruta	cof, tobac	mix	vp	vp	madhya
65.	NINGE GOUDA	60	M	H	agri	poor	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	tea, smoke	mix	kv	pk	madhya
66.	VINODAMMA	60	F	H	HW	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea, tobac	veg	vp	vp	madhya
67.	C. JAY NAIK	50	M	H	business	mid	urban	fr	acute	intermit	irregular	night	severe	madhya	vishama	anidra	tea, smoke, alc	mix	v	pk	madhya
68.	DHARMAPPA C.M	56	M	H	advocate	mid	urban	tr	gradual	intermit	irregular	night	mod	madhya	vishama	alpa	tea, smoke	veg	vp	vp	madhya
69.	RAVINDRA M.	38	M	H	teacher	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	sama	alpa	tea	veg	v	pk	madhya
70.	BOYA REDDY	36	M	H	business	rich	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	tea, alc	mix	vp	vp	madhya
71.	SULOCHANA BAI	45	F	H	HW	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	tea	mix	v	vp	madhya
72.	JAYAMMA M.	60	F	H	HW	mid	rural	fr	acute	intermit	season	night	mild	madhya	vishama	alpa	cof, tobac	veg	vp	vp	madhya
73.	AYYANA GOWDA	52	M	H	agri	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	tea, smoke	mix	v	pk	madhya
74.	JAYALAKSHMI K.N	45	F	H	clerk	mid	urban	fr	acute	continu	irregular	night	mod	madhya	sama	alpa	tea	mix	vp	vp	madhya
75.	SUMITHRA	42	F	H	HW	mid	rural	fr	acute	intermit	irregular	night	mild	madhya	vishama	alpa	cof	mix	kv	kv	madhya
76.	RAGHU	33	M	H	business	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	alpa	tea	mix	vp	kv	madhya
77.	PADMA V.	48	F	H	HW	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea	mix	vp	vp	madhya
78.	CHANDRA	33	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	krura	vishama	alpa	smoke	mix	vp	vp	madhya
79.	GIRIJA	49	F	H	HW	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	alpa	tea	mix	vp	pk	madhya
80.	SURESH	35	M	H	business	mid	rural	fr	gradual	continu	irregular	night	mild	madhya	vishama	anidra	cof	mix	vp	pk	madhya
81.	NOOR JAHAN	60	F	MUS	HW	mid	urban	fr	acute	continu	irregular	night	mild	madhya	vishama	alpa	tea	mix	vp	pk	madhya
82.	G. VIJAYA KUMAR	45	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	anidra	cof	veg	vp	vp	madhya
83.	LEELAVATHI	51	F	H	HW	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea	veg	v	vp	madhya
84.	PUROSHOTTAM	51	M	H	clerk	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	alpa	tea	mix	vp	vp	madhya
85.	JAYARAM S.R	42	M	H	teacher	mid	urban	fr	acute	continu	season	night	severe	madhya	sama	prakruta	tea, smoke	veg	vp	vp	madhya

No.	Name	Age	Sex	Rel	Occupation	Eco	Area		Type												
86.	NAGESH S.	46	M	H	business	mid	urban	fr	acute	continu	irregular	night	mild	madhya	vishama	alpa	smoke	mix	vp	vp	madhya
87.	SUJATHA	51	F	H	HW	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	anidra	tea	veg	v	kv	madhya
88.	LINGAPPA	38	M	H	business	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof, smoke	veg	vp	vp	madhya
89.	CHANDRAMMA	38	F	H	business	poor	rural	fr	acute	continu	irregular	night	mod	krura	vishama	prakruta	tea, tobac	veg	vp	vp	madhya
90.	NAGESH	44	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	sama	prakruta	cof, smoke	veg	v	pk	madhya
91.	GEETHA	41	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea	veg	vp	vp	madhya
92.	RADHAMANI	49	F	H	HW	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof	veg	v	kv	madhya
93.	RUDRE GOUDA	39	M	H	agri	mid	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof, alc	mix	v	vp	madhya
94.	MANJESHA KANNAIAH	31	M	H	business	poor	urban	fr	acute	continu	season	night	mod	madhya	vishama	anidra	tea	veg	v	vp	madhya
95.	ANAND	42	M	H	merchant	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	alpa	tea	mix	v	vp	madhya
96.	MANJULA	42	F	H	clerk	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	veg	vp	vp	manjula
97.	SHEKHAR K.V	34	M	H	clerk	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	tea, smoke	mix	vp	vp	madhya
98.	LALITHA	48	F	H	HW	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof	veg	vp	vp	madhya
99.	KARNA KUMAR	45	M	H	business	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea	mix	vp	vp	madhya
100.	JAYAMALA	31	F	H	HW	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	veg	vp	vp	madhya

Data Assessment in Vataja Kasa Before, After treatment and After Follow up;

Group B		Before treatment							After treatment							After follow up						
Sl.No.	Name	KV	HS	PS	SS	Sha S	US	AEC	KV	HS	PS	SS	Sha S	US	AEC	KV	HS	PS	SS	Sha S	US	AEC
1.	PUSHPA	0	1	1	1	1	0	675	0	0	0	0	0	0	425	0	0	0	0	0	0	425
2.	LALITHAMMA	2	1	0	1	1	0	475	1	0	0	0	0	0	475	1	0	0	0	0	0	450
3.	RATHNAMMA	0	1	1	1	1	0	600	0	0	0	0	0	0	550	0	0	0	0	0	0	550
4.	SHEKHAR	2	1	1	1	1	0	625	1	1	1	1	1	0	625	1	1	1	1	1	0	500
5.	VENKATESH	2	1	1	1	1	0	625	1	1	1	1	1	0	550	1	1	1	1	1	0	550
6.	HARI RAO	2	2	1	1	1	0	900	1	1	0	0	0	0	675	1	0	0	0	0	0	525
7.	SHARADAMMA	0	1	1	1	1	0	675	0	0	0	0	0	0	550	0	0	0	0	0	0	425
8.	R.BASAVARAJU	2	2	1	1	1	0	725	1	1	0	0	0	0	650	1	0	0	0	0	0	625
9.	SUDHA	0	1	1	1	1	0	625	0	1	1	1	1	0	525	0	0	0	1	1	0	425
10.	RANGASWAMY G.S	2	1	1	1	1	0	550	1	1	1	1	0	0	425	1	0	0	0	0	0	375
11.	SHASHIKALA	2	1	0	1	1	0	550	1	0	0	0	0	0	500	1	0	0	0	0	0	500
12.	HUSSAIN	2	1	1	1	1	0	675	2	1	1	1	1	0	625	1	1	1	1	1	0	575
13.	MADESH	2	2	1	1	1	0	675	1	1	0	0	0	0	625	1	0	0	0	0	0	525
14.	K.T. RAME GOWDA	3	2	2	1	1	0	950	2	1	1	1	1	0	825	1	1	1	0	0	0	675
15.	SHARATH	2	2	1	1	1	0	525	1	1	0	0	0	0	500	1	0	0	0	0	0	475
16.	USHA KUMAR	0	2	0	1	1	0	550	0	1	0	0	0	0	450	0	0	0	0	0	0	450
17.	ANANDA	2	1	0	1	0	0	475	1	1	0	1	0	0	450	1	1	0	1	0	0	475
18.	SANTHOSH	2	2	0	0	1	0	625	1	1	0	0	0	0	450	1	1	0	0	0	0	475
19.	PRASHANT H.J	2	2	0	0	1	0	525	1	1	0	0	0	0	475	1	0	0	0	0	0	450
20.	K.G. HANUMANTHE GOWDA	2	2	0	1	0	0	625	1	1	0	1	0	0	550	1	0	0	0	0	0	450
21.	MUDDAPPA	2	2	1	1	1	0	875	1	1	0	0	0	0	550	0	0	0	0	0	0	450
22.	KAMALA	0	2	1	1	1	0	675	0	1	1	1	1	0	525	0	0	0	0	0	0	450
23.	KUMAR	1	1	1	1	1	0	525	1	1	0	0	0	0	450	1	0	0	0	0	0	425
24.	RENUKA	2	1	0	1	1	0	650	1	1	0	1	1	0	525	1	0	0	0	0	0	475
25.	RENUKA PRASAD	2	2	0	1	0	0	725	1	1	0	1	0	0	550	1	0	0	0	0	0	525
26.	MUDDARAJU M.	2	1	0	1	0	0	525	1	1	0	1	0	0	425	1	1	0	1	0	0	425
27.	KAMALAMMA	0	2	2	2	2	0	625	0	1	1	1	1	0	550	0	1	1	1	1	0	525
28.	MALLIKAMMA	1	1	1	1	1	0	450	1	1	1	1	1	0	425	1	1	1	1	1	0	425
29.	POORNIMA H.	2	2	2	2	2	0	625	1	1	1	1	1	0	575	1	1	1	1	1	0	450
30.	NASEEMA	0	0	0	1	0	0	525	0	0	0	0	0	0	450	0	0	0	0	0	0	475
31.	SHASHIKUMAR	3	2	0	2	2	0	600	2	1	0	1	1	0	525	1	1	0	1	1	0	550

No.	Name																						
32.	NATARAJ	3	2	0	2	2	0	575	1	1	0	1	1	0	475	1	1	0	1	1	0	400
33.	KUBERA	2	0	0	0	0	0	825	2	0	0	0	0	0	650	2	0	0	0	0	0	575
34.	BASAVARAJ S.M	2	0	0	0	0	0	450	1	0	0	0	0	0	425	0	0	0	0	0	0	400
35.	SHAMALA	1	1	0	1	0	0	525	1	0	0	0	0	0	475	1	0	0	0	0	0	450
36.	FATHIMA	0	1	0	1	0	0	450	0	0	0	0	0	0	425	0	0	0	0	0	0	400
37.	CHANDRA KUMAR	1	1	1	0	0	0	425	2	1	1	0	0	0	550	2	1	1	0	0	0	550
38.	SOME GOUDA	2	2	0	0	1	0	525	1	1	0	0	1	0	475	1	1	0	0	1	0	450
39.	DHARMACHAND	0	0	0	2	2	0	575	0	0	0	1	1	0	450	0	0	0	0	0	0	425
40.	SIDDIQUE PASHA	2	2	0	1	1	0	600	1	1	0	0	0	0	425	0	0	0	0	0	0	400
41.	NISHANTH JAIN	0	0	0	1	0	0	525	0	0	0	0	0	0	475	0	0	0	0	0	0	450
42.	NINGAPPA K.R	2	0	0	1	0	0	750	1	0	0	1	0	0	575	1	0	0	1	0	0	550
43.	RAVI	1	1	1	0	0	0	625	1	1	1	0	0	0	600	1	1	1	0	0	0	550
44.	PARAPPA	1	1	0	1	0	0	425	0	0	0	0	0	0	400	1	0	0	0	0	0	450
45.	VEERABHADRE GOUDA	2	0	0	2	0	0	525	1	0	0	1	0	0	475	1	0	0	1	0	0	450
46.	LAKSHMANA	0	0	0	2	0	0	675	0	0	0	1	0	0	525	0	0	0	1	0	0	475
47.	ALVELAMMA	2	1	0	1	0	0	650	1	0	0	0	0	0	575	1	0	0	0	0	0	450
48.	HEMALATHA	0	0	0	2	2	0	750	0	0	0	1	1	0	550	0	0	0	0	0	0	425
49.	KHIZAR MOHAMMAD	2	1	1	1	0	1	650	0	0	0	0	0	0	400	1	0	0	0	0	0	425
50.	GEETHA RAMESH	3	2	0	1	0	0	825	2	1	0	0	0	0	575	1	0	0	0	0	0	450
51.	RATHNAMMA R.	2	1	0	1	1	0	525	1	0	0	0	0	0	475	1	0	0	0	0	0	450
52.	YASHODAMMA	2	1	0	1	1	0	450	1	0	0	0	0	0	425	1	0	0	0	0	0	450
53.	JAYARAJ R.	2	1	0	0	2	0	650	1	0	0	0	1	0	500	1	1	0	0	1	0	525
54.	BANAPPA	2	1	0	1	1	0	575	1	0	0	0	0	0	450	1	0	0	0	0	0	475
55.	RANGASWAMY	0	0	0	1	1	0	725	0	0	0	1	1	0	575	0	0	0	1	1	0	550
56.	JAYASHRI CHAKRAVARTHY	1	1	0	1	1	0	525	1	0	0	0	0	0	475	1	0	0	0	0	0	450
57.	NAVEEN KUMAR	2	1	0	1	0	0	625	1	1	0	0	0	0	575	1	0	0	0	0	0	450
58.	SUKANTH SAHA	0	0	0	1	1	0	950	0	0	0	1	1	0	675	0	0	0	1	1	0	550
59.	JAYALAKSHMI	2	1	0	1	1	0	675	1	1	0	0	0	0	575	1	0	0	0	0	0	450
60.	NANDEESH	2	1	0	1	1	1	575	1	0	0	0	0	0	450	1	0	0	0	0	0	475
61.	CHANDRAKALA	2	1	0	0	0	1	750	1	0	0	0	0	0	675	1	0	0	0	0	0	600
62.	DHARMA	2	1	1	1	0	0	525	1	0	0	0	0	0	475	1	0	0	0	0	0	450
63.	MADHU PRAKASH	3	1	1	0	0	0	625	2	0	0	0	0	0	575	1	0	0	0	0	0	450
64.	SHANTAMMA	2	1	1	1	0	0	425	1	0	0	0	0	0	400	1	0	0	0	0	0	400
65.	NINGE GOUDA	0	2	1	0	0	1	650	0	1	0	0	0	0	525	0	0	0	0	0	0	475
66.	VINODAMMA	2	1	0	0	1	0	550	1	0	0	0	0	0	425	1	0	0	0	0	0	400
67.	C. JAY NAIK	0	3	0	0	0	2	1050	0	1	0	0	0	1	750	0	1	0	0	0	1	600
68.	DHARMAPPA C.M	2	1	0	0	1	0	475	1	0	0	0	0	0	450	1	0	0	0	0	0	425
69.	RAVINDRA M.	0	2	2	2	0	1	600	0	1	1	0	0	0	450	0	0	0	0	0	0	425
70.	BOYA REDDY	0	1	0	0	1	0	525	0	0	0	0	0	0	475	0	0	0	0	0	0	450
71.	SULOCHANA BAI	0	1	1	0	0	1	650	0	0	0	0	0	0	525	0	0	0	0	0	0	500
72.	JAYAMMA M.	0	1	0	0	1	0	450	0	0	0	0	0	0	425	0	0	0	0	0	0	425
73.	AYYANA GOWDA	0	2	2	0	0	1	725	0	1	1	0	0	0	650	0	1	1	0	0	0	575
74.	JAYALAKSHMI K.N	2	1	0	1	1	0	850	1	0	0	0	0	0	625	1	0	0	0	0	0	575
75.	SUMITHRA	1	1	0	0	1	0	425	0	0	0	0	0	0	400	0	0	0	0	0	0	425
76.	RAGHU	2	1	1	1	1	0	625	0	0	0	0	0	0	375	0	0	0	0	0	0	400
77.	PADMA V.	2	1	0	1	0	0	525	1	0	0	0	0	0	475	0	0	0	0	0	0	450
78.	CHANDRA	2	1	0	1	0	0	750	1	0	0	0	0	0	500	1	0	0	0	0	0	525
79.	GIRIJA	2	1	0	0	0	0	450	1	0	0	0	0	0	425	0	0	0	0	0	0	400
80.	SURESH	0	1	0	0	0	0	625	0	0	0	0	0	0	450	0	0	0	0	0	0	400
81.	NOOR JAHAN	1	1	0	1	0	0	675	0	0	0	0	0	0	450	0	0	0	0	0	0	400
82.	G. VIJAYA KUMAR	1	1	1	1	0	0	425	0	0	0	0	0	0	400	0	0	0	0	0	0	400
83.	LEELAVATHI	2	1	0	1	0	0	525	1	0	0	0	0	0	475	1	0	0	0	0	0	450

		0	1	0	0	0	0	475	0	1	0	0	0	0	425	0	1	0	0	0	0	425
84.	PUROSHOTTAM	0	1	0	0	0	0	475	0	1	0	0	0	0	425	0	1	0	0	0	0	425
85.	JAYARAM S.R	3	2	0	0	0	0	825	2	1	0	0	0	0	575	1	0	0	0	0	0	500
86.	NAGESH S.	1	1	0	1	0	0	450	1	1	0	1	0	0	400	1	1	0	1	0	0	425
87.	SUJATHA	0	2	0	0	0	0	525	0	1	0	0	0	0	475	0	1	0	0	0	0	450
88.	LINGAPPA	2	1	0	0	1	0	750	1	1	0	0	0	0	875	1	1	0	0	0	0	550
89.	CHANDRAMMA	2	1	0	1	0	0	650	1	1	0	0	0	0	525	1	1	0	0	0	0	450
90.	NAGESH	2	2	1	1	1	0	675	1	1	0	0	0	0	550	1	1	0	0	0	0	500
91.	GEETHA	0	1	1	1	1	0	725	0	0	0	0	0	0	450	0	0	0	0	0	0	400
92.	RADHAMANI	0	2	2	1	0	1	850	0	1	1	0	0	0	550	0	1	1	0	0	0	600
93.	RUDRE GOUDA	3	2	1	0	1	0	950	2	1	0	0	0	0	625	1	1	0	0	0	0	625
94.	MANJESHA KANNAIAH	0	2	0	1	0	1	525	0	1	0	0	0	0	475	0	1	0	0	0	0	450
95.	ANAND	1	1	0	1	1	0	450	1	0	0	0	0	0	425	1	0	0	0	0	0	425
96.	MANJULA	0	1	0	0	1	0	575	0	1	0	0	0	0	450	0	0	0	0	0	0	425
97.	SHEKHAR K.V	2	1	0	1	0	0	675	1	0	0	0	0	0	575	1	0	0	0	0	0	450
98.	LALITHA	2	1	0	1	0	0	750	1	0	0	0	0	0	450	1	0	0	0	0	0	400
99.	KARNA KUMAR	2	1	0	0	0	0	625	1	0	0	0	0	0	575	1	0	0	0	0	0	500
100.	JAYAMALA	2	1	1	1	1	0	525	1	0	0	0	0	0	475	1	0	0	0	0	0	425

Group C

Sl.No.	Name	Age	Sex	Rel	Occup	SES	Loc	Fr/Tr	MOO	Course	Period	Occ	Sev	Koshta	Agni	Nidra	Vyasana	Diet	Nadi	Prakruti	Rogi bala
1.	LAKSHMI	52	F	H	HW	mid	urban	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
2.	CHANDRAVATHI	31	F	H	HW	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
3.	MANJUNATH S.V	43	M	H	business	mid	rural	fr	acute	intermit	season	night	mod	madhya	vishama	alpa	tea, smoke,	veg	kv	kv	madhya
4.	MUTTU LAKSHMI	50	F	H	HW	mid	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
5.	NAGAMANI	31	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	vp	vp	madhya
6.	N.C.BELURAIAH	45	M	H	clerk	poor	urban	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	smoke	mix	v	pk	madhya
7.	RAJI BHAI	31	F	JN	teacher	mid	urban	fr	acute	intermit	season	night	mod	madhya	vishama	prakruta	tea	veg	v	vp	madhya
8.	VEDANTH	31	M	H	business	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	smoke	veg	v	pk	madhya
9.	K.R.NINGAPPA	60	M	H	agri	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	smoke	mix	vp	vp	madhya
10.	SHRINIVAS	39	M	H	business	mid	rural	fr	acute	continu	irregular	persistant	mod	madhya	sama	prakruta	tea	veg	v	pk	madhya
11.	APPAJI GOWDA	34	M	H	agri	mid	rural	fr	acute	continu	season	night	mild	krura	vishama	prakruta	smoke	mix	v	kv	madhya
12.	KAMALAMMA	60	F	H	HW	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	anidra	smoke	mix	vp	vp	madhya
13.	DHANPAL	34	M	JN	engineer	rich	urban	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	tea	veg	v	vp	madhya
14.	SAID HAMEED	58	M	MUS	business	mid	urban	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	cof	mix	kv	vp	madhya
15.	R.L. VENKATESH	42	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	smoke	mix	v	vp	madhya
16.	NARENDRACHAR	40	M	H	teacher	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	cof	veg	kv	kv	madhya
17.	PUTTARANGASWAMY	53	M	H	business	mid	urban	fr	acute	continu	irregular	persistant	mod	krura	sama	prakruta	smoke	mix	v	vp	madhya
18.	NAGARAJ	37	M	H	teacher	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	cof	mix	v	pk	madhya
19.	RAMESH	42	M	H	business	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	cof	mix	v	vp	madhya
20.	JYOTHI	31	F	H	HW	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	cof	mix	vp	pk	madhya
21.	PRAMOD	42	M	H	business	poor	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	tea	mix	v	vp	madhya
22.	DAYANAND V.S	39	M	H	business	mid	rural	fr	acute	intermit	irregular	night	mild	madhya	vishama	prakruta	tea	mix	v	vp	madhya
23.	KRISHNA	31	M	H	clerk	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	smoke	mix	v	vp	madhya
24.	BHAGYA	43	F	H	teacher	mid	urban	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	cof	mix	v	vp	madhya
25.	NEELAMMA	38	F	H	clerk	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	tea	mix	vp	vp	madhya
26.	RAVISHANKAR	40	M	H	teacher	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	kv	kv	madhya
27.	M.M HEMA	50	F	H	teacher	mid	urban	fr	acute	continu	season	night	mod	madhya	sama	alpa	cof, tea	veg	vp	vp	madhya
28.	NANDEESH	44	M	H	merchant	rich	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	cof, smoke	mix	vp	vp	madhya

No.	Name	Age	Sex	Rel	Occupation																
29.	RANGAMMA	58	M	H	HW	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	vp	kv	madhya
30.	NETHRAVATHI	40	F	H	HW	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof, tea	veg	kv	vp	madhya
31.	RAKAPPA	60	M	H	agri	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	v	pk	madhya
32.	PRABHAKAR	35	M	H	clerk	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	cof, tea	veg	kv	kv	madhya
33.	NAGARAJ	42	M	H	business	rich	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	kv	vp	madhya
34.	NAGARAJU S.N	40	M	H	teacher	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	cof	mix	kv	pk	madhya
35.	INDRANI	39	F	H	merchant	poor	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	tea	mix	kv	pk	madhya
36.	GIRIJA H.N	35	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	sama	alpa	cof	mix	vp	pk	madhya
37.	PARVATHI	38	F	H	agri	poor	rural	fr	acute	continu	season	night	mild	madhya	sama	prakruta	tea	veg	vp	vp	madhya
38.	NAGAMMA	49	F	H	merchant	mid	rural	fr	acute	continu	season	night	mod	madhya	sama	alpa	cof	mix	kv	pk	madhya
39.	ASHAM PASHA	38	M	MUS	business	mid	urban	fr	acute	continu	season	night	mild	madhya	sama	prakruta	cof	mix	vp	kv	madhya
40.	SUSHEELA	45	F	H	HW	mid	rural	fr	acute	continu	season	night	mild	madhya	sama	prakruta	cof, tea	mix	vp	vp	madhya
41.	MAHADEVA SWAMY	35	M	H	business	mid	urban	fr	acute	continu	season	night	mild	madhya	sama	prakruta	tea	mix	vp	vp	madhya
42.	NAGARATHNA S.	60	F	H	teacher	mid	urban	fr	acute	continu	irregular	night	mod	krura	vishama	alpa	cof	veg	vp	pk	madhya
43.	CIKKAMMA	60	F	H	HW	poor	rural	fr	acute	intermit	season	persistant	mod	madhya	vishama	alpa	cof	mix	vp	kv	madhya
44.	DEVARAJAMMA	58	F	H	cooli	poor	rural	fr	acute	continu	season	night	mild	madhya	vishama	alpa	cof, tobac	veg	vp	vp	madhya
45.	SAMEENA KHANAM	31	F	MUS	teacher	mid	urban	fr	acute	intermit	season	persistant	mild	krura	vishama	prakruta	cof	mix	vp	pk	madhya
46.	RAVINDRA	33	M	H	clerk	mid	urban	fr	acute	intermit	season	night	mild	madhya	vishama	alpa	cof, tea	mix	kv	kv	madhya
47.	SHARATH D.	38	M	H	business	mid	rural	fr	gradual	continu	irregular	persistant	mod	krura	vishama	prakruta	cof, smoke	mix	vp	vp	madhya
48.	DEVAMMA	55	F	H	HW	mid	urban	tr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	veg	vp	pk	madhya
49.	MAHESH J.K	38	M	H	real estate	rich	urban	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	cof, smoke, alc	mix	vp	vp	madhya
50.	CHANDRAMMA	40	F	H	HW	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	alpa	cof	mix	vp	vp	madhya
51.	PREMA RAMESH	45	F	H	HW	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	cof	veg	vp	kv	madhya
52.	B.K.RAJU	46	M	H	driver	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	smoke	veg	vp	kv	madhya
53.	GOURAMMA	38	F	H	HW	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	cof	veg	kv	vp	madhya
54.	JAYALAKSHMI	42	F	H	HW	mid	rural	fr	acute	intermit	season	night	mild	krura	vishama	prakruta	tea	mix	vp	kv	madhya
55.	LAXMAN	34	M	H	carpenter	poor	rural	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	smoke	veg	vp	kv	madhya
56.	BHAGYAMMA	45	F	H	HW	mid	urban	fr	acute	continu	season	persistant	mild	madhya	sama	prakruta	cof	mix	kv	pk	madhya
57.	LAKSHMI	31	F	H	HW	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	alpa	cof	veg	vp	pk	madhya
58.	GOWRIAMMA	40	F	H	HW	mid	rural	fr	gradual	intermit	irregular	persistant	mod	krura	vishama	prakruta	tea	mix	kv	vp	madhya
59.	SUNANDA U.S	60	F	H	HW	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	alpa	cof	veg	vp	pk	madhya
60.	PRAKASH	41	M	H	engineer	rich	urban	fr	acute	continu	season	night	mod	madhya	vishama	alpa	smoke	mix	kv	pk	madhya
61.	PUSHPALATHA	40	F	H	engineer	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	tea	veg	vp	pk	madhya
62.	SAVITHA	32	F	H	HW	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	cof	veg	kv	vp	madhya
63.	YOGESH	31	M	H	driver	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	smoke	veg	vp	vp	madhya
64.	SHANTAMMA	60	F	H	HW	mid	urban	fr	acute	continu	season	night	mild	madhya	vishama	alpa	tea	mix	vp	vp	madhya
65.	LAKSHMAMMA	49	F	H	HW	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	tea	veg	vp	kv	madhya
66.	PADMAVATHI V.S	53	F	H	HW	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	tea	veg	vp	vp	madhya
67.	H.T. JAGANNATH	53	M	H	engineer	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	alc	mix	vp	vp	madhya
68.	SHANMUKHAPPA	60	M	H	merchant	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	tea, alc	mix	vp	kv	madhya
69.	UMAKANTHI C.B	53	F	H	HW	mid	rural	fr	gradual	continu	season	night	mild	madhya	vishama	prakruta	tea	veg	vp	vp	madhya
70.	BASAVARAJU H.N	60	M	H	merchant	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	smoke	mix	vp	pk	madhya
71.	AFSAL BI	53	F	MUS	business	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	tea	mix	kv	pk	madhya
72.	MOHAN H.C	33	M	H	merchant	mid	rural	fr	gradual	intermit	irregular	persistant	mod	krura	vishama	alpa	smoke	veg	kv	pk	madhya
73.	USHA DEVI	60	F	H	merchant	mid	rural	fr	acute	intermit	season	persistant	mild	madhya	sama	alpa	cof	veg	vp	pk	madhya
74.	RENUKAMMA	41	F	H	HW	mid	rural	fr	acute	continu	irregular	night	mild	madhya	vishama	prakruta	tea	mix	kv	vp	madhya
75.	CHANDRASHEKHAR	40	M	H	engineer	rich	urban	fr	gradual	intermit	irregular	night	mild	madhya	vishama	alpa	smoke	veg	vp	vp	madhya
76.	T SANTHOSH	45	M	H	clerk	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	smoke	mix	v	pk	madhya
77.	BHAGYA	41	F	H	HW	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	prakruta	cof	mix	vp	kv	madhya
78.	NAGACHANDRA	50	M	H	teacher	mid	rural	fr	acute	continu	season	night	mild	madhya	vishama	alpa	cof	veg	vp	pk	madhya

79.	KAVERI	60	F	H	HW	mid	rural	fr	acute	intermit	season	night	mild	madhya	vishama	prakruta	cof	mix	v	vp	madhya
80.	NATARAJ	35	M	H	agri	mid	rural	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	tea	mix	vp	vp	madhya
81.	ESHWAR H.K	35	M	H	agri	mid	rural	fr	acute	continu	irregular	night	mild	madhya	vishama	ati	cof, smoke	veg	vp	vp	madhya
82.	LATHA	31	F	H	teacher	mid	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	tea	mix	vp	kv	madhya
83.	NAGAMMA	55	F	H	cooli	poor	rural	fr	acute	continu	season	persistant	mild	madhya	vishama	prakruta	tobac	mix	v	pk	madhya
84.	B.S. MALLESHAPPA	60	M	H	agri	mid	urban	fr	acute	intermit	irregular	night	mod	madhya	vishama	alpa	tea, smoke	mix	kv	vp	madhya
85.	RAGHU	35	M	H	cooli	poor	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	tobac, smoke, alc	mix	v	vp	madhya
86.	PRAKASH	38	M	H	business	mid	urban	fr	acute	continu	irregular	persistant	mild	madhya	vishama	prakruta	cof, smoke	veg	vp	vp	madhya
87.	VANAMALA	44	F	H	HW	poor	rural	fr	acute	continu	irregular	night	severe	madhya	vishama	anidra	cof	veg	v	vp	madhya
88.	SHIVAPPA	42	M	H	cooli	poor	urban	fr	acute	continu	irregular	night	mod	madhya	vishama	alpa	tea, tobac, smoke, alc	mix	v	vp	madhya
89.	GAYATHRI	56	F	H	tailor	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	cof	mix	v	vp	madhya
90.	MANGALAMMA	42	F	H	HW	mid	rural	fr	gradual	continu	irregular	night	mod	madhya	vishama	alpa	cof	mix	vp	kv	madhya
91.	RAMABHADRA	45	M	H	business	mid	urban	tr	acute	continu	irregular	persistant	mod	krura	vishama	prakruta	tea	mix	v	kv	madhya
92.	SURESH	33	M	H	engineer	mid	urban	fr	acute	intermit	season	night	mild	madhya	sama	prakruta	cof	veg	v	pk	madhya
93.	SOMASHEKHAR S.M	40	M	H	agri	mid	urban	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	tea	mix	kv	pk	madhya
94.	BHOJE GOUDA	40	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	vp	pk	madhya
95.	JUMATH SENA	52	M	JN	business	mid	urban	fr	acute	continu	season	night	mod	krura	vishama	prakruta	tea	veg	vp	pk	madhya
96.	KANAKALAKSHMI	52	F	H	HW	mid	rural	fr	acute	intermit	season	night	mild	madhya	vishama	prakruta	cof	veg	v	vp	madhya
97.	SHANTHA	57	F	H	HW	poor	rural	fr	acute	continu	irregular	night	mild	madhya	sama	prakruta	cof	mix	v	kv	madhya
98.	SHOBHA	31	F	H	teacher	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	prakruta	cof	veg	v	vp	madhya
99.	M.G. KRISHNE GOWDA	59	M	H	agri	mid	rural	fr	acute	continu	season	night	mod	madhya	vishama	alpa	cof	mix	vp	pk	madhya
100.	GURURAJ	38	M	H	engineer	rich	urban	tr	acute	intermit	season	night	mod	krura	sama	alpa	tea	veg	kv	vp	madhya

Data Assessment in Vataja Kasa Before, After treatment and After Follow up;

Group C		Before treatment							After treatment							After follow up						
Sl.No.	Name	KV	HS	PS	SS	Sha S	US	AEC	KV	HS	PS	SS	Sha S	US	AEC	KV	HS	PS	SS	Sha S	US	AEC
1.	LAKSHMI	2	2	2	2	2	0	575	1	1	1	1	1	0	625	1	1	1	1	1	0	650
2.	CHANDRAVATHI	1	1	1	1	1	0	425	1	1	1	1	1	0	475	1	1	1	1	1	0	475
3.	MANJUNATH S.V	2	2	2	2	2	0	550	1	1	1	1	1	0	475	2	2	2	2	2	0	625
4.	MUTTU LAKSHMI	2	2	2	2	2	0	625	2	2	2	2	2	0	550	2	2	2	2	2	0	575
5.	NAGAMANI	0	0	0	1	0	0	425	0	0	0	0	0	0	425	0	0	0	0	0	0	450
6.	N.C.BELURAIAH	0	2	0	0	0	0	625	0	1	0	0	0	0	750	0	1	0	0	0	0	625
7.	RAJI BHAI	0	0	0	0	1	0	725	0	0	0	0	1	0	725	0	0	0	0	0	0	625
8.	VEDANTH	0	0	0	2	0	0	625	0	0	0	1	0	0	725	0	0	0	1	0	0	625
9.	K.R.NINGAPPA	1	1	1	1	1	0	575	2	2	2	2	2	2	625	1	1	1	1	1	0	550
10.	SHRINIVAS	0	2	0	0	0	0	725	0	2	0	0	0	0	750	0	1	0	0	0	0	675
11.	APPAJI GOWDA	0	0	0	0	0	0	425	0	0	0	0	0	0	475	0	0	0	0	0	0	475
12.	KAMALAMMA	2	2	2	2	2	0	625	3	3	3	3	3	0	725	1	1	1	1	1	0	525
13.	DHANPAL	0	1	0	0	0	0	450	0	1	0	0	0	0	525	0	1	0	0	0	0	475
14.	SAID HAMEED	2	2	2	2	2	0	625	3	3	2	3	3	0	725	1	1	1	1	1	0	450
15.	R.L. VENKATESH	0	0	0	1	0	0	650	0	0	0	1	0	0	725	0	0	0	1	0	0	525
16.	NARENDRACHAR	2	2	2	2	2	0	625	2	2	2	2	2	0	750	2	2	2	2	2	0	625
17.	PUTTARANGASWAMY	0	0	0	0	0	0	525	0	0	0	0	0	0	750	0	0	0	0	0	0	425

No.	Name							T1							T2							T3
18.	NAGARAJ	0	0	0	1	0	0	425	0	0	0	0	0	0	475	0	0	0	0	0	0	425
19.	RAMESH	0	2	0	0	0	0	525	0	1	0	0	0	0	575	0	1	0	0	0	0	625
20.	JYOTHI	2	2	2	2	2	0	625	3	3	2	3	3	0	750	2	2	2	2	2	0	650
21.	PRAMOD	0	0	0	0	2	0	625	0	0	0	0	2	0	750	0	0	0	0	1	0	650
22.	DAYANAND V.S	1	1	1	1	1	0	425	2	2	2	2	2	0	550	2	2	2	2	2	0	550
23.	KRISHNA	0	1	0	0	0	0	625	0	0	0	0	0	0	725	0	0	0	0	0	0	650
24.	BHAGYA	2	2	2	2	2	0	625	3	3	3	3	3	0	725	2	2	2	2	2	0	650
25.	NEELAMMA	0	0	0	0	1	0	625	0	0	0	0	1	0	725	0	0	0	0	1	0	650
26.	RAVISHANKAR	2	2	0	2	0	0	450	1	1	0	1	0	0	525	1	1	0	1	0	0	500
27.	M.M HEMA	2	1	1	1	0	0	675	3	2	1	0	0	0	725	3	2	1	1	0	0	725
28.	NANDEESH	1	1	0	1	0	0	450	2	1	0	1	0	0	575	2	1	0	1	0	0	550
29.	RANGAMMA	0	0	0	2	2	0	575	0	0	0	1	1	0	625	0	0	0	1	1	0	600
30.	NETHRAVATHI	2	1	0	2	0	0	625	1	1	0	1	0	0	650	1	1	0	1	0	0	600
31.	RAKAPPA	2	1	1	1	0	0	650	2	1	0	0	0	0	625	1	0	0	0	0	0	525
32.	PRABHAKAR	1	1	0	1	0	0	450	2	1	0	2	0	0	525	1	1	0	1	0	0	500
33.	NAGARAJ	2	2	0	0	0	0	625	2	1	0	0	0	0	750	1	1	0	0	0	0	650
34.	NAGARAJU S.N	1	1	1	1	1	0	450	1	1	1	1	1	0	575	0	0	0	0	0	0	550
35.	INDRANI	1	1	0	1	0	0	425	1	1	0	1	0	0	475	1	1	0	1	0	0	475
36.	GIRIJA H.N	1	1	0	1	0	1	525	2	1	0	1	0	1	625	1	1	0	1	0	1	575
37.	PARVATHI	1	1	0	1	0	0	425	2	1	0	1	0	0	550	1	1	0	0	0	0	550
38.	NAGAMMA	2	2	0	2	0	0	625	3	2	0	1	0	0	750	1	1	0	1	0	0	575
39.	ASHAM PASHA	1	1	0	1	0	0	450	1	1	0	1	0	0	575	1	1	0	1	0	0	550
40.	SUSHEELA	1	1	1	1	0	0	425	1	1	1	1	0	0	475	1	1	1	1	0	0	475
41.	MAHADEVA SWAMY	1	1	0	1	0	0	450	1	0	0	0	0	0	475	0	0	0	0	0	0	450
42.	NAGARATHNA S.	2	2	0	2	0	0	625	2	1	0	1	0	0	700	2	2	0	1	0	0	650
43.	CIKKAMMA	2	2	0	2	0	0	750	2	2	0	1	0	0	675	2	2	0	1	0	0	725
44.	DEVARAJAMMA	1	1	1	1	0	0	450	1	1	1	1	0	0	525	2	2	1	1	0	0	625
45.	SAMEENA KHANAM	1	1	0	1	0	0	425	1	1	0	1	0	0	550	2	1	0	0	0	0	550
46.	RAVINDRA	0	1	0	1	0	0	450	0	1	0	1	0	0	575	0	1	0	1	0	0	550
47.	SHARATH D.	0	1	0	1	0	0	425	0	1	0	1	0	0	475	0	1	0	1	0	0	475
48.	DEVAMMA	1	1	0	1	0	0	625	2	2	0	1	0	0	750	1	1	0	0	0	0	650
49.	MAHESH J.K	2	2	0	2	0	0	650	3	2	0	1	0	0	775	2	1	0	1	0	0	725
50.	CHANDRAMMA	0	1	0	0	1	0	450	0	1	0	0	0	0	575	0	1	0	0	0	0	550
51.	PREMA RAMESH	2	1	1	1	1	0	625	2	1	1	1	1	0	650	2	1	1	1	1	0	700
52.	B.K.RAJU	2	1	1	1	1	0	425	2	1	1	1	1	0	550	2	1	1	1	1	0	525
53.	GOURAMMA	2	1	1	1	0	0	625	2	1	1	1	0	0	750	2	1	1	1	0	0	650
54.	JAYALAKSHMI	1	1	1	1	1	0	425	1	1	1	1	1	0	475	1	1	1	1	1	0	475
55.	LAXMAN	2	2	2	2	2	0	650	3	2	2	2	2	0	775	2	2	2	2	2	0	725
56.	BHAGYAMMA	1	1	1	0	1	0	450	2	1	1	0	1	0	575	2	1	1	0	1	0	550
57.	LAKSHMI	1	1	1	1	1	0	450	2	1	1	1	1	0	550	2	1	1	1	1	0	550
58.	GOWRIAMMA	0	0	2	2	1	1	575	0	0	2	2	1	1	650	0	0	2	2	1	1	550
59.	SUNANDA U.S	1	1	1	0	1	0	425	1	1	1	0	1	0	475	1	1	1	0	1	0	475
60.	PRAKASH	2	1	1	1	0	1	650	2	1	1	1	0	1	775	2	1	1	1	0	1	725
61.	PUSHPALATHA	2	2	1	1	1	0	450	3	2	1	1	1	0	675	2	2	1	1	1	0	550
62.	SAVITHA	1	1	1	1	1	0	425	1	1	1	1	1	0	550	1	1	1	1	1	0	550
63.	YOGESH	2	2	1	1	1	0	650	2	2	1	1	1	0	775	2	2	1	1	1	0	725
64.	SHANTAMMA	1	1	1	1	0	0	450	2	2	1	1	0	0	575	2	2	1	1	0	0	550
65.	LAKSHMAMMA	1	1	1	1	1	0	425	1	1	1	1	1	0	475	1	1	1	1	1	0	475
66.	PADMAVATHI V.S	0	0	1	0	1	0	450	0	0	1	0	1	0	525	0	0	1	0	1	0	425
67.	H.T. JAGANNATH	2	1	1	1	1	0	650	2	1	1	1	1	0	775	2	1	1	1	1	0	725
68.	SHANMUKHAPPA	2	2	1	0	1	0	625	3	1	1	0	1	0	750	2	1	1	0	1	0	575
69.	UMAKANTHI C.B	0	0	1	0	1	0	450	0	0	1	0	1	0	575	0	0	1	0	1	0	550
70.	BASAVARAJU H.N	0	0	1	0	0	0	425	0	0	1	0	0	0	550	0	0	1	0	0	0	550
71.	AFSAL BI	2	2	1	1	1	0	625	2	1	1	1	1	0	575	1	1	1	1	1	0	450

#	Name																					
72.	MOHAN H.C	0	0	2	0	0	0	650	0	0	2	0	0	0	775	0	0	2	0	0	0	725
73.	USHA DEVI	0	0	1	0	1	0	425	0	0	1	0	1	0	475	0	0	1	0	1	0	475
74.	RENUKAMMA	1	1	1	1	1	0	450	2	1	1	1	1	0	575	2	1	1	1	1	0	550
75.	CHANDRASHEKHAR	0	0	1	1	1	0	425	0	0	1	1	1	0	550	0	0	1	1	1	0	550
76.	T SANTHOSH	0	0	0	1	0	0	650	0	0	0	1	0	0	775	0	0	0	1	0	0	725
77.	BHAGYA	0	1	1	0	0	0	425	0	2	2	0	0	0	600	0	1	1	0	0	0	450
78.	NAGACHANDRA	0	1	0	0	0	0	450	0	2	0	0	0	0	575	0	2	0	0	0	0	550
79.	KAVERI	0	1	0	0	0	0	425	0	2	0	0	0	0	550	0	2	0	0	0	0	550
80.	NATARAJ	2	2	1	1	2	0	650	2	2	1	2	2	0	775	2	2	1	2	2	0	725
81.	ESHWAR H.K	1	1	1	1	1	0	425	1	1	1	1	1	0	475	1	1	1	1	1	0	475
82.	LATHA	0	2	2	2	2	0	625	0	1	1	1	1	0	550	0	1	1	1	1	0	500
83.	NAGAMMA	0	0	0	0	1	0	450	0	0	0	0	0	0	575	0	0	0	0	0	0	550
84.	B.S. MALLESHAPPA	1	1	1	1	1	0	425	2	1	1	1	1	0	550	2	1	1	1	1	0	550
85.	RAGHU	0	0	1	0	0	0	650	0	0	1	0	0	0	775	0	0	1	0	0	0	725
86.	PRAKASH	1	1	1	1	1	0	425	1	1	1	1	1	0	475	1	1	1	1	1	0	475
87.	VANAMALA	3	3	3	3	3	0	1050	3	2	2	3	3	0	1100	3	3	3	3	3	0	950
88.	SHIVAPPA	2	2	2	2	2	0	625	3	2	2	2	2	0	850	1	1	1	2	2	0	575
89.	GAYATHRI	0	0	0	2	0	0	650	0	0	0	1	0	0	775	0	0	0	1	0	0	725
90.	MANGALAMMA	2	1	1	1	1	0	450	1	2	1	2	2	0	575	1	1	1	2	2	0	550
91.	RAMABHADRA	3	2	2	2	2	0	950	3	2	2	2	2	0	1050	2	1	1	1	2	0	800
92.	SURESH	1	0	0	0	0	1	425	2	0	0	0	0	1	550	2	0	0	0	0	1	550
93.	SOMASHEKHAR S.M	2	0	0	0	0	1	425	1	0	0	0	0	1	475	1	0	0	0	0	1	475
94.	BHOJE GOUDA	2	0	0	0	1	0	650	3	0	0	0	1	0	775	3	0	0	0	0	1	725
95.	JUMATH SENA	0	0	0	0	1	0	450	0	0	0	0	1	0	575	0	0	0	0	1	0	550
96.	KANAKALAKSHMI	1	0	0	1	0	0	425	1	0	0	1	0	0	550	1	0	0	1	0	0	475
97.	SHANTHA	0	0	0	1	0	0	425	0	0	0	1	0	0	475	0	0	0	1	0	0	475
98.	SHOBHA	1	0	0	0	0	0	425	2	0	0	0	0	0	550	2	0	0	0	0	0	550
99.	M.G. KRISHNE GOWDA	1	0	0	0	0	1	450	2	0	0	0	0	1	575	2	0	0	0	0	1	550
100.	GURURAJ	2	1	0	0	0	2	650	2	1	0	0	0	1	775	2	1	0	0	0	2	725