COMPARATIVE STUDY OF EFFECT OF DHATRYARISHTA AND NAVAYASA LOHA IN THE MANAGEMENT OF

PITTAJ PANDU

A THESIS

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BY

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Undertaking

I **Rajguru Milind G.**is the Ph. D Scholar of the Tilak Maharashtra Vidyapeeth in **Kaychikitsa** subject. Thesis entitled **Comparative study of effect of Dhatryarishta and Navayasa loha in the management of Pittaj Pandu.**under the supervision of Dr Kamat Nitin M, Solemnly affirm that the thesis submitted by me is my own work. I have not copied it from any source. I have gone through extensive review of literature of the related published / unpublished research works and the use of such references made has been acknowledged in my thesis. The title and the content of research is original. I understand that, in case of any complaint especially plagiarism, regarding my Ph.D. research from any party, I have to go through the enquiry procedure as decided by the Vidyapeeth at any point of time. I understand that, if my Ph.D. thesis (or part of it) is found duplicate at any point of time, my research degree will be withdrawn and in such circumstances, I will be solely responsible and liable for any consequences arises thereby. I will not hold the TMV, Pune responsible and liable in any case.

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Annexure IV

CERTIFICATE OF THE SUPERVISOR

It is certified that work entitled **Comparative study of effect of Dhatryarishta and Navayasa loha in the management of Pittaj Pandu** is an original research work done by **Rajguru Milind Gokul** under my supervision for the degree of Doctor of Philosophy in **Kayachikitsa** to be awarded by Tilak Maharashtra Vidyapeeth, Pune. To best of my knowledge this thesis

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Dr. Milind Gokul Rajguru

Ph.D. (scholar) Kayachikitsa

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ABBREVIATION

- A.S. Ashtang Sangraha
- A.H. Ashtang Hridaya
- A.T. After Treatment
- B.T Before Treatment
- B.P. Bhavprakash
- B.R. Bhaishajya Ratnavali
- B.S. Bhel Samhita
- Ch.D. Chakradatta
- Ch. S. Charak Samhita
- H.S. Harit Samhita
- K.S. Kashyapa Samhita
- M.N. Madhav Nidan
- Ni.R. Nighantu Ratnakara
- P.N. Page Number
- Sh.S. Sharang Samhita
- Su. S. Sushruta Samhita
- Y.R. Yoga Ratnakara

Chapter – I

INTRODUCTION

Ayurvedic idea of Pandu is centered around 'Vaivarnya' or 'off colour'. Pandu means fading of the original colour[1]. Five different types[2] of Pandu are described by Charakacharya in Charaka Samhita, Chikitsasthan, Chapter 16 and couplet No 3 as under:

पाण्डुरोगः स्मृतः पञ्चवातपित्तकफैस्त्रयः । चतुर्थः सन्निपातेनपञ्चमोभक्षणन्मृदः ॥

Many people tend to believe that Anaemia means modern condition of Pandu This is not totally correct. Many symptoms described in modern medicine for anaemia match with the Ayurvedic concept of Pandu. This clears it from the description from CharakSamhita, Chikitsasthan, Adhyaya 13 and couplets 4 to 6. It is stated as follows:

दोषाः पित्तप्रधानास्तुयस्यकुप्यन्तिधातुषु । शैथिल्यंतस्यंधातूनांगौरवंचोपजायते ॥

ततोवर्णबलस्नेहायेचान्येऽप्योजसोगुणा : । वजन्तिक्षयमत्यर्थं दोषदूष्यप्रदूषणात् ॥

सोऽल्परक्तोऽल्पमेदस्कोनिःसारः शिथिलेन्द्रियः । वैवर्ण्यं भजते, तस्यहेतुंशृणुसलक्षणम् ॥

Many symptoms described in the above shlokas from CharakaSamhita match with the modern symptomatology of anaemia. These are general laxity of the body. In other words the 'tone' of the body is reduced. Therefore the person feels 'heaviness of the body. The radiance and deep colour of the body is lost and its place is taken by pallor of the skin. There is loss of body fat, enthusiasm and muscular weakness is induced. The loss in the body weight is noticeable. There is reduction in blood. The subcutaneous fat over the abdomen, back and other places are reduced considerably. The muscles of the extremities loose their power of working, so that the sufferer gets tired quickly and he/she is unable to carry out the daily tasks.

'Pandu' is comparable with the description of modern symptom anaemia or anemia to a large extent. Various medical authors have defined anaemia as –

1. When the percentage of haemoglobin in blood becomes low or count of RBCs gets decreased that condition is called Anaemia[3].

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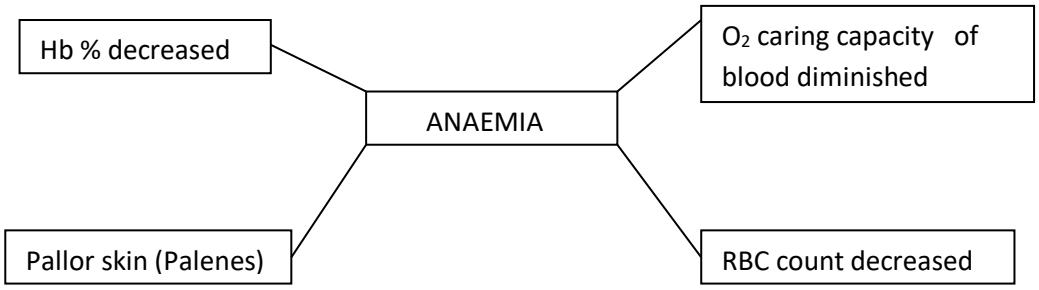
1. When the percentage of haemoglobin in blood becomes low or count of RBCs gets decreased that condition is called Anaemia[3].
2. In the condition of low Hb% or less RBC the oxygen supply carried through blood to body tissue become insufficient. Because of low oxygen supply body tissues produces the symptom called Anaemia[4].
3. Due to Anaemia the oxygen carrying capacity of blood gets diminished[5].
4. Clinically it is described as 'pallor' or 'off colour' and in ayurvedic samhitas it is described as 'Pandu' or 'Pandubhavam'[6]



Anaemia is reduction in haemoglobin contents of red blood cells (rbcs)[7]. The meaning of anaemia given in the Greek word is "without blood". When the hemoglobin count is low i.e. less than 13.5 gms/dl in male and 12gms/dl in female, we can say them anaemic person. The symptoms of anaemia are not seen in the patients when there is slightly low haemoglobin and no observed symptom of illness. He lives his normal routine life without any complaints and if any symptom he feels even though he is not serious about that. Women's who are pregnant commonly have low Hb%.

Iron-deficiency anaemia is most common type of anaemia and is caused by nutritional deficiency or low iron stores.

The survey which has to be conducted by the Unicef and Union ministry of health and family welfare have shown the surprising fact that many a times females do not take their breakfast and young females (age between 10 to 19 years) love to eat junk food

and because of these facts 56% of females in this age are anaemic in Maharashtra[8]. The latest survey in 2016 showed that nearly 48% of women in our country are anaemic and this figure in men is 24% (National Family Health Survey)

The survey which was conducted in over 9.9 crore girls in the state showed that the percentage of anaemia in young girls is much higher than all Indian girls i.e. 56% and cause behind this is, women here are most susceptible to many infectious diseases, undernourished and get married early.. The survey conducted by National Family Health Survey (NFHS) 2015-2016 declared anaemia among all women in Maharashtra which is 48%[9] and Global Data epidemiologist analyses the prevalence of anaemia in India which is 39.86%(2017).This condition occurs due to poor eating habits that is not eating enough fruits, vitamin C, legumes such as pod, peas beans etc. The consumption of a wide variety of nutritious foods is important for women's health. Well balanced diet required adequate amounts of protein, fat, carbohydrates, vitamins and minerals.

Anaemia is characterized by a decreased level of haemoglobin in the blood[10].For transporting oxygen from the lungs to other tissues and to organs of the body haemoglobin is necessary. Anaemia is usually found whenever there is nutritional deficiency of iron, folate, vitamin B12, or some other nutrients. This type of anaemia is commonly named as iron-deficiency anaemia. Iron deficiency is the most spread form of malnutrition in the world and affecting more than two billion people [11]. In India 50 percent of the population is affected by anaemia[12]. Anaemia may have detrimental effects on the health of women and children and may become an underlying cause of maternal mortality and perinatal mortality[13]. Due to anaemia risk of premature delivery and low birth weight gets increased[14]. If the patients of anaemia detected early, can help to prevent complications related to pregnancy and delivery as well as child growth problems. Information on the prevalence of anaemia can be useful for the development of health intervention programmes designed to prevent anaemia, such as iron fortification programmes. In India programme conducted under the Government's Reproductive and Child Health department, iron and folic acid tablets are supplied to pregnant women to prevent anaemia during pregnancy. Hence we can say that Anaemia is one of the serious health problems in India.

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On the other hand Pandu, according to ayurveda is diagnosed from the following signs and symptoms such as: [15]

समुदीर्णयदापित्तंहृदयेसमवस्थितम् ॥

वायुनाबलिनाक्षिप्तसम्प्राप्यधमनीर्दश ।

प्रपन्नंकेवलंदेहंत्वङ्मांसान्तरमाश्रितम् ॥

प्रदूष्यकफवातसृक्त्वङ्मांसानिकरोतितत् ।

पाण्डुहारिद्रहरितान् वर्णान् बहुविधांस्त्वचि ॥

The treatment suggested in Ayurvedic Samhitas is administration of 'Go-ghrita' and 'Ayasachurna'. It is described as follows.[16]

गोमूत्रयुक्तत्रिफलादलाना दत्त्वाऽऽयसचूर्णमनल्पकाम् ॥

प्रवालमुक्ताञ्जनशङ्खचूर्ण लिह्यात्तथाकाञ्चनगैरिकेत्थम् ॥

Sushrut,Uttar Tantra,44/21

Triphala [Powder of three dried fruits of Haritaki (Terminaliachebula), Bibhitaka (Terminaliabellerica) and Amalaki (Phyllathus emblica)] is mixed with fine powder of iron and tricurated in 'Go mutra' (cow's urine).This mixtue is licked for a long period of time (till Panduta vanishes). This treatment is suggested by Sushrutacharya in SuhsrutSamhita in Uttar-Tantra, chapter 44 and couplet 21.

In another couplet Sushrutacharya suggests the following treatmet:

मूत्रे स्थितंसैन्धवसंप्रयुक्तंमासंपिबेद्वाऽपिहिलोहकिट्टम् ॥

Iron powder boiled with 'mansa' (flesh or mutton) and Cow's urine is given as linctus for a number of days[17].

From these brief descriptions from SushrutSamhita it is clear that the use of iron for the treatment of Pandu, Panduta or Pandubhavam was in use. In many other commentaries on Charaka and SushrutaSamhitas, emphasis is given on the iron compounds for the treatment of all the five types of Pandurogas.

The prevalence of anaemia in comparison to men as to women is higher in our country and iron and folic acid tablets to combat it, is a routine treatment[18]. Many women are poor and they reside in hutments and at in accessible places. Alternative treatment in the form of Ayurvedic 'Pandughna' drugs can be tried. The treatment of

AIM AND OBJECTIVES

Aim:

To Compare Effect of Dhatryarishta and Navayasa Loha in the Management of Pittaj Pandu.

Objectives:

1. To study the conceptual details of disease Pandu.
2. To assess characteristics of Dhatryarishta and Navayasa Loha with reference to Pittaj pandu.
3. To compare the efficacy of indigenous drugs with modern drugs.

Chapter – II

REVIEW OF LITRATURE

DISEASE REVIEW

Pandu Historical Review[1]:

1) In Rigveda Pandu is mentioned by the name Halima.
2) In Atharvaveda it has been mentioned by the name Harima.
3) Pandu has been described in the Hindu Scripture Ramayana, Mahabharata and also in Agnipurana and Garudapurana.
4) Vagbhta has mentioned this disease as 'The disease of disease'

Pandu In Ayurvedic Samhitas

Charak Samhita:

Pandu has been described in "Ashtodariya Adhaya" of Sutrasthana Adhaya - 19th as well as Pandu Rog Chikitsa in Chikisa sthana Adhaya -16th.

Sushruta Samhita:

Pandu has been mentioned by Sushruta in Uttartantra Adhaya – 44th.

Vagbhat Samhita:

Pandu has been described in "Pandu roga, shoph, visarpa nidana" Adhaya – 13th of Nidana sthana and "Pandu roga chikitsa" Adhaya 16th of Chikitsa sthana.

Sharangdhar Samhita:

Pandu has been described in "Pradhan Khanda" Adhaya – 7th

Bhavprakash:

Pandu mentioned in Bhavprakasha in Madhyam Khanda Adhaya – 8th

Madhav Nidana:

In madhav pandu has been described in " Pandu Kamala Kumbhakamala Nidana" Adhaya 8th.

Derivation:[2]

पु. (पडिगतौ + मृगख्या दयश्च । उणा । १ ।३८

इति कुप्रत्ययः निपातनात धातो – र्दीघश्च । शब्दकल्पद्रुम

पाण्डुर –शुक्लपीतमिश्रितवर्णः अमरकोष

पाण्डुवर्णाधिक्यात् पाण्डुरोग इति सज्ञा ।

सर्वेषुछौतेष्विह पाण्डुभावो यतोऽधिकोतः खलु पाण्डुरोगः इति ।

In this disease whole body skin colour became Pandura (Pallor)

Definition:[3]

पाण्डूभावो यतोऽधिकऽसः खलु पांडूरोगः

पाण्डूवर्णाधिक्यात् सर्वे एव पाण्डूरोगाः प्रोच्यन्ते

The term 'Panduroga' is Predominance of pallor in whole body.

Etiology:[4]

1) Dietic cause:

Excessive intake of Kshara, Amla, Lavnana Ushna Viruddha and Asatmya Aahara.

Excessive intake of Nishpava, Masha, Pinyak, Madya and Tila Taila.

2) Habitual causes:

Diwaswapa,Ativyayama,Maithuna,VishamaChikitsa,veg-dharana rutuvaishamyata .

3) Manasa causes:

Manovighata due to Kama, Chinta, Bhaya, Krodha, Shoka.

4) Iatrogenic:

Mithyayoga of Vamnadi Karmas

5) Complications of other discases:

Jirna Jwara, Grahani, Krimi, Raktarsha, Raktapradara, Raktapitta, etc.

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Jirna Jwara, Grahani, Krimi, Raktarsha, Raktapradara, Raktapitta, etc.

Clinical Features:[5]

1) Features due to Rasadhatukshaya

Hridayspandana, Raktalpatwa, Shrama, Karsha.

2) Features due to Raktadhatukshaya.

Varnakshaya Twaksphutana, Bhrama, Shwasa.

3) Features due to Mansadhatukshaya

Karshya, Shrama, Gatrasada.

4) Feature due to Medadhatukshaya.

Karshya, Twakrushata, Sweda.

5) Feature due to Asthidhatukshaya

Shirnalomata, Shrama,Gatrarukshata.

6) Feature due to Majjadhatukshaya

Bhrama, Tama, Balakshaya.

7) Feature due to Shukradhatukshaya

Daurbalya, Gatrasada, Panduta.

8) Feature due to Ojakshaya

Shotha, Shrama, Gatrasada, Gaurava, Balanasha, Varnanasha

Types of Pandu:

According to Charaka[6]	According to Sushruta[7]	According to Vagbhata[8]	According to Madhav[9]
*Vataj *Pittaj *Kaphaja *Sannipattaja * Mridbhakshana janya	*Vataj *Pittaj *Kaphaja *Sannipataj	*Vataj *Pittaj *Kaphaja *Sannipattaja * Mridbhakshana janya	*Vataj *Pittaj *Kaphaja *Sannipattaja * Mridbhakshana janya
5	4	5	5

According to Sharangdhar[10]	According to Yogratnakar[11]	According to Kashyapa[12]	According to Harita[13]
*Vataj *Pittaj *Kaphaja *Sannipattaja *Mridbhakshana janya	*Vataj *Pittaj *Kaphaja *Sannipattaja *Mridbhakshana janya	*Vataj *Pittaj *Kaphaja *Sannipattaja *Mridbhakshana janya	*Vataj *Pittaj *Kaphaja *Sannipattaja *Mridbhakshanajanya * Ruddhapthakamala *Bahupittakamala *Halimaka

5	5	5	8

1) Vataj Pandu:[14]

Etiology - Vitiation of Vayu due to excessive intake of vataprakopak Ahara.

Features - Krishnapanduta, Rukshata, Angamarda, Ruja, Kampa, Anaha, Balakshaya etc.

2) Pittaj Pandu:[15]

Etiology - If the person of Pitta Prakriti takes pittaprakopak Ahara vihra.

Features - Pitabhata, Haritabhata, Jwara, Daha, Trishna, Murcha, Pitamutrata Amlodgara, Tama….

3) Kaphaj Pandu:[16]

Etiology - Vitiation of Kapha due to Kaphaprokopaka Ahara & Vihara.

Features - Gaurava, Tandra Chardi, Shveta-abhasata, Praseka Lomaharsha, Shwasa, Kasa, Aruchi.

4) Sannipatic Pandu:[17]

Etiology - If the person takes tridoshaprakopak Ahara & Vihara.

Features - Signs and Symptoms of vitiation of all the three Doshas.

5) Mrid-Bhakshanjaya Pandu :[18]

Etiology - Addicated of Mridbhakshana

The soil of Madura Rasa vitiates Kapha dosha.

The soil of Lavana Rasa vitiates Pitta dosha.

The soil of Kashaya Rasa vitiates Vata dosha.

Features - Akshikutashotha, Asyashotha, Balakshaya, Gandashotha, Krimikoshta Mehanashotha, Nabhishotha Purishkapha, Purishakrimi, Padashotha.

SHARIR RACHANA AND SHARIR KRIYA:

Charak and Vaghbhata has mentioned that Panduroga is Rasa pradoshaja i.e disease of Rasavaha srotasa[19,20] while according to Sushrut it is Raktapradosha Vyadhi[21].

The mulasthan of Rasavaha srotasa is Hridya and its dasha rasavahi dhamanies while the mulasthan of Raktawaha srotasa is yakrut, Pliha and raktawahidhamanies[21]
(According to Charak – Yakrut, Pliha)

1) Yakrut - It is developed from Raktadhatu it is matruj organ. It is the sthana of Pitta[22].

2) Pliha - According to Sushtuta Pliha is also developed from rakta dhatu.[23]
According to Charaka it is matruj avayava Pliha is mulasthan of Raktavaha Srotasa.[24]

3) Aamashaya - According to Charaka it is located between Nabhi and Sthana.[24] It is the mulasthana of Annavaha Srotasa. It is the site Kledak Kapha According to Vagbhata it is the site of RanjakPitta which converts rasa into rakta.[25]

Sharirkriya:

Involved dosha and dhatus –

Rasa and Rakta dhatus are the main dhatu involved in the samprapti of Panduroga.Rakta dhatu is formed only because of Rasadhatu both dhatus are always together in the liquid form.

Ahar rasa i.e the essence of digested food being acted upon by pitta is converted into Rakta, this conversion is brought about by Ranjak Pitta. Ranjak Pitta resides in yakruta, pliha, aamashaya and hridaya. Rasadhatu redness to it and then it receives the name Rakta.[26, 27]

In this way Raktadhatu depends upon Rasadhatu as the sthan of Rasadhatu is all over the body. Both the dhatu go all over the body through their srotasa, mainly in their sthana i.e yakruta, pliha, twak, mansa and hridaya. So associated with its organ, symptoms occur all over the body.

Normal body complexion is maintained by Rasa and Rakta when Rasa and Rakta get diminished, naturally abnormal body complexion occurs.

Rasa

It is the first dhatu among the Saptadhatu. It develops first from the Ahar rasa. Rasa is a Gati Darshak dhatu that flows day and night is called Rasa.[28,29]

Mulasthan - Hridya and its dasha dhamanies.

Functions of Rasadhatu :-

i) **Preenan** -Rasa give nourishment i.e. preenan to other dhatus. Diminision of Rasa results in wasting of all other forthcoming Dhatus and ultimately the vital essence i.e. Oja. Due to this person become insipid or Nissar. This nissarata includes all signs and Symptoms of Pandu Roga.[30]

ii) **Raktapushti-** Rasa gives nourishment to Raktadhatu. If the Sar-Rakta poshak ansha is not drived from Rasa Dhatu, Raktakshaya develops leading Pandu.[31]

Rakta

According to Sushrut Raktadhara Kala produces rakta.[32]

Charak :- At the liver and spleen there is Agni which produce Raktadhatu. This is called as Raktagni or Ranjakgni. Rasa goes in different stages and conversion of Rasa into Rakta takes 6 days.[32]

Sushrut :- According to Sushrut Ahar-rasa gives nourishment (Poshan) to

Rasadhatu then this rasa goes into liver and spleen and produced blood in this process the mala i.e. kapha is removed from rasa and prasadbhuta rakta and its upadhatus artava and stnya are produced.[33]

Due to the digestion or convertion of Rasa into Shweta, Kapola, Harita, Padmakinshuka, alaktak, the varna of rasa changed and converts into shonita.[34]

Ranjak Pitta is present in Aamashaya, which absorbs the essential part which is useful for production of blood from the Aahar and produced blood.[35]

Functions of Raktadhatu: [36]

1) Varnaprasad
2) Mansapushti
3) Sukha
4) Ayu
5) Bala

Involved Dosha: - Vata, Pitta, Kapha especially Pitta

Types of Pittadosha

1) Pachak Pitta :- Main function is digestion. When this pachak pitta is vitiated, there is usually loss of appetite[37] which is the main causative factor of many disease.

2) RanjakPitta :- According to Sushruta Yakrut and Pliha is Site of Ranjak Pitta[38] According to Vagbhata Amashaya is the site of Ranjak Pitta. Which give raktatwa to rasa that means it converts Rasa into Rakta.[39] According to Vagbhata Ranjak pitta present in the Amashaya production of blood takes place.[40] According to modern Intrinsic factor is in Gastric juice.[41]

3) SadhakPitt :- Maintains intellect, self consciousness,memory and oja. In Pandu there is dushti of pitta which is present in heart thats why Hridspanda symptom is found.[42]

4) Alochak Pitta :- Function - Related to vision.[43]

5) Bhrajak Pitta :- Site is skin and maintains the luster, colour and

freshness of skin. Due to dushti of Bhrajak Pitta, luster of skin diminished which is the main symptom of Pandu.[44]

NIDAN PANCHAK

Hetu-Vichar:-

Hetu is that which is responsible for the pathogenesis of disease.

Following are the main causes of Panduroga tabularised as follows[45]:-

Aharajanya	Viharjanya	Manasik	Lakshanatmak	Upadravajanya
a) Ati-kshariya b) Ati-Amla c) Ati-Lavana d) Ati-Ushana e) Ati-shuska f) Ati-Sheet g) Ati-Madhur h) Asatmaya i) Viruddha Ahar j) Matsya sevana k)Mrud-bhakshan l) Nishapav m) Udid n) Til-Tail o) Vidagdha anna	a) Ativyayam b) Diwaswap c) Jagaran d) Vegadharna e) Upwas f) Maithun	a) Kama b) Chinta c) Bhaya d) Krodha e) Shoka	a) Arsha b) Jwar c) Unmad d) Apasmar e) Gulma f) Rajyakshama g) Kasa h) Raktarbud i) Krumi j) Amlapitta	1) Raktapitta 2)Yonigat Raktasrav 3) Siravedha 4) Ati-Raktastrav

p) Madya Pana				

PANDU KRIYAKALA

1) Sanchaya :- In Pandu Roga due to excessive intake of Pittakara ahar-vihar, the pitta dosha will be vitiated which accumulates in its cheif site i.e. Amasaya.

2) Prakopa :- Due to continuous indulgence of hetu, the pitta dosha increase further and spread to many of their own sites like Yakrut, Pliha, Twak, Drik etc. and produce its own specific Symptoms.

3) Prasara :- Excited pitta Dosha enter into the Hridya by leaving its original site After reaching Hridya, this excited Pitta spread to all over body through Dhaminies, with the help of Vayu.

4) SthanSamshraya :- In this statge Dosha-Dushya Samurchana occurs.The Increased Dosha which are higher travelling all over the body mixed with circulating Rasadhatu and now tend to localize in particular tissue (Twak and Mansa) and organ

5) Vyakti :- After localization of vitiated Pitta in between Twak and Mansa The specific Sign and symptoms of Pandu like pale yellow and greenish and different type of discolouration skin develops.

6) Bheda :- In this stage, the disease may subside or it may passed to subacute or chronic stage or stage of complications.

Thus due to pitta dushti Rasa gets vitiated and because of this rasa, bala, sneha,varna of body are diminished and properties of oja are also diminished. Due to Rasadushti, other forthcoming dhatus i.e. Rakta, Mansa, Meda, Asthi suffer from proper nutrition ultimately there is Nissarata and discolouration of skin.

PURVARUPA

Purvarupa are given in tabular form according to different Acharyas

Sympoms	Charak[46]	Sushrut[47]	Vaghbat[48]
1) Hritspandan	+	-	+
2) Rukshata	+	-	+
3) Swedabhav	+	-	+
4) Shram	+	-	+
5) Twaksphutan	-	+	-
6) Hrillas	-	+	+
7) Padgaurav	-	+	+
8) Mridbhakshan iccha	-	+	+
9) Akshik shotha	-	+	+
10) Avipak	-	+	+
11) Peeta Mutrata	-	+	+
12) Peeta purisha	-	+	+
13) Aruchi	-	-	+

Symptoms	Madhavnidan[49]	Bhavprakash[50]	Harit[51]

I) Twakasphotanam	+	+	+
2) Shtivan	+	+	+
3) Gatrasad	+	+	-
4) Mridbhakshniccha	+	+	-
5) Prekshankootashotha	+	+	+
6) Purishapitata	+	+	-
7) Mutrapitata	+	+	+
8) Avipak	+	+	-
9)Panduta	-	-	+

RUPAS OF PANDU

Symptoms when fully manifested are called rupa. It appears in the vyakti stage.

In Pandu Pandubhava is invariable rupa. All the Acharyas have described various types of discolouration with other symptoms in various types of Pandu. Charak and Vagbhat have mentioned the samanya rupas of Pandu but Sushruta, Madhava and Bhavprakasha have not described the samanya Rupa of Pandu. They only mentioned the Doshik lakshanas of Pandu.

Kashypa has mentioned samanya rupas as[52] -

1) Nabipradesh shotha
2) Shevata- Akshitva
3) Shveta-nakhatva
4) Shvetavakatva

Samanya Rupa	Charak[53]	Vaghbat[54]
1) Karnashweda	+	+
2) Daurbalya	+	+
3) Annadvesha	+	+
4) Jwara	+	+
5) Gaurav	+	+

6) Shwas	+	+
7) Shishirdwesh	+	+
8) Pindikodwesthan	+	+
9) Panduta	+	+

RUPAS ACCORDING TO TYPES

1) Vataj Pandu

Symptoms	Charak[55]	Sushrut[56]	Vaghbat[57]	Harit[58]
1) Krishna Panduta	+	-	-	-
2) Nakha Vaivarnya	-	+	-	-
3) Kampa	+	-	-	-
4) Shirshula	+	-	+	-
5) Angamarda	+	-	-	-
b) Netrashyawata	-	+	-	-
7) Shoth	+	-	+	-
8) Balakshaya	+	-	-	-
9) Malvasthambh	+	-	+	-
10) Sarakt Mala	-	-	+	-
11) Sarakt Mutra	-	+	+	-

2) Pittaj Pandu

Sympoms	Charak[59]	Sushrut[60]	Vaghbat[61]	Harit[62]
1) Peetata	+	-	+	+
2) Haritata	+	-	+	-
3) Jwara	+	+	+	+
4) Daha	+	-	+	-
5) Sheet Kamata	+	-	+	-
6) Anannabhilasha	+	-	-	-
7) Avipak	+	-	-	-
8) Daurgandhya	+	-	+	+
9) Varchobhed	+	-	+	-

3) Kaphaj Pandu

Sympoms	Charak[63]	Sushrut[64]	Vaghbat[65]	Harit[66]
1) Gaurav	+	-	-	+
2) Tandra	+	-	+	+
3) Shwetata	+	+	+	-
4) Shvas	+	-	-	-
5) Kasa	+	-	+	+
6) Alasya	+	-	-	+
7) Shuklamutrata	+	-	+	-
8) Shwetpurisha	+	+	+	-
9) Shuklanakhta	-	+	+	-
10) Shoth	+	-	-	-

Sannipataj –

This pandu appears with symptoms of three doshas. Harita has mentioned specific features as[67]

Jwara

Arochaka

Hrullasa

Chardi

Trishna

Klama

Kshinata

Hatendriyata

Mridbhakshajanya Pandu-

This type produces due to habit of soil eating, provoks the three doshas which causes pandu with the following sympthoms.[68]

Akshikutashotha

Asyashotha

Balakshay

Gandashotha

Krimikoshta

Mehanashotha

Nabhishotha

Purishakapha

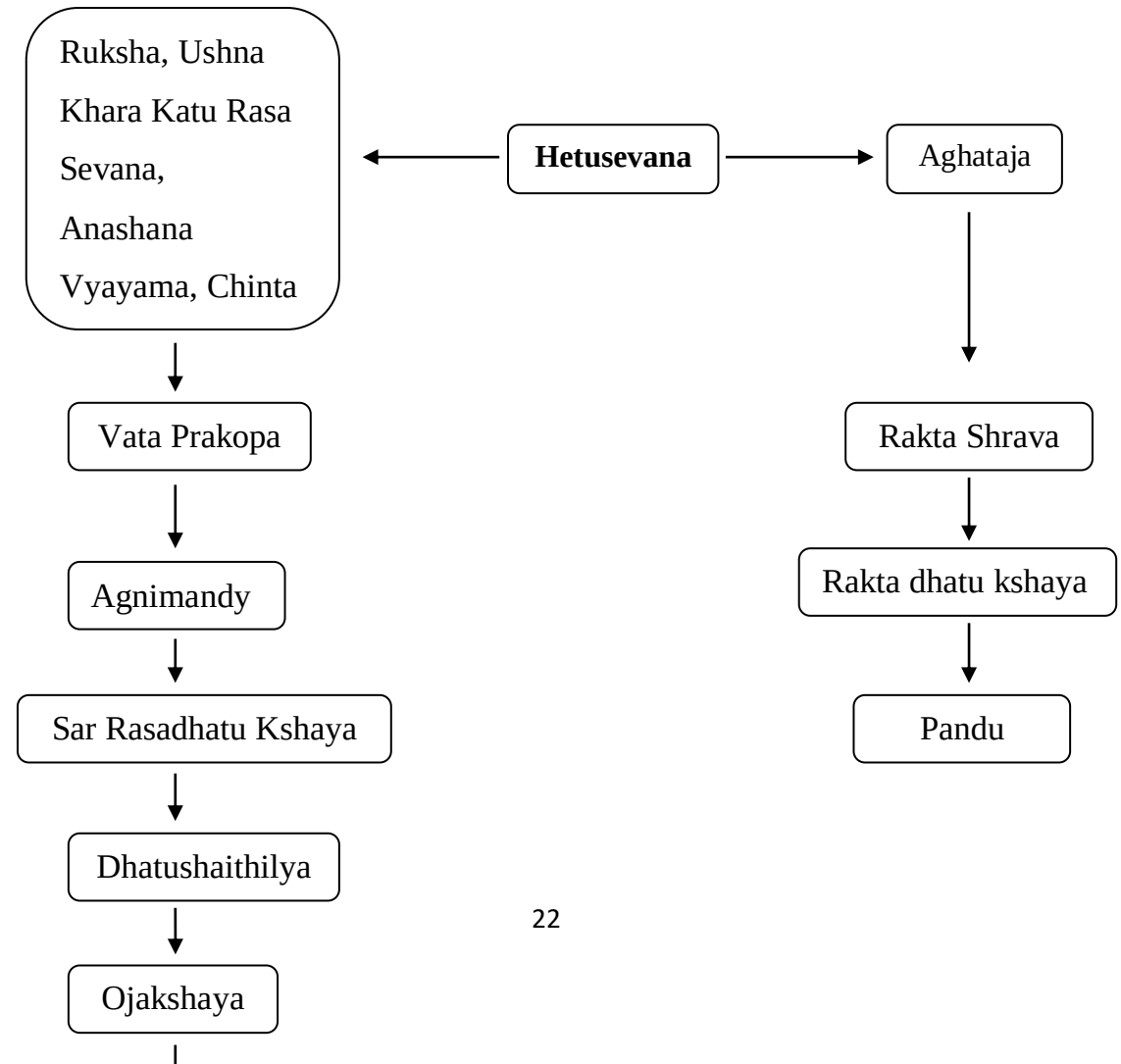
Padashotha

Pandu Samprapti :[69]

According to different types of Hetus Samprapti of Pandu divided into two types.

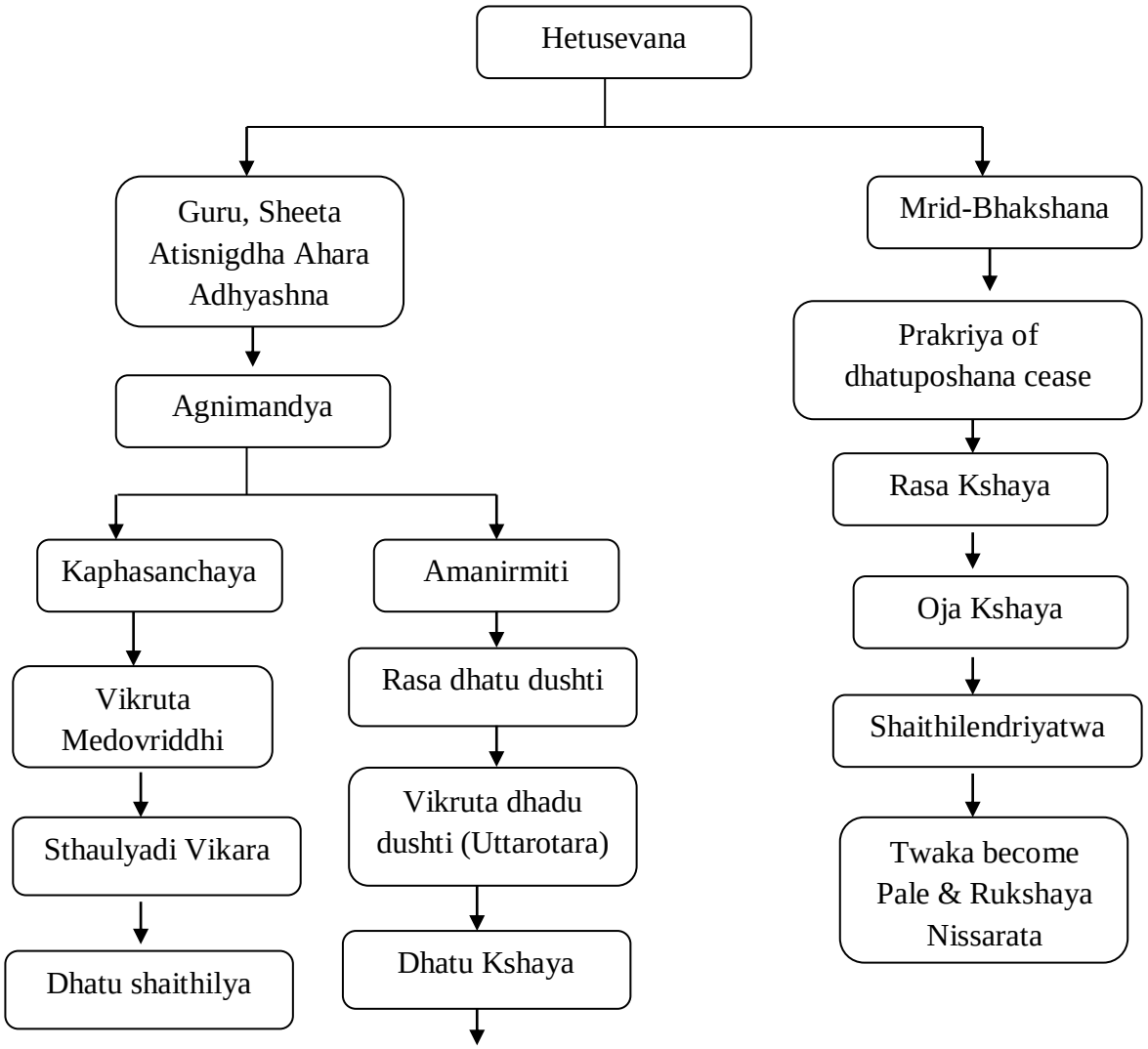
1) Santarpanotha Pandu
2) Apatarpanottha Pandu

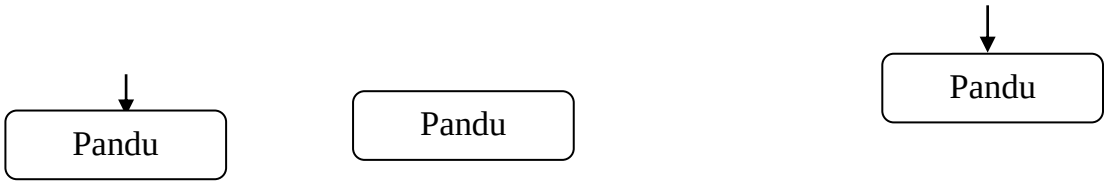
Apatarpanottha Pandu



Twaka become Pale
Nissara, Shithila

Santarpanottha Pandu





Samprapti Ghataka

Dosha	-	Tridosha with dominance of Pitta dosha
Dushya	-	All dhatus including Oja
Srotasa	-	Rasavaha, Raktavaha, Medovaha
Srotodushti	-	Sanga
Udbhav	-	Hridaya
Sanchara	-	Whole body
Vyaktisthana	-	Twak
Rog Marga	-	Madhyama

CLASSIFICATION OF PANDU ROGA

Charak, Vagbhata, Madhav, Shrangdhara, Yogratnakara, Kashyapa, Harita all have mentioned five types of Pandu roga. Only Sushrut has emphasised that there are only four types of pandu roga.

Differential Dignosis of Pandu :

1) Kamala
2) Kubhakmala
3) Halimak
4) Shoth

are the main diseases which can differentiated from Pandu.

Sadhyasadhyatwa[70] –

Only in severe case Pandu roga found to be fatal, symptoms if occurs indicated its Krucchasadhyata and Asadhyata resulting into death.

- Long standing Pandu laksana
- Shotha as a Upadrava
- Drushti Pitata
- Ruksha Harita & Kaphayukta Mala Pravrutti
- Deenata
- Shweta-sharira
- Chardi
- Murcha
- Frequently Trishna
- Shwetata due to Atiraktashrava.

UPADRAVAS [71]–

Updravas develop after development of main disease. If the patient continues the hetusevana the dosha get further aggravated and produces complications in addition the main disease. Sushruta has mentioned the Upadrava as follows.

1.	Aruchi
2.	Trushna
3.	Chhardi
4.	Murdharuja
5.	Shoth
6.	Kanthagatabalatwa
7.	Murchha
8.	Agnimandya
9.	Jwar
10.	Hridayawapidan
11.	Klama

Following are the some main upadrvas

1) Murccha - It is due to increase activity of pitta, there is more and

more blood destruction and murccha develops. .

2) Hridayapidanam - Due to excessive loss of rasa and rakta, heart perform more activity for the compensation of blood supply of whole body. If this condition is continued, the heart may be dilated and this may develops the symptoms of pericardial pain

3) Shotha - Due to loss of blood, there is hypoprotinemia which in turn produce shotha.

4) Atisara - Due to aruchi and avipaka atisara may develop

5) Shwas - Due to severe loss of blood, there is anoxia which stimulate the respiratory centre and respiration is increased.

5) Daha - It is due to diminution of rasa and rakta and increased activity of pitta, symptoms of daha may develop.

CHIKITSA

Ayurveda has described three types of chikitsa[72]

1) Daiva-Vyapashraya
2) Yukti-Vyapashraya
3) Satwavajaya

The treatment of Pandu Roga is Yukti Vyapashraya and includes

1) Nidan Parivarijana

2) Snehana - In order to correct rukshata and drive doshas in to koshta Snehana is redrived for samprapti vighatana.

Yoga of Snehana -

1) Panchgavya Ghrita[73]
2) Maha-tikta Ghrita[74]
3) Kalyanak Ghrita[75]
4) Dadimadi Ghrita[76]
5) Katukadya Ghrita[77]
6) Pathya Ghrita[78]
7) Danti Ghrita[79]
8) Draksha Ghrita[80]

9) Haridradi Ghrita[81]

10) Bruhatyadi Ghrita[82]

11) Murvadya Ghrita[83]

12) Haridradya Ghrita[84]

13) Punarnavadi Tailam[85]

14) Aragvadhadhigana Siddha Ghrita[86]

3) Shodhan Chikitsa

Virechana[87]

Virechana is the best shodhana upakarma of pitta dosha. Hence, Virechana is the best and most acceptable Shodhana Chikitsa in Pandu Vyadhi.

Virechana Yoga[88]

1) Gomutra + Kshira
2) Dantiphala Kwath+Gambhari Phala/ Draksha
3) Nishottara Churna + two part sharkara for pittajPandu.
4) Gomutra + Haritaki for Kaphaja Pandu.[89]

4) Sanshamana Chikitsa

A) Vanaspatik Yoga

Charak	Sushruta	Vagbhatta
1) Vishaladi fant[90] 2)Swarnakshiradiyoga[91] 3) Gomutra haritaki[92]	1) Triphaladi churna[93] 2) Panduharanamajashadi churna[94] 3) Bibhitakadi vatak[95] 4) Balashigru yoga[96] 5) Nyagrodadhikashaya[97]	1) Vishaladi churna[98] 2) Yoshadi churna[99] 3)Drakshadi leha[100]

B) Khanij Yoga

1) Loha Bhasma[101]
2) Mandura Bhasma[102]
3) Kasis Bhasma[103]
4) Suvarna Makshika[104]

5) Shuddha Shilajta[105]

6) Navayasa Loha[106]

7) Nisha Loha vati[107]

8) Amrut Vatak[108]

9) Mandura Vataka[109]

10) Punarnava Mandura[110]

11) Vajraanduradha Vatak[111]

12) Lohasava[112]

13) Saindhav Mandura[113]

C) Avaleha used in Pandu

1) Darvyadi Leha[114]

2) Dhatrayvaleha[115]

3) Abhayavaleha[116]

4) Amalakyavaleha[117]

5) Triphaladya Avaleha[118]

D) Asava & Arista used in Pandu

1) Goudakarista[119]

2) Bijakarista[120]

3) Dhatryarista[121]

4) Parpatyadyarishta[122]

5) Nyagrodadhivarga Kashaya[123]

6) Manduradyorishta[124]

7) Yashtimadhu Kashaya[125]

8) Nagaradhadi Kashaya[126]

So the line of treatment of pandu is

1) Snehana Chikitsa[127] -

In panduroga due to decreased quantity of sneha,rukshata i.e.dryness is developed. Besides this dosha mala remain dormantly in shakha. So to minimize rukshata and to bring Sama dosha intokostha, Snehana karma is done. Snehana vanishes rukshata and vata gets samyak gati.

2) Shodhanchikitsa[128] -

Shodhan eradicates the causative factor of Samprapti. In Panduroga.Shodhan consists of Vaman and Virechana.

3) Vishista (specific) Chikitsa

The drug of panduroga must be tridoshagna and raktaprasadak.

Pathya Pathya

A) Pathya Ahara[129]

1) Food	Old Wheat, Rice, Jawar, Green Gram Pea
2) Vegetables	Bottle gourd, Patol, Bimbi, Chakvat, Palak, Dill, Guduchi, Jeevanti, Punarnava.
3) Non-Veg.	Shingada Fish, Goatmeat, Jangal Mansa
4) Fruits	Amala, Draksha, Anjeer, Chiku, Banana, Falsa, Mango, Khajoor, Keshar.
5) Roots	Shingada, Kamalkanda, Lasona, Ginger
6) Milk Products	Godugdha, Ghee, Navaneeta, Takra.
7) Liquids	Gomutra, Laja Manda, Koshnajala, Laghu Panchamula Siddha jala.
8) Madya	Sauvir, Tushodak
9) Kshara	Yava Kshara

B) Apathya Ahara[130]

1) Shaka Varga	Except above

2) Shimbi Varga	Kanti, Masha, Pinyak
3) Dal Varge	Til, Sarshapa
4) Tail Varga	Bijowar Tail
5) Jal Varga	Atyambu pan

C) Pathya Vihara[131]

Laghu Vyayama, Samyak Nidra, Visranti

D) Apathya Vihara[132]

1) Divaswapa
2) Atapsevana
3) Ati Vyavaya
4) Ati Vyayama
5) Veg-Vidharana
6) Chinta
7) Shoka
8) Krodha etc.

Modern Review

Anatomical Aspect:

1) Liver[1]

The liver is large, solid, gland situated in the right upper quadrant of the abdominal cavity. It secrets bile and performs various other metabolic functions.

Functions of the liver[1] -

I) In relation with blood and circulation-

1. RBC formation- infetal life
2. RBC destruction- in adult life
3. Storehouse of blood and regulates blood volume.
4. Relation with blood clotting

a) Manufacture prothrombin (with vit. k) and fibrinogen essential for clotting

b) Mast cells form heparin and prevent intravascular clotting.

5. Related to activity of its reticulo— Endothelial system in immune mechanism
6. It transfers blood from portal to systemic circulation.
7. Manufactures all plasma proteins.

8. Stores iron, hematinicon factor- vit B12 and copper and thus helps in the formation of red cells and haemoglobin.

II) Metabolism of carbohydrates, fats and proteins.

III) Protective - by conjugation, destruction, phagocytosic, antibody formation and excretion.

IV) Storage – Glycogen, iron, fat, vitamins A, D, E, K

V) Excretion of drugs, toxins, poison, cholesterol, bile pigments and heavy metals.

2) SPLEEN[2]

The spleen is a wedge shaped organ lying mainly in left hypochondium and partly in the epigastrium. It is soft and highly vascular. It is a lymphatic organ connected to the blood vascular system. It acts as a filter for blood and plays important role in the immune system of body. It also plays important role in the metabolism and defence mechanism of the body

Functions of the Spleen –

1) Phagocytosis - Spleen is important component of the reticulo endothelial system. The phagocytes present in the organ remove cell debris and old RBCs, other blood cells and micro organisms and thus filter the blood. Phagocytosis of circulating antigens intiates humoral and cellularimmune respones.

2) Haemopoiesis - The spleen is an important haemopoietic organ during foetal life lympho poiesis continues throughout life. The lymphocytes manufactured in it take part in immune

responses of the body. In the adult spleen, haemopoiesis can restart in certain diseases like chronic myeloid leukemia and myelosclerosis.

3) Storage of RBC'S - RBCs can be stored in the spleen and released into the circulation when needed.

4) Iron metabolism - Iron librated from Hb is at first stored in splenic pulp cells.

3) STOMACH[3]

Stomach is a muscular bag forming the widest and most distensible part of the digestive tube. It acts as a reservoir of food and helps in digestion of proteins and fats.

Functions of Stomach -

1) The stomach has a temporary reservoir for food.
2) It produces gastric juice
3) Muscular action mixes the food with gastric juice.
4) Absorption takes place in the stomach to limited extents
5) Although iron absorption takes place in the small intestine it is dissolved out of foods most effectively in the presence of hydrochloric acid in thestomach.

Gastric Juice -It is secreted by secretary gland in the wall of the stomach and consists of water, mineral salts, mucus, hydrochloric acid Enzymes- Pepsinogen and rennin and intrinsic factor.

Procedure of digestion in stomach -

1) Water further liquefies the food swallowed

2) Hydrochloric acid acidifies the food also converts pepsinogen to the active enzyme pepsin and kills harmful micro organisms

3) Enzyme action — Pepsin begins the chemical digestion of proteins

4) Intrinsic factor: - It is necessary for the absorption ofvit B12 is also called anti-anemic factor, present in food and is absorbed through the walls of the small intestine. It is stored in the liver until required in red bone marrow for the normal development of erythrocytes.

5) Mucus — Prevents mechanical injury to stomach wall by lubrication.

Physiological Aspect

BLOOD[4]

Blood is described as a specialised connective tissue in which there is liquid intra cellular substance known as plasma and formed elements, the red blood cells, the white blood cells and the platelets suspended in the plasma. Blood is the transportation system of the body.

Composition of blood -

A) Cells (45%)
   i) Red blood corpuscles. (R.B.C.)
   ii) White blood corpuscles (.W.B.C.)
   iii) Platelets or thrombocytes

B) Plasma (55%)
   i) Water - 91 to 92%
   ii) Solids - 8 to 9%

a) Inorganic constituents (0.9%) - Sodium, pottassium, Calcium, Magnesium, Phosphorus, Iron, Copper etc.

b) Organic Constituents -

i) Proteins (7.5%) - Serum Albumin, Serum globulin, Fibrinogen, Prothrombin etc.

ii) Non-protein-nitrogenous substances, urea, uric acid, Xanthine , hypoxanthine,Creatinine, ammonia, aminoacids.

iii) Fats: Natural fat, phospholipid, Cholesterol etc.

iv) Carbohydrate, glucose etc.

v) Other substances Internal secretions, antibodies, and various enzymes

vi) Colouring matter - The yellow colour of plasma is due to small amount of bilirubin, carotene and xanthophylline.

Functions of blood :

1) Transport of Respiratory gases: - It carries oxygen from lung to tissue and carbon di oxide from the tissues to lungs.

2) Transport of nutrition: - It carries digested food material absorbed from intestine to the tissue cells for utilization.

3) It acts as a vehicle: - through which hormones, vitamins etc. are brought to their places of activity.

4) Drainage of waste product: - It carries the waste product of cellular activity to the organ of excretion

5) Maintenance of Water balance, Acid base equilibrium and ion balance.

6) Regulation of body temperature.

7) Defensive action:-

i)Phagocytosis by white cells

ii) By developing antibodies which combat with toxic agents

8) By the property of coagulation it guards against haemorrhage.

9) The plasma proteins of blood have various functions.

10) Regulation of blood pressure.

ERYTHROCYTES[5] -

The mature human erythroucyte is circular, biconcave ,non-nucleated disc.

Composition of Red cells:-

Each cell is composed of a colourless envelop enclosing semisolid material. 65% water and 35 % solids of which 33% is hemoglobin bound to 2% stromal meshwork of protein, phospholipid, cholesterol, cholesterol esters and neural fat. Other organic substances such as urea, amino acids, creatinine, adenyl pyrophosphates, diphosphoglycerates, etc. are also present.

Normal Red cell count - Male - Average 5 million\cmm
Female - 4.5 million\cmm
Intants - 6 to 7 million\cmm
Foetus - 7.8 million.

Erythropoiesis - Formation of RBC is called erythropoiesis.

In embryo the red cell develop from the area vasculosa of the yolk sac. Afler birth the bone marrow is main site of erythropoiesis.

The most important factor controlling the rate of red cell production is the oxygen content of the arterial blood. A decrease in the oxygen content of stimulates erythropoiesis.The oxygen content of blood may fail due to less amount of Hb content of blood or inadequate oxygenation of Hb.

The phenomenon of development involves two distinct processes.

1) Multiplication
2) Maturation

By maturation process the cell becomes specialized to perform that particular work for which it is meant.

The process of maturation involves three different chages.

i) A gradual reduction of cell size
ii) Acquirement of Haemoglobin
iii) The disappearance of the nucleus

Stages of development[6]–

This is suggested by two theories.

i) Intravascular ii) Extravascular

Extravascular	**Intravascular**
Haemocytoblast	Endothelial cells
↓	↓
Proerythroblast	Megaloblast
↓	
↓	
↓	

Early normoblast	↓ Early erythroblast
Intermediate normoblast	↓ Late erythroblast
Late normoblast	↓ Normoblast
Reticulocyte	Reticulocyte
Normal Erythrocyte	Erythrocyte

Factors controlling Erythropoiesis :- 1) Diet
2) Anoxia & Erythropoietin
3) Stimulus for maturation

Haematinic principle of Castle:-

Vit B12 (extrinsic factor) and folic acid are required for the conversion of proerythroblast into early normoblast. For the proper absorption of extrinsic factor, intrinsic factor present in gastric mucosa is essential.

A number of factors influence this process:-

1) Metals :- a) Iron b) Copper and Manganese c) Cobalt
d) Calcium
2) Bile Salts :- Essential for the proper absorption of these metals.
3) Endocrine Glands
4) Vitamins :- Vitamins C, B6 and B12, folic acid, riboflavin etc.

5) Pigments :- a) Bile pigments b) Chlorophyll and other porphyrins.

Functions of R.B.C[7]:-

1) Respiratory: - Red cells carry oxygen and carbon dioxide.

2) Acid base balance: - Help to maintain acid base balance by buffering action of haemoglobin and other intracellular buffers.

3) Red cells maintain ion balance :-By the special permeability of the cell membrane, help to maintain balance of positive and negative ion.

4) Viscocity of blood: - It help to maintain the viscocity of blood.

5) Various pigments derived from haemoglobin after the disintegration of the red cells eg. Bilirubin,biliverdin etc.

HAEMOGLOBIN[8]

Haemoglobin is the red pigment of blood. It is a complex protein which in synthesised inside the immature erythrocyte.

It is a chromo protein consisting of 2 parts.

1) One part is a specific simple protein known as globin (96%)

2) Non-specific prosthetic group an iron containing pigment called Haem(4%)

Haem is a metalloporphyrin where the metal is iron. The iron content of haemoglobin is about 0.34%. About 3gm of Iron is present as Hb in the total amount of blood of an adult. Iron remains in ferrous (Fe^{++}) form. Globin helps haem to keep the iron in ferrous state

Synthesis of Haemoglobin[9]**:-**

1) First class proteins :- Necessary for the synthesis of globin part of haemoglobin.

2) Metals :- a) Iron - Essential constituent of Haemoglobin.
b) Copper, manganese and cobalt :- These are catalytic agents.Copper help in the incorporation of Iron in protoporphyrin molecules. cobalt is constituent of blood.

3) Endocrine : - Thyroxine is of proved value

4) Vitamins : - Vit C and Vit B_{12}

5) Porphyrins :- Two types - I and III. III is utilised for Haemoglobin formation.

Normal values of Hb irrespective of sex is 14.5 gm%

(Different observes give different figures)

1) Sahli 17.3%

2) Haldane 14.8%

3) Gower 15%

4) Hellige 14%

Variations of Hb under different physiological conditions

1) Age - In foetus Hb is highest

2) Sex - In female Hb is slightly lower than in male.

3) Diurnal variation - In morning - Lowest,Evening - Highest.

4) Altitude: - At higher altitude Hb % rises.

5) Exercise, excitement, adrenalin injection: - Increase Hb.

Function of Hb: -

1) It is essential for oxygen carriage.
2) It plays an important part in CO_2 transport.
3) It constitutes as the important buffers of blood.
4) Various pigments of bile, stool, urine, etc are formed from it.

IRON[10]

Sources: - All animal food e.g. meat, liver, egg etc. except milk and butter; vegetables e.g. peas, lentils, green leaves, fruits.

Daily requirements: - 12mg per day

Absorption and Transport: - Iron is absorbed mostly from the whole of the gastrointestinal tract but a large amount is absorbed through duodenum.

Dietary iron is absorbed through the mucosal cells as ferrous (Fe^{++}) form. Iron in diet is mostly present as ferric (Fe^{+++}) state which is reduced to ferrous form during absorption. After entering the mucosal cells as ferrous form, the iron molecules are rapidly reconverted into ferric state.

Transport: -From the mucosal cell the ferritin iron passes in the blood first it is reduced into ferrous form. After entering the blood stream, it is reoxidised into ferric form.

Absorption of Iron[11, 12]

It depends upon following factors -

1) Iron requirements of the subject: - Iron absorption in infants, children , menstruating and pregnant ladies all having increased requirement is found to be more than in adults.
2) Form of compound: - Iron is best absorbed in ferrous form.
3) Reaction of the gastro intestinal contents:-The acidity of the gastric juice helps absorption.
4) Pigments: - Absorption of iron is increased by chlorophyll and bile pigments.
5) Calcium and vitaminC: - A small amount of Ca decreases the formation of insoluble iron phosphates and thus helps absorption. Vitamin C increases the absorption of iron from food.

Storage[13, 14] Iron is stored in to forms, Ferritin and haemosiderin.

It is stored usually in form of ferritin in liver, spleen and intestinal mucosa. The small amount is stored in reticullo endo thelial cells and some other organ (e.g. Pancreas, adrenals)

Distribution: - Whole blood contains about 45-50mg iron per 100 ml.The total quantity present in all the red cell is about 3gm. Another 1-3 gm is present in the rest of the body.

Excretion: - Only in traces in urine, bile and faeces.

Functions of Iron:[15]

1) Formation of Hb - Primary function of iron is to form haemoglobin
2) Development of red cells: - Necessary for formation and maturation of red cells.
3) Oxygen carriage in the blood - In the form of Hb.
4) Related to tissue oxidation - Cytochrome is an iron containing compound .It is concerned with the oxidation of metabolites in the cells.Indophenol oxidase is also an iron compound.

5) Supplies O_2 to the muscle: - Myoglobin of muscle is an iron containing chromoprotein like haemoglobin. It combines with O_2 and acts as an oxygen store for muscle.

6) Relation with the cell nucleus -Iron takes an essential part in the functions of nuclei.

7) Relation with oxidation in nerve cells - Nissil granules present in the cytoplasm of the nerve cells, contains organically combined Iron.

Requirements:[16]

60µg/kg for Infant

25µg/kg for Children

21µg/kg for Adult female

13µg/kg for Adult male

8 0µg/kg for lactating and pregnant woman

ANAEMIA[17, 18,19]

The word 'Anaemia' (Greek word) means lack of blood or changes in the blood.

Definition:- It is defined as a state in which the level of haemoglobin in the blood is below the normal range, taking into account both age and sex.

Causes:- A -Peripheral causes

1) Haemorrhage- loss of blood.

2) Inadequate production of normal red cells.

3) Excessive destruction of red cells :- haemolysis.

B- Decreased or in effective marrow production

1) Lack of iron, B_{12} or folate.

2) Hypoplasia

3) Invasion by malignant cells

Classification:-

Following are the aetiological classifications:—

I) Disorders of erythrocyte formation -

1) Nutritional anaemias: - due to deficiency of essential nutrients like folate.

Vit.$B_{12,}$ proteins , Vit C.

2) Hypothyroidism

3) Sideroblastic anaemia

II) Haemorrhagic -

1) Acute haemorrhage - Antepartum and postpartum, bleeding oesophageal varices, bleeding peptic ulcer, hematemesis, malaena, traumatic and surgical bleeding.

2) Chronic loss due to intestinal parasites like hookworms. Haemorrhoids, menorrhagia, etc.

III) Haemolytic anaemia due to increased destruction of erythrocytes.

IV) Hypoplastic anaemia due to reduced production of erythrocytes,

V) Myeloplastic due to replacement of normal erythropoietic tissue by abnormal tissue e.g. acute leukemias, lymphomas, multiple myeloma etc.

Morphological classification as seen in stained blood film:-

1) Microcytic hypochromic: Fe deficiency, Haemoglobinopathies, Hemolytic. Thallasaemias,

2) Normocytic Normochromic: -Aplastic Anaemia.

3) Macrocytic hypochromic: - Folate deficiency. Vit.B_{12}, deficiency, hypothyrodism

4) (Dimorphic):-Combined deficiency of iron and folate or Vit.B_{12}.

So overall classification is as follows :-

1) Anaemias due to deficiency of factors essential for normal blood formation -

A) **Iron -**

1) Chronic nutritional hypochromic anaemia.

2) Post haemorrhagic anaemia.

3) Hypochromic anaemia due to malabsorption of iron.

B) Vitamin B12 & Folic acid-

1) Addisonian pernicious anaemia

2) Megaloblastic anaemia-

a)Nutritional,

b) complicating pathologies of gastrointestinal tract

c) complicating pathologies of pregnancy.

d) complicating pathologies of infancy.

e) due to anticonvulsant drugs.

f) complicating hemolytic or Leukemia.

C) Vitamin C

D) Thyroxine.

II) Anaemias due excessive blood destruction (HemolyticAnamia):- Due to congenital abnormalities of the erythrocyte, infective, toxic or allergic factors or erythrocyte antibodies.

III) Anaemia due to aplasia or hypoplasia of the bone marrow - Idiopathic or Secondary.

IV) Anaemia of uncertain origin eg. chronic infection, uraemia, rheumatoid arthritis, liver disease or wide spread malignant disease.

Clinical Features of Anaemia :-

Are the direct consequences of diminished oxygen carrying power of blood on the tissues.

Symptoms	Signs
Lassitude	- Pallor of skin mucous membranes
Fatigue	palms of hands conjuctivae
Breathlessness on exertion	- Tachycardia
Palpitation	- Cardiac dilatation
Throbbing in head and ears	- Systolic flow murmurs
Dizziness	- Oedema
Tinnitus	
Headache	
Dimness of Vision	
Insomnia	
Paraesthesia in fingers and toes	
Angina	

Types :-

Anaemias due to blood loss may be either acute or chronic.

1) Acute – i.e. blood loss of large volume over a short period.

2) Chronic – i.e. blood loss of small volumes over long period.

Anaemias due to inadequate production of red cells: - Causes

1) Deficiency of essential factors like iron,Vit B_{12},Folate

2) Toxic factors eg. inflammatory disease (Infective/non infective),hepatic and renal failure, drugs.

3) Endocrine abnormalities -hypothyroidism. hypoadrenalism, hypopitutarism, hypogonadism.

4) Invasion of bone marrow by leukemia, secondary carcinoma and fibrosis.

5) Developing red cell deformity-sideroblastic or other idiopathic refractory anaemia, thalassaemia

6) Failure of stem cell compartment due to aplastic anaemia or frequently drug induced.

IRON DEFEICIENCY ANAEMIA:[20, 21]

Is the most common type of anaemia Iron deficiency may also lead to reduction in the activity of various iron containing and iron dependent enzymes. Some of these tissue level changes are seen even when hemoglobin is still in normal range.

Aetiology -

1) The diet may not provide enough or it may be in unabsorbable form.

2) Disease of gastro-intestinal tract may give rise to malabsorption.

3) Loss of iron from the body due to blood loss, occasionaly iron may be excreted in the urine in the form of haemosiderinuria.

There are periods in the life when iron deficiency may be regarded as almost physiological.

1) At birth, 2) In adolscence,3) In females, 4) Reduction in gastric output

5) In post menopausal women and adult men commonest cause is gastrointestinal bleeding, erosions, ulcers etc.

Clinical Features :- are mainly those of anaemia. The characteristic ones being –

1) Angular stomatitis, Glossitis

2) Brittle finger nails

3) Koilonychia

4) Dysphagia: - Rare if present check the possibility of post cricoid web (Plummer Wilson syndrome)

5) Pica i.e. eating of strange things such as coal, soil or foods in great excess such as tomatoes

6) Spleenomegaly :- in severe cases.

Investigations:-

1) Reduced haemoglobin level with normal or slightly reduced red cell count.

2) Peripheral blood smear:-

Microcytosis:-Shape of red blood cell is decreased.

Hypochromia: - Reduced saturation of haemoglobin in the red cells.

3) Low mean cell volume (MCV)

4) Low mean cell haemoglobin (MCH)

5) Reduced mean corpuscular haemoglobin concentration (MCHC)

6) Serum ferritin is present in minute quantities

7) Bone marrow- iron stores are found to be empty.

8) Serum iron is decreased

9) Raised platelet count may suggest that bleeding is cause of defficiency.

Treatment:-

1) Over all correction of nutrition with iron rich food e.g. meat, green vegetables. etc.

2) Erradication of underlying cause

3) Drugs -Iron can be replenished orally or parenterally, oral route being safer and cheaper.

1) **Oral iron therapy: -**

The rate of haemoglobin rise is the same with 100 mg or 200 mg. The lower dose of elemental iron is better tolerated given as a single dose at bed time. Oral iron is better tolerated if given after food but it may then be absorbed less efficiently.Haemoglobin rise is inversely proportional to the initial haemoglobin level. About 6-8 weeks are required for the haemoglobin level to normalize. However iron therapy has to be continued for a total of 6 months. It is better absorbed in the ferrous state than in the ferric. There is no significant difference in the absorption of iron given in the form of sulphate, gluconate,

fumarate, lactate or succinate. The cheapest preparation is dried ferrous sulphate given as a tablet containing 200 mg. of salt (60 mg elemental iron)- three times a day. Iron absorption is increased by simultaneous administration of ascorbic acid, succinic acid and fructose.

Adverse effects of oral iron:-

1) Nausea
2) Epigastric discomfort
3) Vomiting
4) Constipation
5) Diarrhoea
6) Aggravation of disease of GIT.

2) **Parenteral iron therapy**: -

Its indications being -

1) In patient who cannot tolerate oral iron.
2) In women present with severe anaemia at a very late stage of pregnancy
3) Patients who are unable to absorb iron because of some disorder of GI tract
4) After major operations.
5) For the treatment of anaemia of rheumatoid arthritis.

a) Iron sorbitol: - Dose -1.5 mg of iron/kg body wt. daily. About 250 mg of iron is required to raise Hb level by 1 gm/dl of blood, total dose not more than 2.5 gm. It must be given I/M and never I/V.

Side effects of Iron sorbital[22]

1) Fever
2) Joint pain
3) Backache
4) Aggravation of UTI, if present.
5) Nausea, Vomitting
6) Anaphylaxis
7) Abscess

8) Discolouration of skin

2) Iron dextran: -

Given I/M or I/V diluted in the form of a drip or undiluted as a slow injection I/M iron should be given by 'z' tract technique to prevent staining of the skin at the injection site. Part of I/M iron remains at the injection site for a very long time and is not available for Hb synthesis

Test dose should be given before given full dose of Iron dextran.

Side effects of Iron dextran:-

1) Fever
2) Joint pain
3) Nausea
4) Vomitting
5) Diarrhoea
6) Abdominal pain
7) Backache
8) Chest pain
9) Skin rashes
10) Local lymphadenopathy.
11) Hypotension (sometimes)
12) Angioneurotic oedema

3) Iron carbohydrate compelx having molecular weight between iron dextran and iron sorbital.

Formula for giving parenteral iron = 4.4 X body weight in Kg. X Hb deficit in Gm/dl

MEGALOBLASTIC ANAEMIA:[23, 24]

Here the red cells appear abnormally large called as Megaloblasts.

Etiology –

1) Failure to Assimilate Vit B12 due to defective formation of interensic factor in stomach
2) Intake of diet deficient in Folic Acid and Vit. B12
3) Failure of absorbtion of Folic Acid and Vit B12

4) Tape worm infestation

5) Administration of anti-convulgent drug

6) In haemolytic and Leukermic Process

Vit B_{12} Difficieny Anaemia –

Requirement of VitB12 1-3 Microgm daily[25].

Causes of deficiency -

1) Inadequate diet.
2) Defficiency of intrinsic factor due to gastric atrophy as in pernicious anaemia, gastrectomy or rarely congenital deficiency without gastric atrophy.
3) Disease of the terminal ileum reducing or eliminating the absorption site eg. Crohn's disease.
4) Vit. B_{12} is removed from the gut by bacterial proliferation in blind loops or fistulae or by parasites.

Addisonian Pernicious Anaemia :-

It is the megaloblastic anaemia due to failure of secretion of intrinsic factor by stomach other than from surgery.

Clinical features:-

In addition to the symptoms of anaemia, there may

1) Intermittent soreness of the tongue
2) periodic diarrhoea.
3) Weight loss.
4) Skin and mucous membranes are pale and in severe cases skin may a lemon yellow tint.
5) Spleenomegaly
6) In many cases paraesthesia occurs in fingers and toes.
7) Demensia
8) In female there may be infertility.

Treatment:-

Specific: -Hydrocobalamine should be given in a dosage of 1000 ug twice during the first week then 1000 ug weekly until blood count is normal.

Megaloblastic anaemia due to folate deficiency -

Folate occurs mainly in the form of polyglutamates in both vegetable and

animal food stuffs

Deficiency of folate arises from

1) Inadequate intake: - Diets which totally lack fresh vegetable and meat or which consist of overcooked food.
2) Disease of upper small bowel where folate is mainly absorbed, this may occur in coeliac disease or tropical sprue.
3) The body's demands exceeding intake

   a) When there is very active cell proliferation eg.Hemolytic anaemia, leukemia and other neoplastic disease and during periods of acute or chronic infection.

   b) Pregnancy
4) Interference with dihydrofolate reductase system this enzyme may be blocked by drugs like methotrexate and pyrimethamine.
5) Unexplained mechanism: - The anti epilepsy drugs phenytoin and primidone may cause folate depletion by unknown mechanism.

Treatment :-

Daily dose of 5 mg of folic acid by mouth. It should always give with Vit B12 in Addisonian pernicious anaemia or Vit. B12 deficiency anaemia.

Primary Idiopathic Aplastic Anaemia:-

This is the disease of stem cells which fail to varying degree, producing hypoplasia of the marrow elements

Clinical features:-

Infections and haemorrhage are complications bleeding occurs in the skin and mucous membranes

Hematureia,Epistaxis are common. Intracranial bleeding may occur.

Necrotic mouth and throat ulcers

Treatment :-

1) Stimulation to heaemopoiesis
2) Androgenic steroid are useful
3) Oxymethalone by mouth .
4) Deconate intramuscularly

5) Bone marrow transplantation

HAEMOLYTIC ANAEMIA :[26]

Following are the causes of Haemolytic Anaemia.

I) Intra-erythrocytic defects

1) Heriditory- Spherocytosis Haemoglobinopathies (Abnormal Haemoglobine& thalasemias)

2) Disorders of glycolysis

3) Acquired: -Red cells produced by dyserythropoetic states.eg. Vit B12 & folate deficiency.

II) Extra-erythrocytic abnormalities

1) Antibodies and Autoimmunce and isoimmunes.

2) Physical trauma and Prosthetic heart valve

3) Chemical trauma - drugs

4) Infections – Malaria,Clostridium welchi

5)Toxic factors associated with inflammatory or neoplastic disease and metabolic failure

Following are the types of Haemolytic Anaemia given in short

1) Congenital Spherocytosis

2) Hereditary Haemoglobinopathies:-

A) Thalassaemia (Cooley's anaemia) types are as follows

i) Thalassaemia

ii) Thalassaemia minor

iii) Thalasaemia Major

B) Sickle cell Anaemia :-

3) Haemolytic Anaemia due to infective or toxic factors

4) Haemolytic anaemia due to erytrhocyte antibodies

i) Haemolytic disease of the newborn

ii) Idiopathic Hamolytic Anaemia

iii)Symptomatic Anaemia

iv) Paroxysmal Haemoglobinuria

Anaemias due to Hypoplasia or Aplasia of the Erythropoitic tissue in bone marrow:[27]

i) Primary (Idiopathic) Aplastic Anaemia: - Rare disease of unknown etiology.

The bone marrow shows a great reduction in all formative elements

ii) Secondary Aplastic Anaemia

Causes:-

1) Idiosyncrasy to certain drugs.such as chloramphenicaol phenylbutazone, organic arsenic etc.
2) Majority of drugs used in the chemotherapy of malignant disease.
3) X-rays and radio-activity.
4) Replacement of bonemarrow by abnormal red cells such as tumor or by fibrous tissue.
5) Viral infections particularly hepatitis.

Anaemias of uncertain origin:-

i) Infections
ii) Uraemia
iii) Hepatic cirrhosis
iv) Malignant disease
v) Sideroblastic Anaemia

Prognosis of Anaemia :-

Anaemia is not fatal or not emergency. In some cases acute blood loss, or in malignancy or in hereditary cases, it beomes serious. In some cases blood transfusion is necessary, prognosis of haemolytic anaemia and aplastic anaemia is bad.

Drug Review

Ayurvedic science is so vast. It is widely practiced on the Indian subcontinent. So, we find different views and comments on a same topic in ancient historical books. But, each of them carries some importance. While stating pre-therapy of each disease, title differences and conflicts of opinions could be seen. Because, while studying everyone thinks as per their respective patients and does the treatment and diagnosis accordingly.

While stating remedies for the Pandu disease, various kalpas have been mentioned in the different ancient books. And we use them regularly in our daily routine. But, no specific kalpa has been mentioned in according to types, which are in use.

Five types of Pandu diseases have been stated. But, it is not clarified that exactly which kalp should be used in a particular type of Pandu disease. Also, there is no clarity about its uses. Therefore, from all the types (Pandu), to see which kalp makes effect and also to what extent, two kalpas different contents have been choosen here. Among them, one kalp is Herbo-Mineral and another one is Herbal Kalpa. By choosing two different methods it has been analyzed that at what extent respective Kalpas are effective.

Dhatriyarishta[1]

धात्रीफलसहस्त्रे व्दे पीडयित्वा रसं तु तम्

क्षौद्राष्टांशेन संयुक्त कृष्णार्धकुडवेनच ।

शर्करार्धतुलोन्मिश्र पक्षं स्निग्धघटे स्थितम्

प्रपिबेन्मात्राया प्रातजीर्णे हितमिताशनः ।

कामलापाण्डूह्द्रोगवातासृग्विपमज्वरान्

कासहिक्कारूचिडवासांश्चैषोडरिष्टः प्रणाशयेत्त

इति धात्र्यरिष्टः ।

It contains following Drugs:

1) Amalaki Swarasa
2) Sharkara
3) Madhu
4) Pippali Churna

Method of preparation of Dhatriyarishta.

1) Prepare Swarasa of 2000 fresh cleaned amalaki

i) Take a porcelain jar

ii) Do Dhupan karma in jar

iii) After Dhupana fill the Amalaki Swarasa in it.

iv) Add Madhu (1/8 th of Swarasa) and half tula (2.4 kg) Sharkara in it.

v) After that add pippali churna ½ kudava (96 gm) as prakshepa dravya.

vi) Seal the jar with a cotton cloth smeared with mud (Multani soil)

vii) Put the jar in clean & dry place where direct exposure of sunlight and air should not takes place.

viii) After completion of fermentation (up to 30 days) filter the Arishta with double folded cotton cloths

ix) Pack the Arishta in glass / plastic bottle.

1) Amalaki[2, 3, 4]

हरीतकीसमं धात्रीफलं किन्तु विशेषतः ।
रक्तपित्त प्रमेहन परं वृष्य रसायनम्
हन्ति वात तदमात्वात्पितं माधुर्यशैत्यतः ।
कफरूक्ष कषायत्वात्फलं धात्र्यास्त्रिदोषजित
यस्य यस्य फलस्येह वीर्यभवति याहराम ।
तत्स्य त्स्यैव विर्येण मज्जानमपि निर्देशेत

Latin Name - Emblica Officinalis Gaerth

Natural order - Euphorbiaceae

Part used - Fruit

Synonyms - Amruta, Amrutphala, Amalaki ,Tishyafala, Dhatri, Vayastha.

Ayurvedic Properties :

Rasa - Amla, Maduhra, Kashaya Tikta, Katu

Guna - Guru, Sheeta, Rukshya

Virya - Sheeta

Doshaghnata - Pittashamaka mainly, Tridoshashamaka

Rogaghnata-

Agnimandya, Amlapitta, Parinamashula, Udavarta, Udara, Arsha Vibandha Trushna, Yakruta Vikara, Daha, Pittaj Vikara, pittaj Shirashula, Raktapitta Khalitya, Palitya Pradard, Dourbalya.

Karma –

Dahaprashamana, Roachana, Deepana, Anulomana , Medhya, Yakruta Uttejka, Keshya, Stambhana, Kaphaghna Rasayana.

2) Pippali[5,6,7]

पिप्पल्ली दीपानी वृस्या स्वादुपाका रसायनी ।
अनुष्णा कटुव्वा स्निग्धा वातश्लेष्महरि लघुः ॥
पिप्पली रेचनी हन्ति श्वासकासोदर ज्वरान् ।
कुष्ठप्रमेहगुल्मारीः प्लीहशूला ममारूतान् ॥

Latin Name - Piper longum Linn

Natural order - Piperaceae

Part used - Fruit

Synonyms - Upakullya, Ushana, Kana, Krushna, Kola, Chapala, Tikshnatandula, Pippali, Magadhi Vaidehi.

Ayurvedic Properties :

Rasa - Katu

Guna - Laghu, Snigdha, Tikshna

Virya - Anushna Sheeta

Doshaghnata - Vata Kaphashamaka

Rogaghnata-

Agnimandya, Aruchi, Ajeerna, Udarashula, Gulma, Arsha, Yakrut-vikra, Plihavruddhi, Krumiroga, Daurbalya, Pandu, Raktavikara.

Karma –

Deepana, Vatanulomaka, Vatahara, Jantughna, Shulaprashamana Mrudurechana Krumighna, Yakrutauttejaka, Medhya, Shirovirechana, Balya Rasayana.

3) Madhu[8,9]

वातलं गुरू शीतं च रक्तपित्तकफापहम् ।
सन्धातृच्छेदनं रूक्ष कषाय मधुरं मधु ॥

Ayurvedic Properties:

Rasa	-	Kashaya Madhura
Guna	-	Guru, Ruksha, Sukshma
Virya	-	Sheeta
Vipaka	-	Madhura
Doshaghnata	-	Pitta-Kapha shamaka

Karma –

Deepana,Rochana,Anulomaka,Shrotoshodhaka,Chardinashaka, Vibandahara,Dahaprashamana, Yogavahi, Increases general Metabolism.

4) Sharkara[10,] -

सिता सुमधुरा प्रोक्ता वृष्या शुक्रविवर्धिनी ।
पित्तहनी मधुरा बल्या शर्कराप्यायिनी नृणाम् ॥
शर्करान्या सुशीता च कासशूलप्रमर्दिनी ।
हिता पित्तासृजि शोषे मूर्च्छा भ्रमदापहा ॥

Ayurvedic Properties :

Rasa	-	Madhura
Guna	-	Guru, Snigdha
Virya	-	Sheeta
Vipaka	-	Madhura
Doshaghnata	-	Vata-Pitta shamaka

Chemical Constituents –

Glucose, Fructose, Sucrose

Action And Uses –

Vatapittashamaka, Raktashodhaka

Navayasa Loha/ Churna[11,12]

त्र्युषणा त्रिफला मुस्ताविडंग चित्रकाः समाः।
नवयोरजसो भागास्त चूर्ण क्षौद्र सर्पिषा।
भक्षयेत पाण्डुहृद्रोग कुष्ठार्शःकामलापहम्।

It contains following Drugs:

1) Haritaki
2) Amalaki
3) Bibhitaka
4) Shunthi
5) Maricha
6) Pippali

7) Vidanga

8) Chitraka

9) Musta

10) Lohabhasma

Method of preparation of Navayasa Loha Churna

1) Take above ingredients 1 to 9 of pharmacopoeial quality.

2) Dry, wash and make the powder in a pulverizer separately.

3) Pass the powder through sieve No.85.

4) Weigh all the powders separately per formulation (1 Part of total churna which we will be preparing)

5) Take the Lohabhasma of pharmacopoeial quality (Equal part of total weight of all the ingredients 1 to 9)

6) Mix all the churnas & Lohabhasma properly with the help of mixer.

7) Pass the mixture through sieve No.44 to obtain a homogenous blend.

8) Store it in air tight container and in cool place.

1) Haritaki-[14,15,16]

हरीतकी पंचरसामुष्णामलवणां शिवाम् ।

दोषानुलोमनीं लघ्वी विद्याद्दीपनपाचनीम् ।

आयुष्यांम पौष्टिकीं धन्यां वयसः स्थापनीपराम् ।

सर्वदोषप्रशमनीं बुध्दीन्द्रियबलप्रदाम् ।

कुष्ठगुल्ममुदावर्तं शोषं पाण्ड्वामयं मदम् ।

अर्शासि ग्रहणीदोषं पुराणं विषमज्वरम् ॥

Latin Name - Terminalia Chebula

Natural order	-	Combrefaceae
Part used	-	Fruit
Synonyms	-	Abhaya, Shira, Pathya, Vayahta, Hemavati, Vijaya.

Ayurvedic Properties:

Rasa	-	Kashaya, Tikata, Katu, Amla, Madhura
Guna	-	Ruksha, Laghu.
Virya	-	Ushna
Vipaka	-	Madhura
Doshaghnata	-	Tridoshahara

Rogaghnata-

Vibandha, Pliha & Yakruta roga, Kamala, Vishama Jwara, Amvata, Chhardi ,Jwara.

Karma –

Deepana, Pachana, Yogavahi, Anulomana, Bruhana, Rasayana, Chakshushaya, Medhya.

2) Amalaki-[17,18,19]

हरीतकीसमं धात्रीफलं किन्तु विशेषतः।
रक्तपित्त प्रमेहन परं वृष्य रसायनम्
हन्ति वात तदगात्वात्पितं गाधुर्यशैत्यतः।
कफरूक्ष कषायत्वात्फल धात्र्यास्त्रिदोषजित
यस्य यस्य फलस्येह वीर्यभवति याहरान।
तत्स्य त्स्यैव विर्येण मज्जानमपि निर्देशेत

Latin Name	-	Emblica Officinalis Gaerth
Natural order	-	Euphorbiaceae
Part used	-	Fruit
Synonyms	-	Amruta, Amrutphala, Amalaki ,Tishyafala, Dhatri, Vayastha.

Ayurvedic Properties :

Rasa	-	Amla, Madhura, Kashaya Tikta, Katu
Guna	-	Guru, Sheeta, Rukshya
Virya	-	Sheeta
Doshaghnata	-	Pittashamaka mainly Tridoshashamaka

Rogaghnata-

Agnimandya, Amlapitta, Parinamashula, Udavarta, Udara, Arsha Vibandha Trushna, Yakruta Vikara, Daha, Pittaj Vikara, pittaj Shirashula, Raktapitta Khalitya, Palitya, Pradar, Dourbalya.

Karma –

Dahaprashamana, Rochana, Deepana, Anulomana Amanashaka, Medhya, Yakruta Uttejka, Keshya, Stambhana, Kaphaghna Rasayana.

3) Bibhitaka-[20,21,22]

बिभितकस्वादुपाकं कषाय कफपित्तनुत ।
उष्णविर्य हिमस्पर्श भेदनं कासनाशनम् ।

Latin Name	-	Terminalia bellirica
Natural order	-	Combrefaceae
Part used	-	Fruit
Synonyms	-	Aksha, Karshaphala, Klidruma, Bhutwasa Kaliyugalaya.

Ayurvedic Properties :

Rasa	-	Kashaya
Guna	-	Ruksha, Laghu.
Virya	-	Ushna
Vipaka	-	Madhura
Doshaghnata	-	Kapha-Pittashamaka.

Rogaghnata-

Kasa, Krimi, Swarabheda Rasadoshahara, Raktadoshahara, Mansadoshahara, Medodoshahara.

Karma –

Grahi, Rechana, Bhedana, Keshya, Deepana, Chakshushaya, Madaka.

4) Shunthi-[23,24,25]

शुण्ठी रुच्यामवातघ्नी पाचनी कटुका लघः।
स्निग्धोष्णा मधुरा पाके कफवात विबन्धनुत ॥

Latin Name	-	Zingiber officinale
Natural order	-	Zingiberaceae
Part used	-	Dried Rhizomes
Synonyms	-	Nagara, Katubhadra, Vishwa Mahaushadha, Vishvabhesaja Shringavera, Mahaushadha

.

Ayurvedic Properties :

Rasa	-	Katu
Guna	-	Laghu, Snigdha
Virya	-	Ushna
Vipaka	-	Madhura
Doshaghnata	-	Khapavatashamaka.

Rogaghnata-

Amavata, Slipada, Chhardi, Shotha Swasa, Kasa, Arsha, Grahani, Atisara, Udarashotha, Katishula Kamala, Gulma, Karnashula, Sannipatik Jwara.

5) Maricha-[26, 27, 28]

मरिचं कटुकं तीक्ष्णं दीपना कफवातजित् ।
उष्ण पित्तकरं रुक्षं श्वासशूलकृमीन्हरेत् ॥

Latin Name	-	Piper nigrum
Natural order	-	piperaceae
Part used	-	Fruit
Synonyms	-	Vellajama, Ushanam, Dharmapanam

Ayurvedic Properties:

Rasa	-	Katu
Guna	-	Tikshna, Ruksha.
Virya	-	Ushna
Vipaka	-	Katu
Doshaghnata	-	Khapavatahara.

Rogaghnata-

Shwasa, Shula, Krimi, Ajirna Yakruta Vikara, Kasa, Arochaka.

Karma –

Vatakaphashamaka, Deepana, Pachana, Medhya, Rasayana.

6) Pippali-[29, 30, 31]

पिप्पल्ली दीपानी वृस्या स्वादुपाका रसायनी ।
अनुष्णा कटुव्वा स्निग्धा वातश्लेष्महरि लघुः ॥
पिप्पली रेचनी हन्ति श्वासकासोदर ज्वरान् ।
कुष्ठप्रमेहगुल्मारीः प्लीहशूला ममारूतान् ॥

Latin Name - Piper longum Linn

Natural order - Piperaceae

Part used - Fruit

Synonyms - Upakullya, Ushana, Kana, Krushna, Kola, Chapala, Tikshnatandula, Pippali, Magadhi Vaidehi.

Ayurvedic Properties :

Rasa - Katu

Guna - Laghu, Snigdha, Tikshna

Virya - Anushna Sheeta

Doshaghnata - Vata Kaphashamaka

Rogaghnata-

Agnimandya, Aruchi, Ajeerna, Udarashula, Gulma, Arsha, Yakrutvikra, Plihavruddhi, Krumiroga, Daurbalya, Pandu, Raktavikara.

Karma –

Deepana, Vatanulomaka, Vatahara, Jantughna, Shulaprashamana Mrdurechana Krumighna, Yakrutauttejaka, Medhya, Shirovirechana, Balya Rasayana.

7) **Vidanga-**[32, 33, 34]

विडंगकटु तीक्ष्णोष्णं रूक्ष वन्हिकरं लघु।

Latin Name - Embelia ribes

Natural order - Myrsinaceae

Part used - Fruit

Synonyms - Jantunashana, Amogh, Tandula Chitratandula, Vella.

Ayurvedic Properties:

Rasa - Katu

Guna - Ruksha, Tikshna, Laghu

Virya - Ushna

Vipaka - Katu

Doshaghnata - Khapavatahara.

Rogaghnata-

Krimi, Jwara, Adhmana, Malavashtambha, Twakvikara.

Karma –

Krimighna, Rasayana, Agnivardhaka Shirovirechana, Raktashodhak.

8) Chitraka-[35,36,37]

चित्रकः कटुक पाके वन्हिकृत्पाचनो लघुः ।

रुक्षोष्णो .....

Latin Name - Plumbago Zeylanica

Natural order - Plumaginaceae

Part used - Root

Synonyms - Agni, Vyala, Ushana, Pathi.

Ayurvedic Properties:

Rasa - Katu

Guna - Ruksha, Laghu

Virya - Ushna

Vipaka - Katu

Doshaghnata - Vata-khapa shamaka.

Rogaghnata-

Pandu, Grahani, Krimi, Shotha, Udara, Sthaulya, Kasa, Arsha, Kushta.

Karma –

Deepana, Pachana, Jwaraghna, Swedajanana, Krimihara.

9) **Musta**[38, 39, 40] –

मुस्तं कटु हिमं ग्राहि तिक्तं दीपनपाचनम् ।
कषायं कफपित्तास्त्रतृड्ज्वरारुचिजन्तुहृत् ।

Latin Name - Cyperus Rotundus
Natural order - Cyperaceae
Part used - Tuber
Synonyms - Varida, Mustak.

Ayurvedic Properties :

Rasa - Katu, Kashaya, Tikta
Guna - Ruksha, Laghu
Virya - Sheeta
Vipaka - Katu
Doshaghnata - Kapha Pitta shamaka.

Rogaghnata-

Trushna, Arochaka, Jantughna, Jwara, Mutravikara, Amapachana, Atisara, Pravahika, Krimighna, Ajirna Swasa.

Karma-

Deepana Pachana, Grahi, Raktaprasadana, Mutral, Jwaraghna Twakdushtinashaka.

10) Loha Bhasma[41,42] –

लोहं रुक्ष सुमधुरमलं पाकतश्चाथ तिक्त
वीर्ये शीत गुरुच तुवर लेखन ञ्चतिनेत्र्यम् ।
बल्यंवृष्यं जठरं गदनुत् श्लेष्मपित्ता मयघ्न
वर्ण्यमेध्यंखलु किम धिकं हन्ति नानामयघ्नम् ॥

English Name - Incinerated Iron
Rasa - Tikta, Kashaya
Guna - Ruksha, Guru
Virya - Sheeta
Vipaka - Madhura
Doshaghnata - Kapha Pitta shamaka.

Rogaghnata-

Pandu, Krimi, Bhrama, Chardi, Shosha, Shotha, Udara, Kasa, Arsha, Shwasa, Shula, Halimaka

Karma-

Chakshushya, Deepana, Lekhana, Balya Vrishya, Medhya, Varnya.

Chapter – III

MATERIALS AND METHODS

The drug Dhatryarishtha was purchased from well known pharmacy Vaidyaratnam and raw materials of NavayasLoha were purchased from Aushadhibhavan pharmacy Nashik.

The patients with clinical features of Pittaj Pandu were selected from OPD of Vasantdada Patil Ayurvedic Medical College and Hospital. Sangli.

Study Design:

This study is a randomized group comparison study. Only 210 patients were aimed for the enrolment in this study. Patient selection was on first come first served basis. Extra 15 patients were selected as waiting list in view of possible drop outs.

For the present study, patients were selected and enrolled from the Out Patients Department of Kayachikitsa .Those were selected who fulfilled ayurvedic description of PittajPandu and also on the basis of the hemoglobin contents of the blood samples taken routinely at the OPD department of the hospital. The age group was restricted to the age range of 18 to 40 years. A formal written consent form was filled in and signed by all patients in the presence of a witness. The selection of the patients was on random basis.

Those who fulfilled ayurvedic description of PittajPandu were only accepted as per the previously fixed criteria under ‘acceptance criteria’. Others were rejected and directed to other departments according to their complaints. All patients were accepted on OPD basis and no one was admitted as indoor patient. There was no bar for cast, creed, education, social status or income per month. In the beginning, an initial target of approximate 210 cases was set for the final assessment. But considering the possible dropouts and requests for enrollment, 15 more cases were kept on waiting list. For the final assessment 210 cases fulfilled the requirements and were accepted for the final results.

After an initial general physical examination, every patient was explained in details. This was explained to them in local (Marathi) language with simple words. It was ascertained that they understood the procedure and the purpose of the study. All enrolled patients joined the study willingly. All of them agreed to follow the instructions and to be punctual and obedient.

In the beginning all the participants were made comfortable, the physical examination was carried out carefully, and the findings were recorded in a specially prepared case paper on the same day without losing any time in between.Hematological investigation i. e.(Hb%) was done before(on 1st day) and after(6th week) the study and again on the followup day in 12thweek. Every 7th day the patients accepted in this study were required to answer questions put to them regarding the parameters selected for this study and enquiry was made about the intolerance of the drug or any side effects. Pathyakara Ahara was grossly advised without any drastic changes in their routine food intake.

INCLUSION CRITERIA:

1. Patients suffering from Pandu of 16 to 40 years of age.
2. Patients having Pittaja Pandu lakshanas.
3. Haemoglobin levels not less than 6 g/dL
4. Gender was no bar for inclusion.

EXCLUSION CRITERIA:

1. Patients suffering from severe anaemia (Hb below 6 g/dL)
2. Other types of Pandu (anaemia) viz. Thalassemia, Sickle cell anaemia, anaemia due to malaria, bleeding piles etc.
3. Communicable diseases like TB, Hepatitis etc.
4. Any other Pandu viz Vataja, Kaphaja, Mruttikabhakshanajanya etc. were excluded.
5. Patients suffering from haemorrhagic disorders like Arsha, Raktapitta.
6. Patients having severe dehydration.
7. Patients suffering from Prameha, Hridrogas.
8. Patients having HIV positive and cancer of any type.

CRITERIA FOR TERMINATION OF THE TRIAL:

Any patient showing any adverse drug reaction, intolerance, and allergic reactions etc to the drugs (Dhatryarishtha, NavayasLoha, Iron supplements) were withdrawn.

In this clinical study patients of either gender, diagnosed as PittajPandu were randomly allocated in to three groups.

Management of the patients:

1st Group 'A': This group was treated with Dhatryarishta.

2nd Group 'B': This group was treated with NavayasaLoha.

3rd Group 'C': This group was treated with Conventional Iron Supplement.

1) Group A:

In this group 70 patients were treated with Dhatryarishta.

Dose	: 20 ml	
Kala	: Anannakala	Ch. Chi. 16/111-113
Anupana	: water	
Duration	: six weeks	
Diet	: Patients were allowed to take normal routine diet but advised to avoid fermented, spicier, salty, sour etc foods which increase pitta dosha.	

2) Group B:

In this group 70 patients were treated with Navayasaloha.

Dose	: 1gm per day in two divided doses in powder form	
Kala	: Vyan-Udana(After meal)	AFI & B.R.12/28
Anupana	: Goghrit (Patients were advised to take half of powder in half tea spoon goghrit and after that dip 1/3 finger in honey and lick it)	
Duration	: six weeks	
Diet	: Patients were allowed to take normal routine diet but advised to avoid fermented, spicier, salty, sour etc foods which increase pitta dosha.	

3) Group C:

In this group 70 patients were treated with Conventional iron suppliment.

Dose : As per medicine.

Kala : After meal

Anupana : As per medicine

Duration : six weeks

Diet : Patients were allowed to take normal routine diet but advised to avoid fermented, spicier, salty, sour etc foods which increase pitta dosha.

Sample size computation:

$$n = \frac{Z^2\, Px(1-P)}{d^2}$$

n= Required Sample Size (Min.)

Z= Standard Normal Variable= 1.96

P= Prevalence = 0.16= 16%

d= Error=0.05

$$n = \frac{1.96^2\, X0.16X0.84}{0.05^2}$$

With 16% Prevalence, 5% level of significance and 95 % power of test using above formula (Daniel) the desired sample size would be 206.5 = 207=210

Statistical Tests:

- Kruskal Wallis test (Non parametric one way ANOVA)
- Wilcoxon signed rank test
- Z-test

Method of grading the lakshana of PittajPandu:

The assessments of the results were made on the basis of improvement in clinical findings which were repeated after the completion of duration of treatment.

The improvement in the signs and symptoms were assessed by adopting the following score method.

Pitabhata

Pitabhata in twakvartmajivha and hastapadatala if

Not seen/ complete relief	0
Mild	1
Moderate	2
Marked	3
Severe	4

Haritabhata

Haritabhata in twakvartmajivha and hastapadatala if

Not seen/ complete relief	0
Mild	1
Moderate	2
Marked	3
Severe	4

Jwara

Not seen/ complete relief	0
Occasionally occurs and get relief after 2 to 3 hrs	1
Occurs daily once and gets relief after 6 hrs	2
Constant all the day or night (up to 12 hrs)	3
Constant 24 hrs	4

Daha

No daha at all / totally cure	0
Daha of mild degree or in one region like netrapadatalahastatalatwak	1
Daha of moderate degree or in two region like netrapadatalahastatalatwak	2
Daha of marked degree or in more than two region like netrapadatalahastatalatwak	3
Severe daha in all over the body or daha more than three region like netrapadatalahastatalatwak	4

Trishna

Normal feeling of thirst	0
Frequent feeling but quench with sufficient liquid	1
Frequent feeling but quench with increased amount	2
Night awakeing due to thirst	3
Quench after heavy intake of liquid	4

Murcha

Not seen/ complete relief	0
Rarely bhrama for some movement durind change of posture	1
Often for some movement during change of posture	2
often for each movement even in lying condition	3
Pt. unable to hold himself without any support	4

Sweda

Normal sweating	0
Profuse sweating on specific parts on mild exertion	1
Profuse sweating on all over the body on mild exertion	2
Sweating during routine work	3
Sweating at rest	4

Sheeta-kamata

absent	0
intermittent	1
Continuous but subsides with cold consumption for 3-4 hrs	2
Continuous but does not subside with cold consumption	3
Does not subside	4

Annabhinandana

If there is negative answer after asking about the symptom/ totally cure	0
If pt. is unable to tell about the symptom (Yes or No) confidently	1
If pt. is telling about the symptom (Yes) confidently but after asking	2
If the pt. is telling about the symptom on his own but eats something in a day	3
If the pt. is telling about the symptom on his own and does not eat anything in one or two days	4

Katukasyata

If there is negative answer after asking about the symptom/ totally cured	0
If pt. is unable to tell about the symptom (Yes or No) confidently	1
If pt. is telling about the symptom (Yes) confidently but after asking	2
If the pt. is telling about the symptom on his own but eat something in a day	3
If the pt. is telling about the symptom on his own and east something under duress	4

Ushnanupashayata

If there is negative answer after asking about the symptom/ totally cured	0
If pt. is unable to tell about the symptom (Yes or No) confidently	1
If pt. is telling about the symptom (Yes) confidently but after asking	2
If the pt. is telling about the symptom on his own but eats something in a day	3
If the pt. is telling about the symptom on his own.	4

Vidaha

No symptom / totally cure	0
Occasionally	1
Daily after eating ushnarasatmakahara but gets relief after 1 to 3 hrs	2
Every time on eating anything and does not get relief after 3 to 4 hrs	3
Every time on eating anything and wants to take antacid or cold things	4

Amlodgara

No amlodgara at all	0
Occasionally during the day	1
Amlodgara of moderate severity but does not disturb daily routine of the Pts.	2
Amlodgara disturbs daily routine of the Pts.	3
Severe amlodgara with regurgitation	4

Daurgandhya

Absence of bad smell/ totally cure	0
Occasional bad smell of the body removed after bathing	1
Persistent bad smell limited when close to patient	2
Persistent bad smell left from long distance to patient	3
Persistent bad smell left from long distance and even intolerable to patient himself too	4

Daurballya

Not seen/ complete relief	0
After heavy work relieved soon and tolerate	1
After moderate work relieved and tolerate	2
After little work relieved later	3
After little work relieved later but beyond tolerance	4

TAMA

Nil	0
Rarely tamodarshana for short duration	1
Rarely tamodarshana for small duration leads to bhrama	2
Frequently tamodarshana for small duration leads to bhrama	3
frequently tamodarshana persist for longer during makes pt.to sleep	4

Bhinnavarcha

Normal defecation	0
One loose motion per day	1
Two loose motion per day	2
Three loose motion per day	3
More than three loose motion per day	4

Each patient was assessed individually and percentage of score of reduction in the symptoms was determined with the help of calculations

Results:

Considering the overall improvement which was seen in the patients signs and symptoms, the total effect of drugs were assessed in the term of complete relief, marked improvement, moderate improvement, mild improvement and no change as follows

Complete relief	Total 100% relief in signs and symptoms was taken as complete relief.
Marked improvement	More than 75%improvement in signs and symptoms was taken as marked improvement.
Moderate improvement	50 to 75 % improvement in signs and symptoms was taken as moderate improvement.
Mild improvement	25 to 50 % improvement in signs and symptoms was taken as mild improvement
No change	Less than 25% improvement in signs and symptoms was taken as no change.

Follow up study

After the completion of above therapeutic procedure, all the patients were called back after twelth week for observation.

Chapter – IV
Data Presentation, Analysis, Interpretations and Discussion

4.1: Introduction

Data Analysis is a key phase of research work. The present chapter entitled 'Data Presentation, Analysis and Interpretation

In this chapter the information comprising to several variables is presented in order to pertain a fair comprehensive profile of respondents in pittaj pandu. The primary purpose of this study is to examine the comparative effect of Dhatryrishta and Navayasa Loha as a trial drugs as well as Conventional Iron supplement as a standard group.

The secondary purpose is to examine the relationship of the variables and drugs that how the drugs are going to effect on different group of respondents in 6 weeks of follow up. The findings of the hypotheses tested in this study are discussed

This chapter begins with the information on the study results and the description of the respondent's demographic information. The descriptive analysis of the variables used in this study is also presented. This is followed closely by the testing of the hypotheses formulated for this study and presented in the order of the hypothesis. Each hypothesis focused on the variables of the research with Dhatryrishta and Navayasa Loha drug as independent variables and symptoms of the pittaj pandu as a dependent variable. The analysis of the hypothesis is carried out based on the statistical tools adopted. The results found in this study are clearly stated under result presentation and discussion.

4.1 Results

Results of this study are analyzed using SPSS 25 (SPSS, Inc., 2010) statistical program. Descriptive statistics on frequency distributions are calculated based on the respondent's responses for each item as regards to the demographic data, data on the parameters as Amalodgar,Pitabhata, Haritabhata,Jwara, Daha, Trishna, Murcha, Sweda, Shitkamata, Annabhinandana, Katukasyata, Ushnanupashayata,Vidaha, Daurgandhya, Daurbalya, Tama and Bhinnavarcha which are qualitatively measured by likert scale as

No Symptom/ Complete Relief (Grade 0)	0
Mild (Grade 1)	1
Moderate (Grade 2)	2
Marked (Grade 3)	3
Severe (Grade 4)	4

The Data is classified as

Group A: Treatment of Dhatryrishta given to 70 respondents.

Group B: Treatmentof Navayasa Loha given to 70 respondents.

Group C: Treatment of Conventional Iron supplement given to 70 respondents.

The results of this clinical study are shown below.

4.2: Demographic Profile of Patients:

This section presents the descriptive analysis of the variables used in this study. The variables used for the profile are Age group, Gender, Marital status, Occupation, Economic status, Agni, Prakruti,Diet, etc. At the time of clinical study all variables studied carefully and presented as below.

Table No: 4.1

Distribution of Age of Patients: The following table shows the age of patients in the three Groups as Group A, Group B and Group C. The parameter Age group is considering for study because age of patients matters the disease and its efficacy.

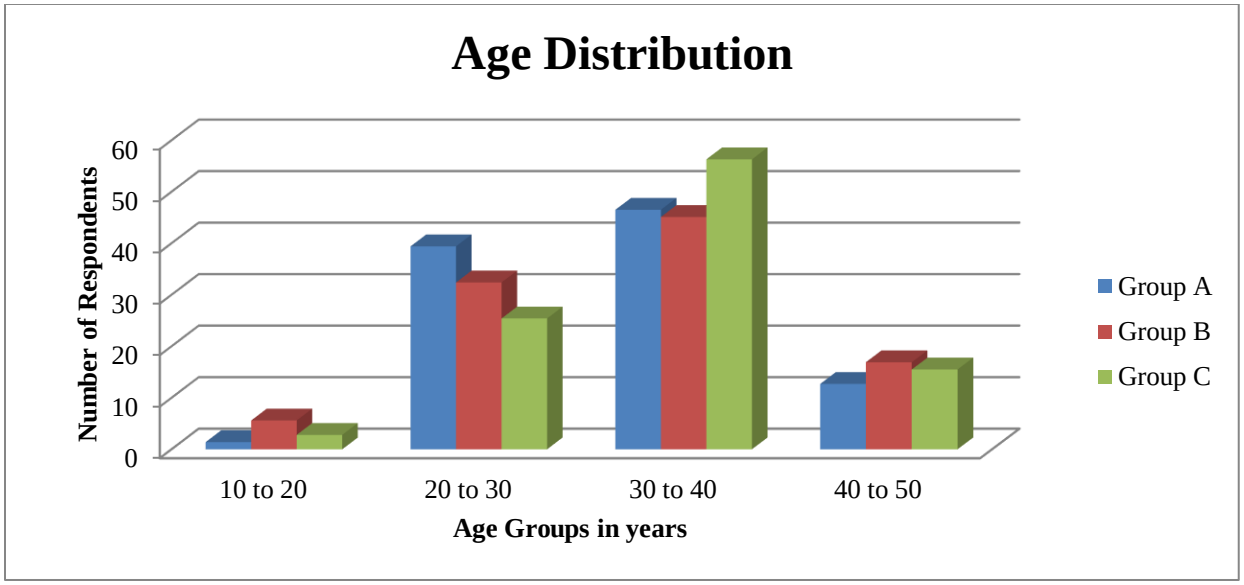
	Group A		**Group B**		**Group C**	
Age-Group	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
10 to 20	1	1.4	4	5.6	2	2.8
20 to 30	28	39.4	22	32.4	18	25.4
30 to 40	33	46.5	32	45.1	40	56.3
40 to 50	8	12.7	12	16.9	10	15.5
TOTAL	70	100	70	100	70	100

Descriptive Statistics

	N	**Minimum**	**Maximum**	**Mean**		**Std. Devi**
	Statistic	**Statistic**	**Statistic**	**Statistic**	**Std. Error**	**Statistic**
Age1	70	19	40	31.17	0.796	6.659
Age2	70	18	40	31.46	0.838	7.013
Age3	70	18	40	32.01	0.794	6.641

(Source: Primary Data)

Graph No 1:



Out of total sample size 70 patients on the group A, majority of patients (46.5Percent) lies in the age group 30 to 40 and (39.4Percent) patients lies in the age group 20 to 30. Total 85.9Percent patients lies in the age group 20 to 40 with mean 31.17with standard error 0.796. Similarly in group B 77.5Percent patients lies in the age group 20 to 40 with mean 31.46 and standard error 0.838, spread to efficacy is all over the group.

In the third group C, 81.7 Percent patients lies in the age group 20 to 40 with mean 32.01 and standard error 0.794.

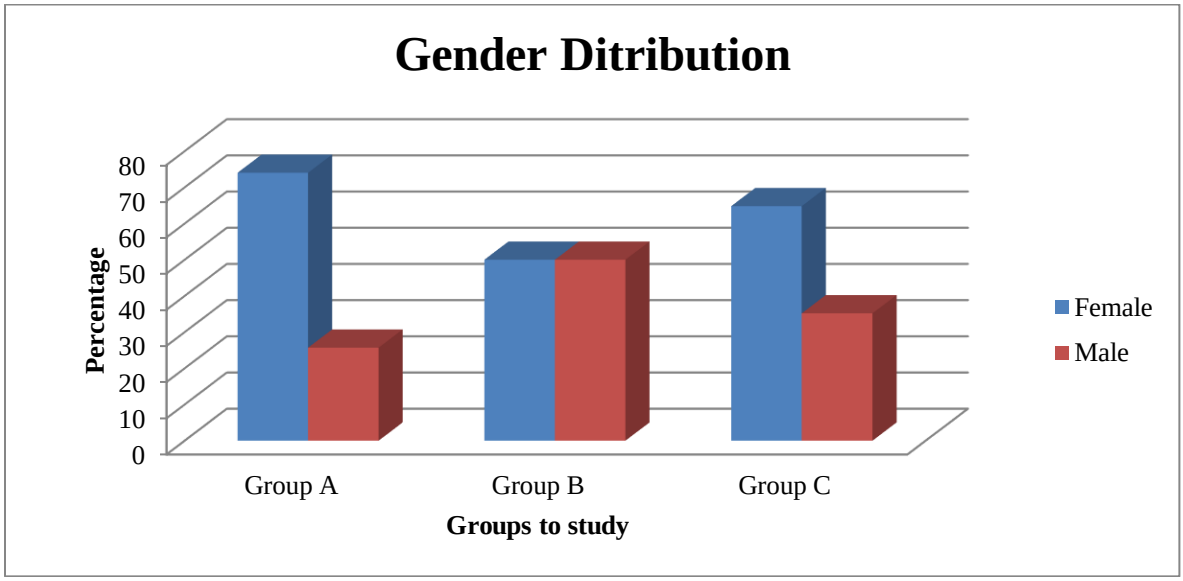
Table No: 4.2

Distribution of Gender of patients: The following table shows the gender of patients in the three Groups as Group A ,Group B and Group C. The parameter gender is significant because the disease Pittaj Pandu in majority occurs with female and many of female patients visited to OPD to take treatment of Pandu. In the table below reflects the same.

Gender Distribution Of Patients						
	Group A		**Group B**		**Group C**	
Gender	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Female	52	74.3	56	80	46	64.8
Male	18	25.7	14	20	24	35.2
TOTAL	70	100	70	100	70	100

(Source: Primary Data)

Graph No 2:



In the group A 74.3 Percent are female and 25.7Percent are male. In the group B 80 Percent are female and 20 Percent are male. In the group C 64.8 Percent are female and 35.2 Percent are male. More than 3/4th Percent patients were the female patients which are suffering from PittajPandu.

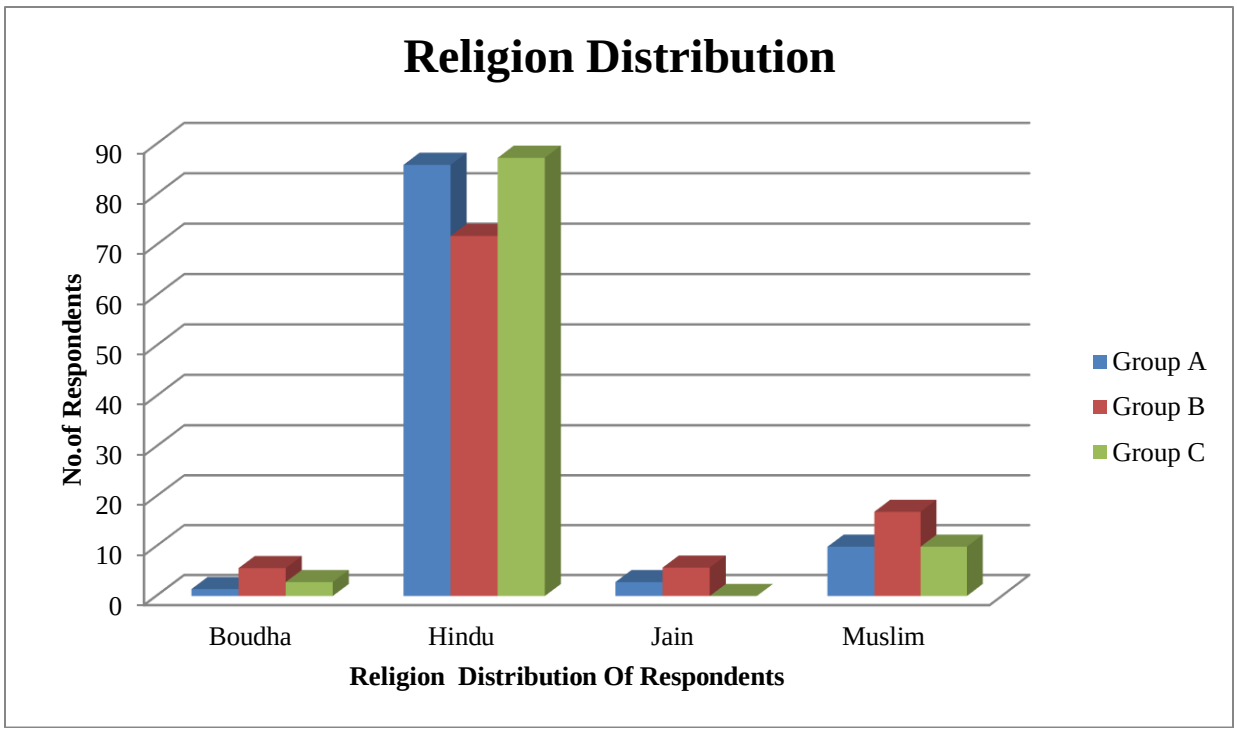
Table No: 4.3

Distribution of Religion of patients: The following table shows the religion of patients in the three Groups as Group A, Group B and Group C. The parameter religion is significant to Pittaj Pandu with relation of their diet and religious manner.

Religion Distribution Of Respondents						
	Group A		**Group B**		**Group C**	
Religion	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Boudha	1	1.4	4	5.6	2	2.8
Hindu	61	85.9	51	71.8	62	87.3
Jain	1	2.8	4	5.7	0	0
Muslim	7	9.9	11	16.9	6	9.9
TOTAL	70	100	70	100	70	100

(Source: Primary Data)

Graph No 3:



Majority of Hindu religion people suffering from PittajPandu

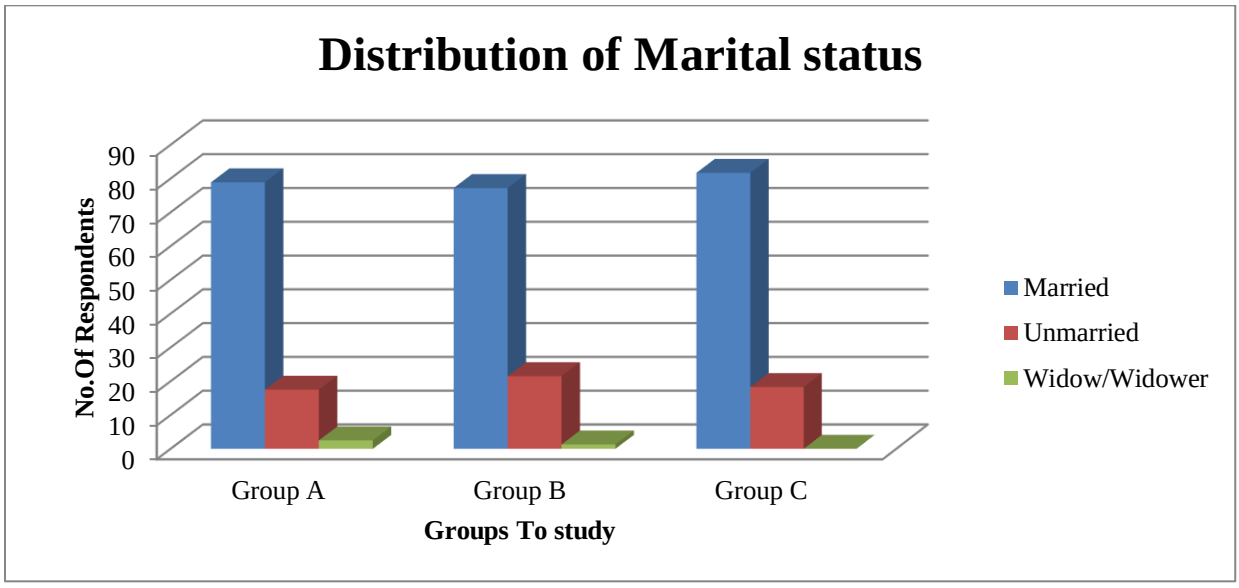
Table No: 4.4

Distribution of Marital status of Patients: The following table shows the Marital Status of patients in the three Groups as Group A, Group B and Group C.

Marital Status Distribution Of Patients						
	Group A		**Group B**		**Group C**	
Marital Status	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Married	56	78.9	54	77.2	58	81.7
Unmarried	12	17.5	15	21.5	12	18.3
Widow/Widower	2	2.5	1	1.3	0	0
TOTAL	70	100	70	100	70	100

(Source: Primary Data)

Graph No 4:



In the group A, 56 patients (80Percent) were married ,12patients (17.5Percent) were unmarried and 2patients (2.5Percent)were widow/widower .In the group B, 54 patients(77.2Percent) were married,15patients(21.5Percent)were unmarried and 1 patient (1.3Percent)was widow/widower. In the group C,58 patients (81.7Percent) were married ,12patients (18.3Percent)were unmarried.

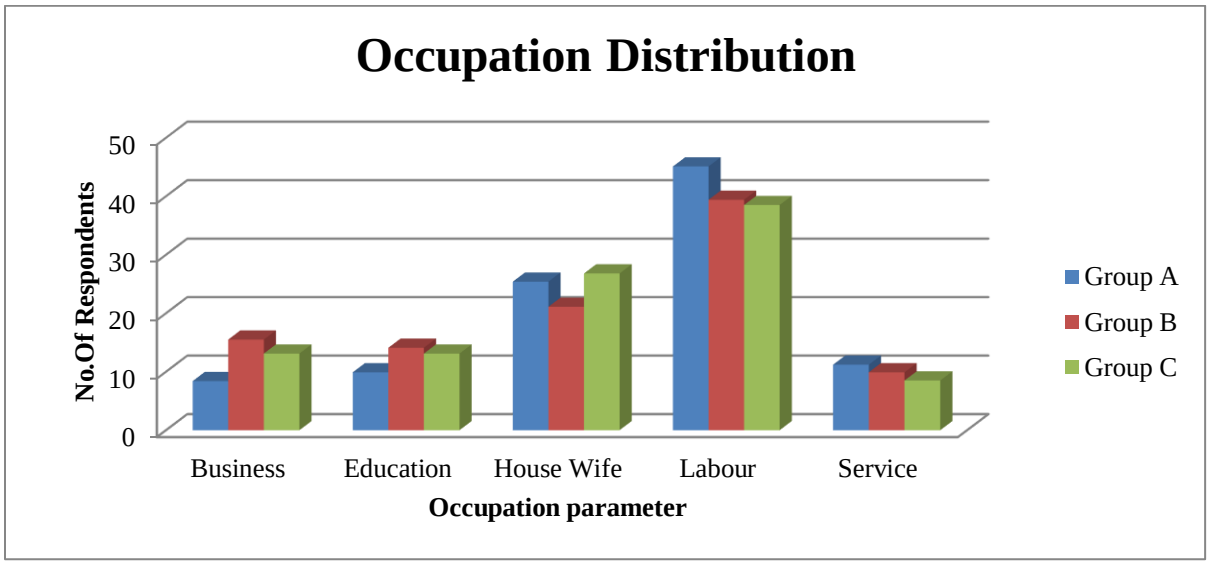
Table No: 4.5

Distribution of occupation status of Patients: The following table shows the occupation status of patients in the three Groups as Group A, Group B and Group C.

Occupation Distribution Of Patients						
	Group A		**Group B**		**Group C**	
Occupation	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Business	5	8.4	10	15.5	9	13.1
Education	7	9.9	10	14.1	9	13.1
House Wife	18	25.4	15	21.1	19	26.8
Labour	32	45.1	28	39.4	27	38.5
Service	8	11.2	7	9.9	6	8.5
TOTAL	70	100	70	100	70	100

(Source: Primary Data)

Graph No 5:



In the group A, 5 patients (8.4Percent) were in business ,7 patients (9.9Percent) were students, 18 patients (25.4Percent)were house wives,32 patients(45.1Percent) were labor while 8 patients (11.2Percent)were in service. In the group B, 10 patients (15.5Percent) were in business ,10 patients (14.1Percent) were students, 15 patients (21.1Percent)were house wives,28 patients(39.4Percent) were labor while 7 patients (9.9Percent)were in service. In the group C, 9 patients (13.1Percent) were in business , 9 patients (13.1Percent) were students, 19 patients (26.8Percent)were house wives,27 patients(38.55) were labor while 6 patients (8.5Percent)were in service.

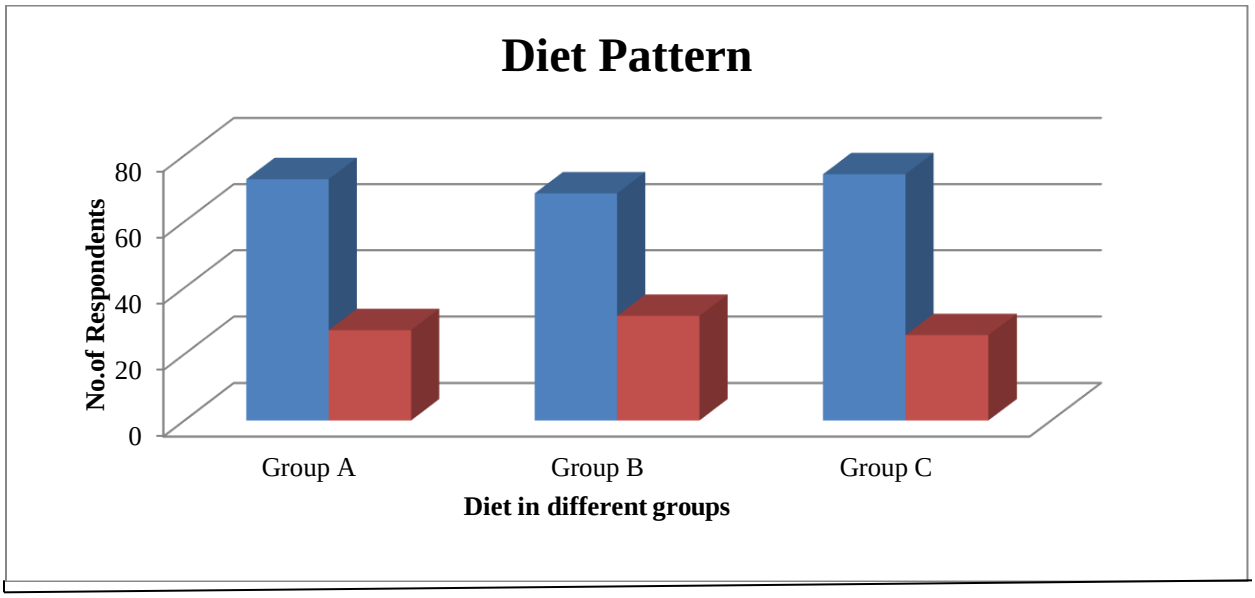
Table No: 4.6

Distribution of diet pattern of Patients: The following table shows the diet pattern of Patients in the three Groups as Group A ,Group B and Group C.

Diet Distribution Of Patients						
	Group A		**Group B**		**Group C**	
Diet	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Veg	51	72.8	48	68.5	52	74.3
Non-Veg (mix)	19	27.2	22	31.5	18	25.7
TOTAL	70	100	70	100	70	100

(Source: Primary Data)

Graph no 6:



In group A, 51 patients (72.8Percent) were pure vegetarian while 19 patients (27.2Percent) were non vegetarian (mix) .In group B, 48 patients (68.5Percent) were pure vegetarian while 22 patients (31.5Percent) were non vegetarian (mix).In group C, 52 patients (74.3Percent) were pure vegetarian while 18 patients (25.7Percent) were non vegetarian (mix).

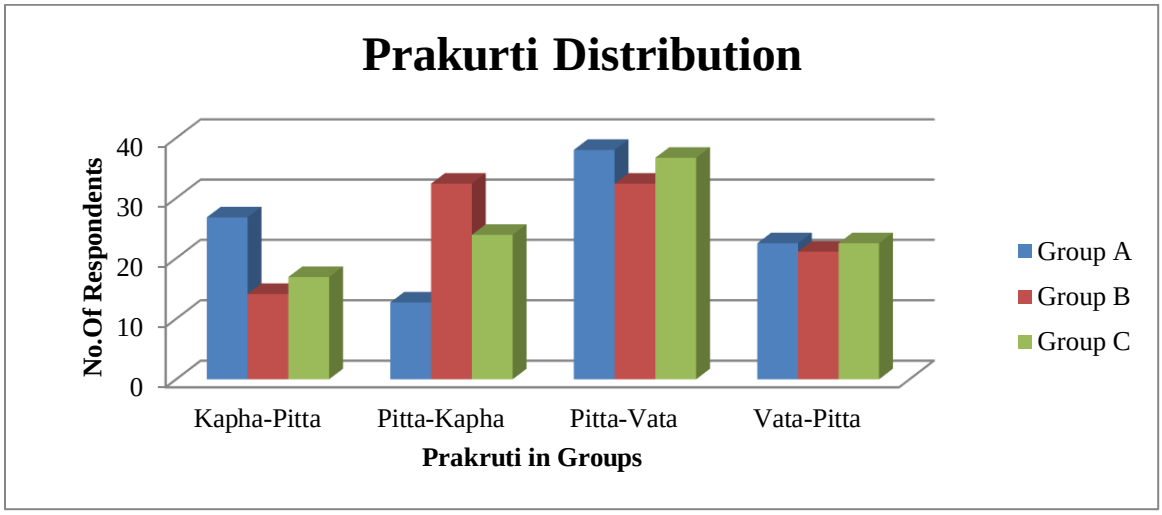
Table No: 4.7

Distribution of Prakruti status of Patients: The following table shows the Prakruti status of the Patients in the three Groups as Group A, Group B and Group C.

Prakruti Distribution Of Patients						
	Group A		**Group B**		**Group C**	
Prakruti	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Kapha-Pitta	19	26.8	10	14.1	12	16.9
Pitta-Kapha	9	12.7	23	32.4	17	23.9
Pitta-Vata	26	38	22	32.4	25	36.7
Vata-Pitta	16	22.5	15	21.1	16	22.5
TOTAL	70	100	70	100	70	100

(Source: Primary Data)

Graph no 7:



In the group A, 19 patients (26.8Percent) were in kaphapitta prakruti, 9 patients (12.7Percent) were pittakapha prakruti, 26 patients (38Percent)were pittavata prakruit and remaining 16 patients(22.5Percent) were vatapitta prakruti. In the group B, 10 patients (14.1Percent) were in kaphapitta prakruti, 23 patients (32.4Percent) were pitta kapha prakruti, 22 patients (32.4Percent) were pittavata prakruit and remaining 15 patients (21.1Percent) were vatapitta prakruti. In the group C, 12 patients (16.9Percent) were in kaphapitta prakruti, 17 patients (23.9Percent) were pittakapha prakruti, 25 patients (36.7Percent) were pittavata prakruit and remaining 16 patients (22.5Percent) were vatapitta prakruti.

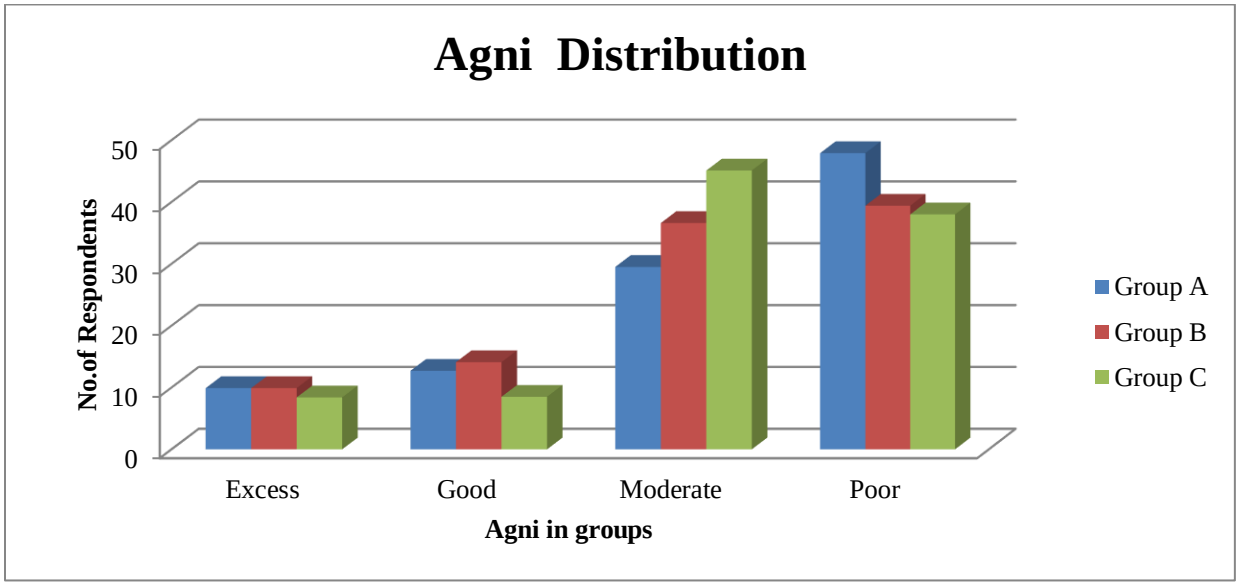
Table No: 4.8

Distribution of Agni status of Patients: The following table shows the Agni status of Patients in the three Groups as Group A, Group B and Group C.

Agni Distribution Of Patients						
	Group A		**Group B**		**Group C**	
Agni	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Excess	6	9.9	6	9.9	5	8.4
Good	9	12.7	10	14.1	6	8.5
Moderate	21	29.5	26	36.6	32	45.1
Poor	34	47.9	28	39.4	27	38
TOTAL	70	100	70	100	70	100

(Source: Primary Data)

Graph No 8:



In the group A, Agni of 6 patients (9.9Percent) was excess, 9 patients (12.7Percent) was good while Agni of 21 patients (29.5Percent) was moderate and remaining 34 patients (47.9Percent) was poor. In the group B, Agni of 6 patients (9.9Percent) was excess, 10 patients (14.1Percent) was good while Agni of 26 patients (36.6Percent) was moderate and remaining 28 patients (39.4Percent) was poor. In the group c, Agni of 5 patients (8.4Percent) was excess, 6 patients (8.5Percent) was good while Agni of 32 patients (45.1Percent) was moderate and remaining 27 patients (38Percent) was poor.

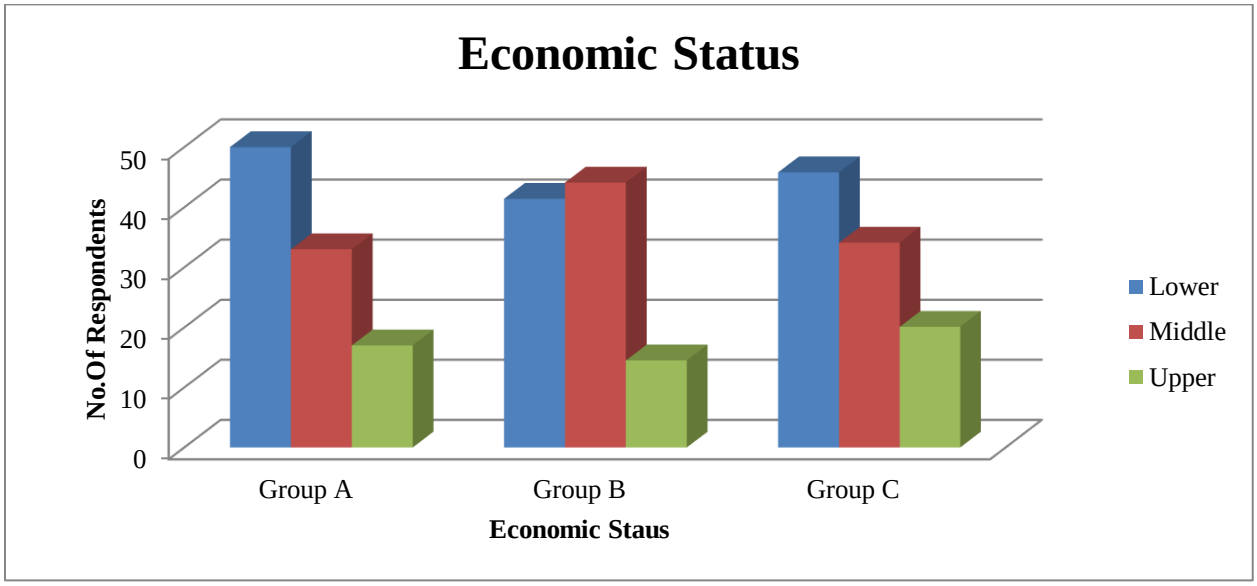
Table No: 4.9

Distribution of Economic status of Patients: The following table shows the Economic status of patients in the three Groups as Group A, Group B and Group C.

Economic Status Distribution Of Patients						
	Group A		**Group B**		**Group C**	
Economic Status	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Lower	35	50	29	41.4	32	45.8
Middle	23	33	31	44.1	24	34.1
Upper	12	17	10	14.5	14	20.1
TOTAL	70	100	70	100	70	100

(Source: Primary Data)

Graph No 9:



In group A, 35 patients (50Percent) were from lower level,23 patients (33Percent)were from middle economic level while remaining 12 (17Percent)were from upper economic level. In group B, 29 patients (41.4Percent) were from lower economic level,31 patients (44.1Percent)were from middle economic level while remaining 10 (14.5Percent)were from upper economic level. In group C, 32 patients (45.8Percent) were from lower level,24 patients (34.1Percent)were from middle economic level while remaining 14 patients (17Percent)were from upper economic level.

4.2: Frequency Distribution and Statistical Analysis of different parameters:

This section presents the frequency distribution analysis of the variables (symtoms of pittaj pandu) used in this study. The variables used for the profile are Amalodgar,Pitabhata, Haritabhata,Jwara, Daha, Trishna, Murcha, Sweda, Shitkamata, Annabhinandana, Katukasyata, Ushnanupashayata,vidaha, Daurgandhya, Daurbalya, Tama, Bhinnavarcha. .At the time of clinical study all variables studied carefully and presented as below.

To test within group effect**"Wilcoxon Signed Rank Test"** is used while for effects of three group comparison**"Kruskall Wallis Test"** is used and **"Z Test"** is used for analysis of haemoglobin percentage.

For Wilcoxon Signed Rank Test our Hypothesis were

H_0: After treating the patients median before treatment is equal to median after treatment.

i.e. H_0: Null hypothesis: Median AT = Median BT

H_1: Median after treatment is less than Median before treatment.

i.e. H_1: Alternative hypothesis: Median AT <Median BT

Significance Threshold: P<0.05.

For Kruskall Wallis Test our Hypothesis were

H_0: There is no difference between the treatments.

H_0= Null hypothesis

H_1: There is difference between the treatments.

H_1=Alternative hypothesis

Significance Threshold: P<0.05.

For Z Test our Hypothesis were

H_0: After treating the patient mean before treatment is equal to mean after treatment.

i.e. H_0: Null hypothesis: mean of Hb% before treatment = mean of Hb% after treatment

H_1: After treating the patient mean after treatment is greater than mean before treatment.

i.e.H_1: Alternative hypothesis: Mean of Hb% after treatment >Mean of Hb% before treatment.

Significance Threshold: $P<0.05$.

Tested these hypothesis here for each parameter and result is interpreted accordingly.

Observations and results are also supplemented with tables and graphs.

Aamlodgar

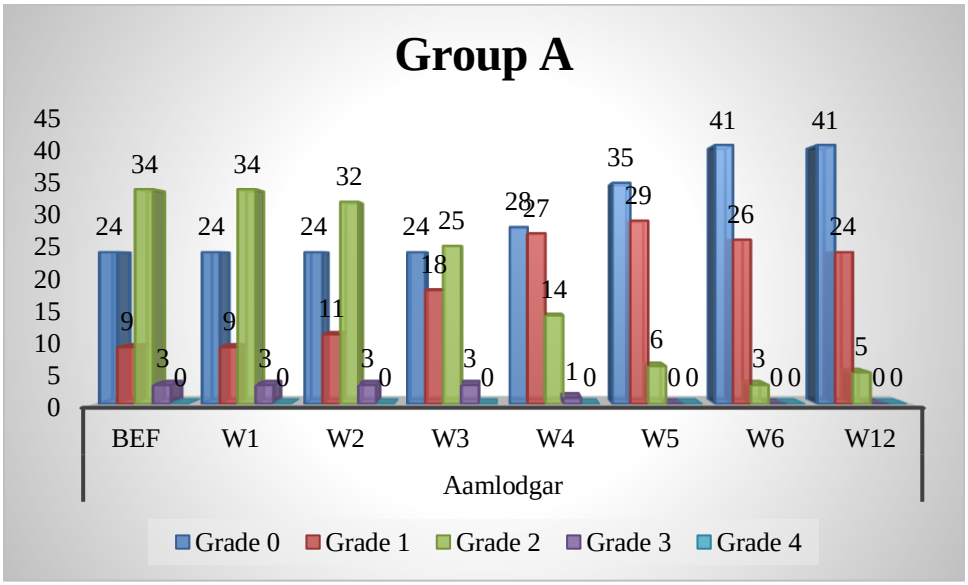
Aamlodgar is one of major symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan amlodgar and observations are as follows.

Table No: 4.10

Incidence of symptom Aamlodgar in group A

Group A	Aamlodgar							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	24	24	24	24	28	35	41	41
Grade 1	9	9	11	18	27	29	26	24
Grade 2	34	34	32	25	14	6	3	5
Grade 3	3	3	3	3	1	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 10:



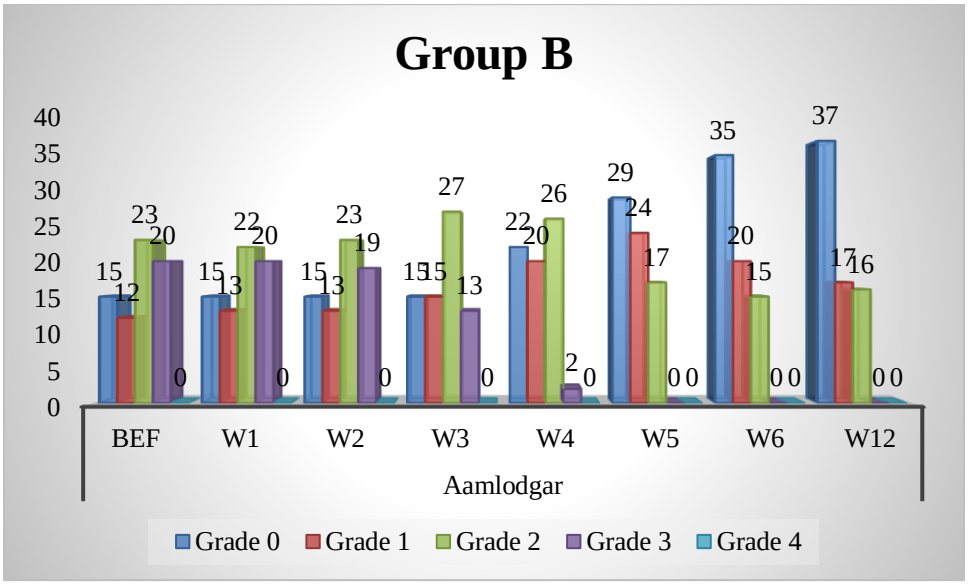
Here is the study of effect of Navayasa loha on the group B for the lakshan amlodgar and observations are as follows

Table No: 4.11

Incidence of symptom Aamlodgar in group B

Group B	Aamlodgar							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	15	15	15	15	22	29	35	37
Grade 1	12	13	13	15	20	24	20	17
Grade 2	23	22	23	27	26	17	15	16
Grade 3	20	20	19	13	2	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 11:



Here is the study of effect Conventional iron supplement on the group C for the lakshan amlodgar and observations are as follows

Table No: 4.12

Incidence of symptom Aamlodgar in group C

Group C	Aamlodgar							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	19	19	19	19	19	20	24	25
Grade 1	13	13	13	13	13	12	21	21
Grade 2	24	24	24	24	24	25	23	21
Grade 3	14	14	14	14	14	13	2	3
Grade 4	0	0	0	0	0	0	0	0

Graph No 12:

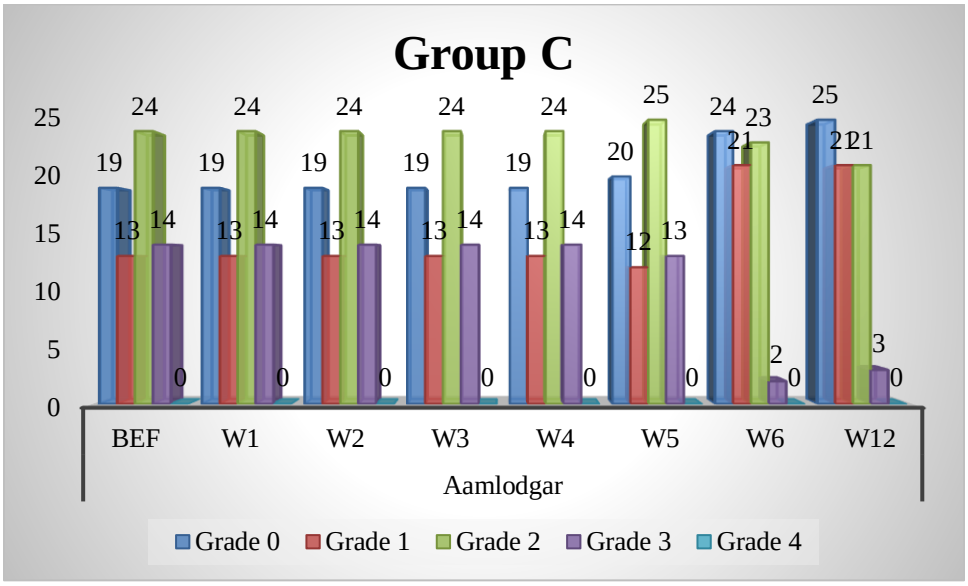


Table No: 4.13 Intra Group Comparative Analysis of Aamlodgar

Aamlodgar	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	2	0	0	-6.138[a]	0.000	62.8	Significant
Group B	2	0.5	0	-6.658[a]	0.000	57.6	Significant
Group C	2	1	1	-5.477[a]	0.000	29.1	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 13:

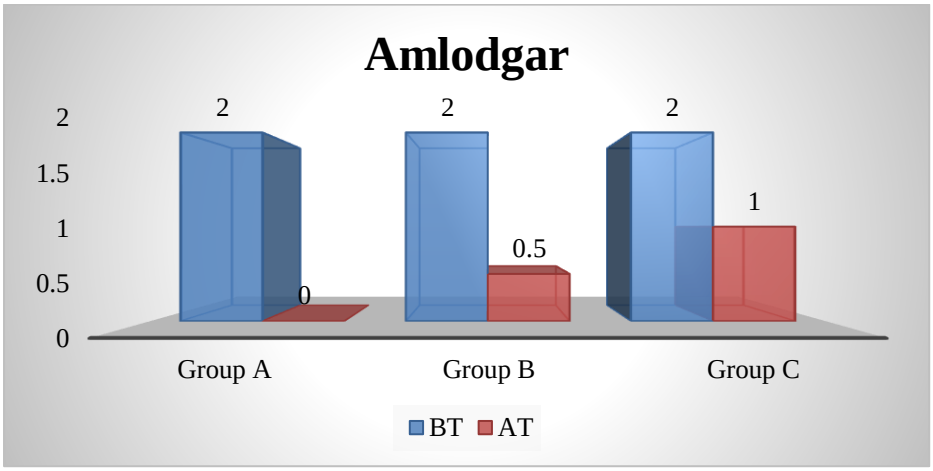


Table No: 4.14Inter group Analysis of Aamlodgar

Aamlodgar	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	109.21	22.802	0.000
Group B	70	125.64		
Group C	70	81.64		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Pitabhata

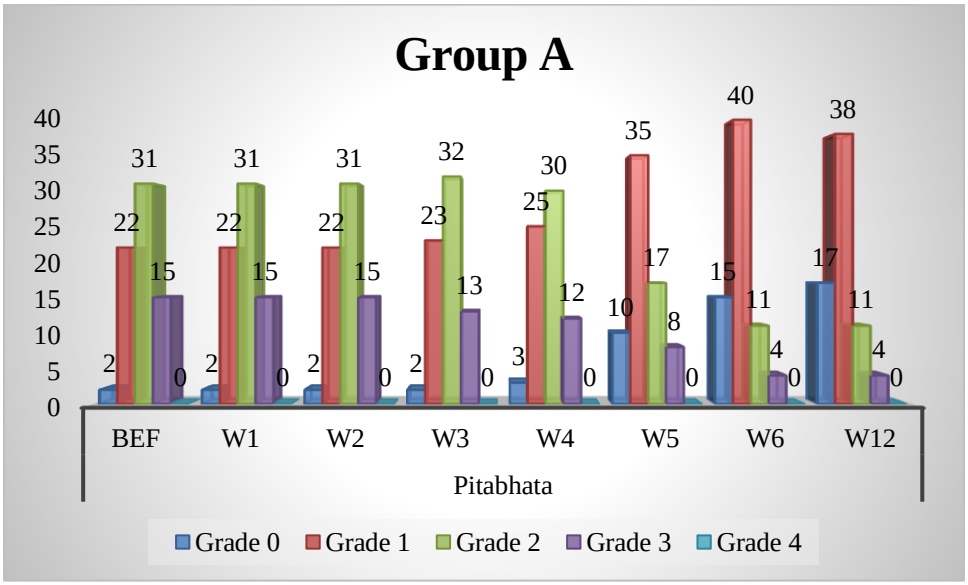
Here is the study of effect of dhatryarishta on the group A for the lakshan Pitabhata and observations are as follows.

Table No: 4.15

Incidence of symptom Pitabhata in group A

Group A	Pitabhata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	2	2	2	2	3	10	15	17
Grade 1	22	22	22	23	25	35	40	38
Grade 2	31	31	31	32	30	17	11	11
Grade 3	15	15	15	13	12	8	4	4
Grade 4	0	0	0	0	0	0	0	0

Graph No 14:



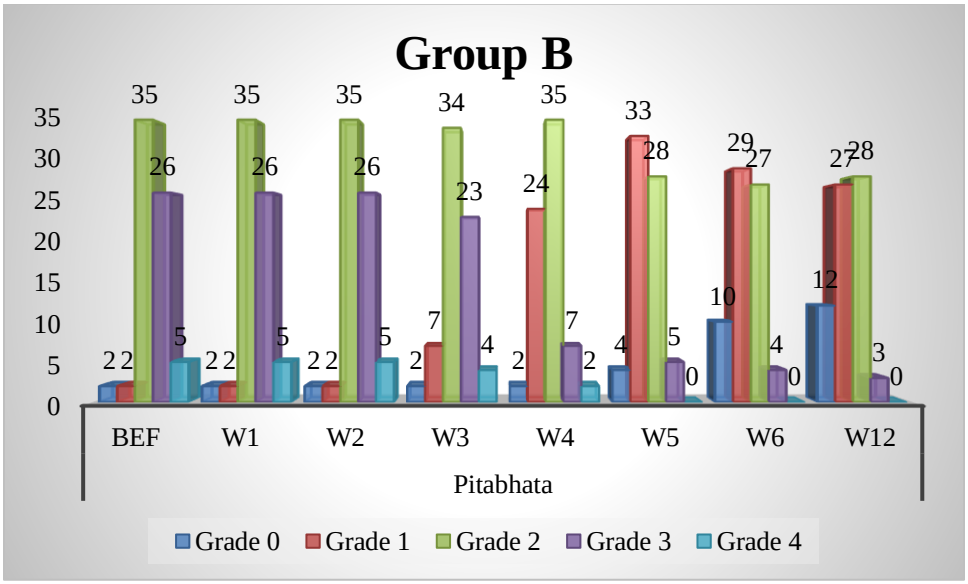
Here is the study of the effect of effect of Navayasa loha on the group B for the lakshan Pitabhata and observations are as follows.

Table No: 4.16

Incidence of symptom Pitabhata in group B

Group B	Pitabhata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	2	2	2	2	2	4	10	12
Grade 1	2	2	2	7	24	33	29	27
Grade 2	35	35	35	34	35	28	27	28
Grade 3	26	26	26	23	7	5	4	3
Grade 4	5	5	5	4	2	0	0	0

Graph No 15:



Here is the study of effect of Conventional iron supplement on the group C for the lakshan pitabhata and observations are as follows

Table No: 4.17

Incidence of symptom Pitabhata in group C

Group C	Pitabhata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	2	2	2	2	2	2	7	8
Grade 1	7	7	7	7	7	7	25	26
Grade 2	37	37	37	37	38	40	35	33
Grade 3	24	24	24	24	23	21	3	3
Grade 4	0	0	0	0	0	0	0	0

Graph No 16:

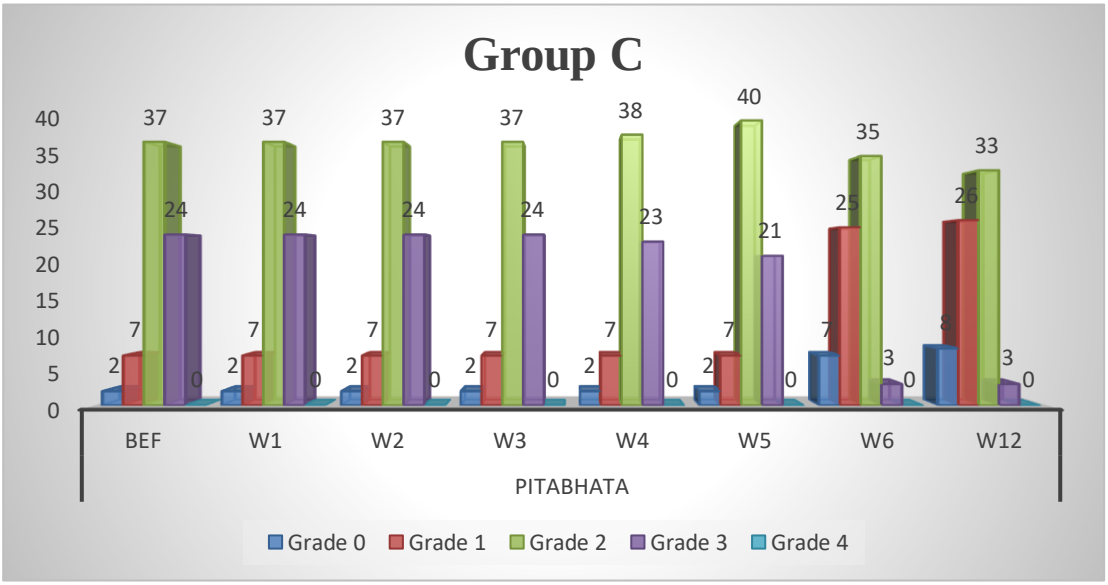


Table No: 4.18Intra Group Comparative Analysis of Pitabhata

Pitabhata	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	2	1	1	-6.784[a]	0.000	42.6	Significant
Group B	2	1	1	-7.499[a]	0.000	44.1	Significant
Group C	2	2	2	-7.000[a]	0.000	32.0	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups are significant.

Graph No 17:

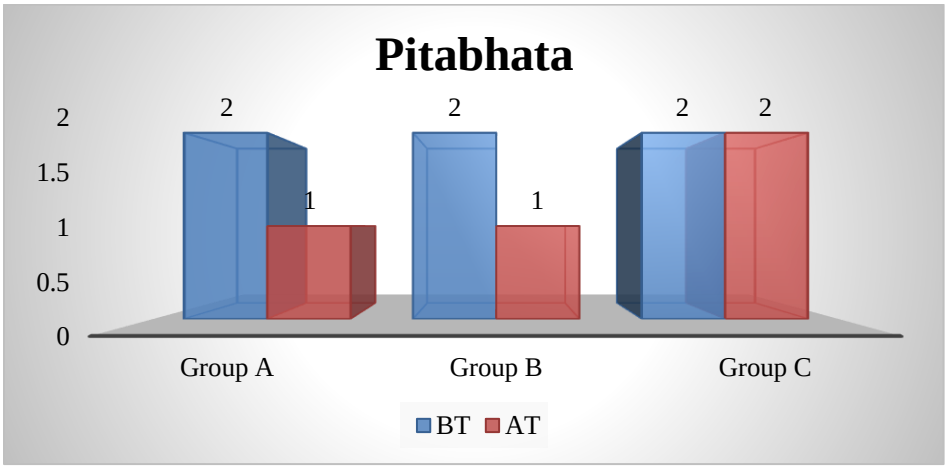


Table No: 4.19 Inter group Analysis of Pitabhata

Pitabhata	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	99.11	18.375	0.000
Group B	70	125.49		
Group C	70	91.90		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Haritabhata

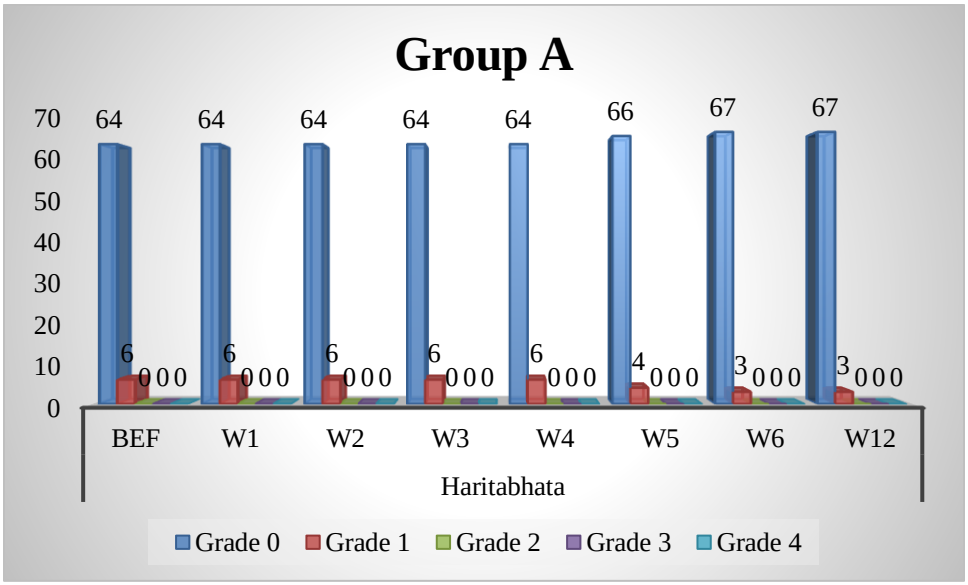
Haritabhata is one of the symptoms of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan haritabhata and observations are as follows.

Table No: 4.20

Incidence of symptom Haritabhata in group A

Group A	Haritabhata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	64	64	64	64	64	66	67	67
Grade 1	6	6	6	6	6	4	3	3
Grade 2	0	0	0	0	0	0	0	0
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 18:



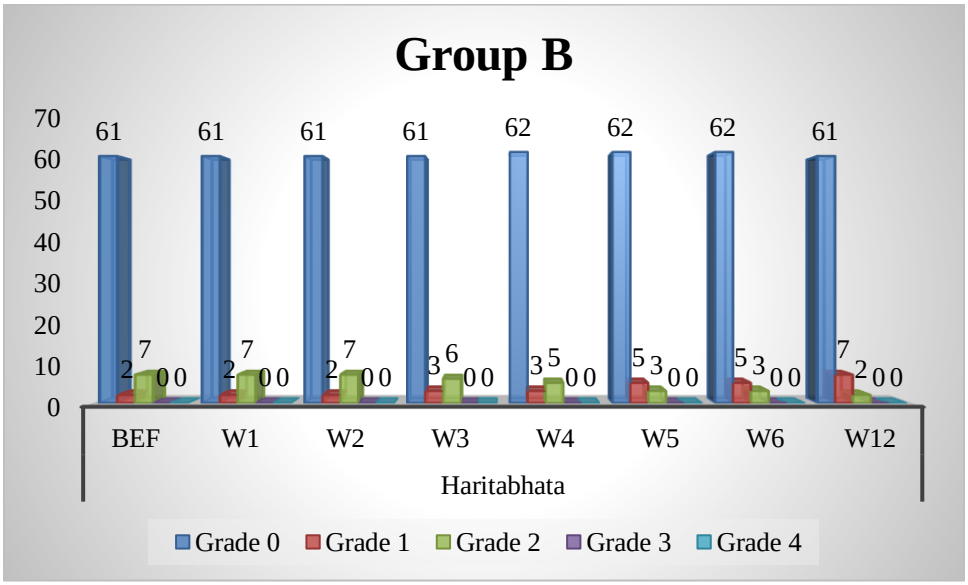
Here is the study of effect of Navayasa loha on the group B for the lakshan haritabhata and observations are as follows

Table No: 4.21

Incidence of symptom Haritabhata in group B

Group B	Haritabhata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	61	61	61	61	62	62	62	61
Grade 1	2	2	2	3	3	5	5	7
Grade 2	7	7	7	6	5	3	3	2
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 19:



Here is the study of the effect of Conventional iron supplements on the group C for the lakshan haritabhata and observations are as follows

Table No: 4.22

Incidence of symptom Hatitabhata in group C

Group C	Haritabhata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	61	61	61	61	61	61	61	61
Grade 1	1	1	1	1	1	1	5	5
Grade 2	7	7	7	7	7	7	3	3
Grade 3	1	1	1	1	1	1	1	1
Grade 4	0	0	0	0	0	0	0	0

Graph No 20:

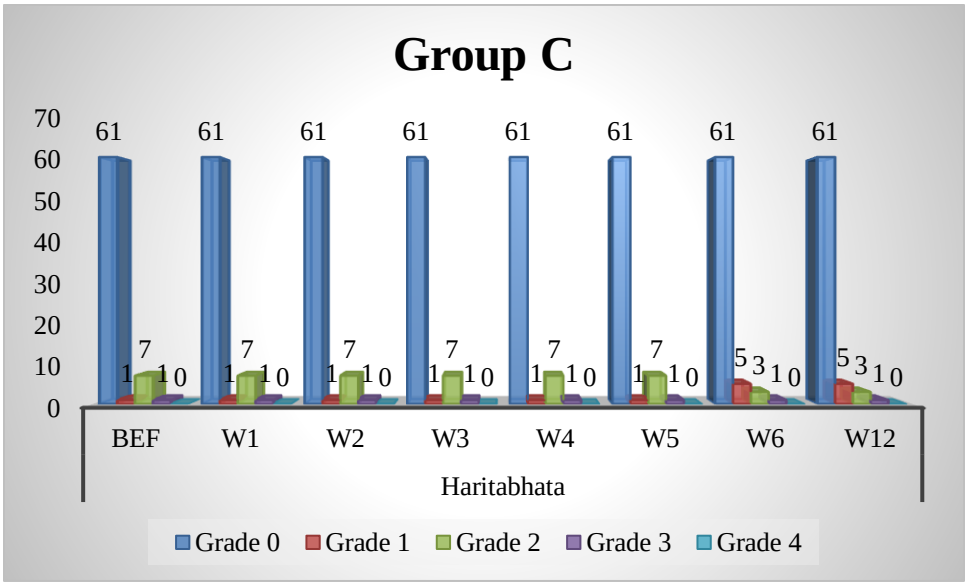


Table No: 4.23

Intra Group Comparative Analysis of Haritabhata

Haritabhata	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-2.212	0.035	50.0	Significant
Group B	0	0	0	-2.236[a]	0.025	30.3	Significant
Group C	0	0	0	-2.000[a]	0.046	22.2	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 21:

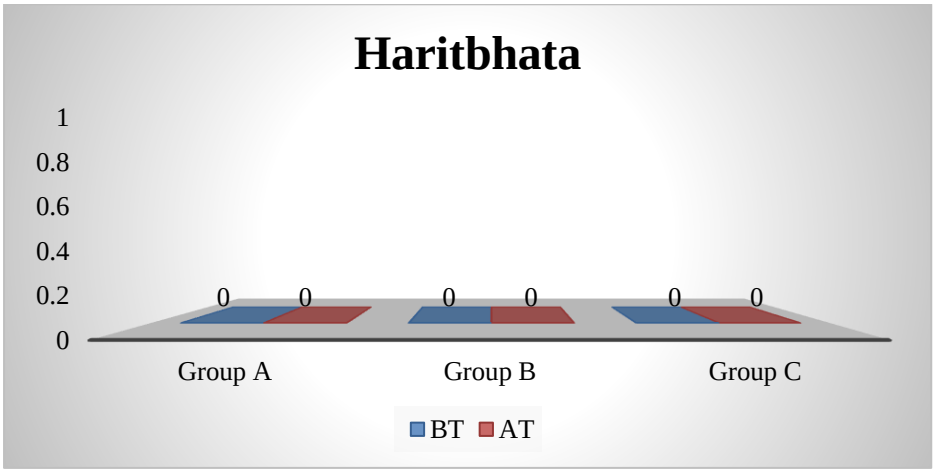


Table No: 4.24

Inter group Analysis of Haritabhata

Haritabhata	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	104.00	0.528	0.768
Group B	70	107.00		
Group C	70	105.50		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is greater than 0.05. Hence we conclude that there is no significant difference among effect of three groups.

Jwara

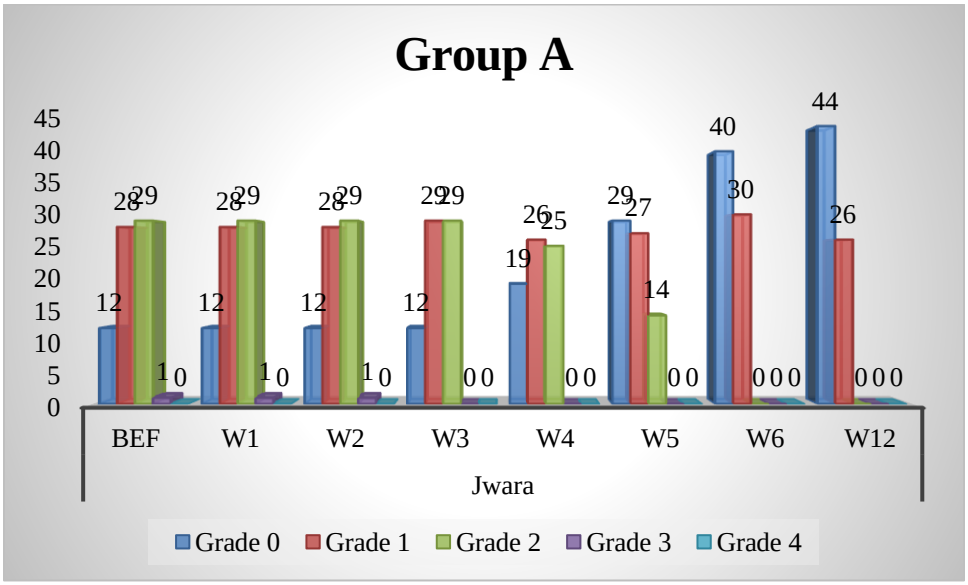
Jwara is one of major symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan jwara and observations are as follows.

Table No: 4.25

Incidence of symptom Jwara in group A

Group A	Jwara							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	12	12	12	12	19	29	40	44
Grade 1	28	28	28	29	26	27	30	26
Grade 2	29	29	29	29	25	14	0	0
Grade 3	1	1	1	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 22:



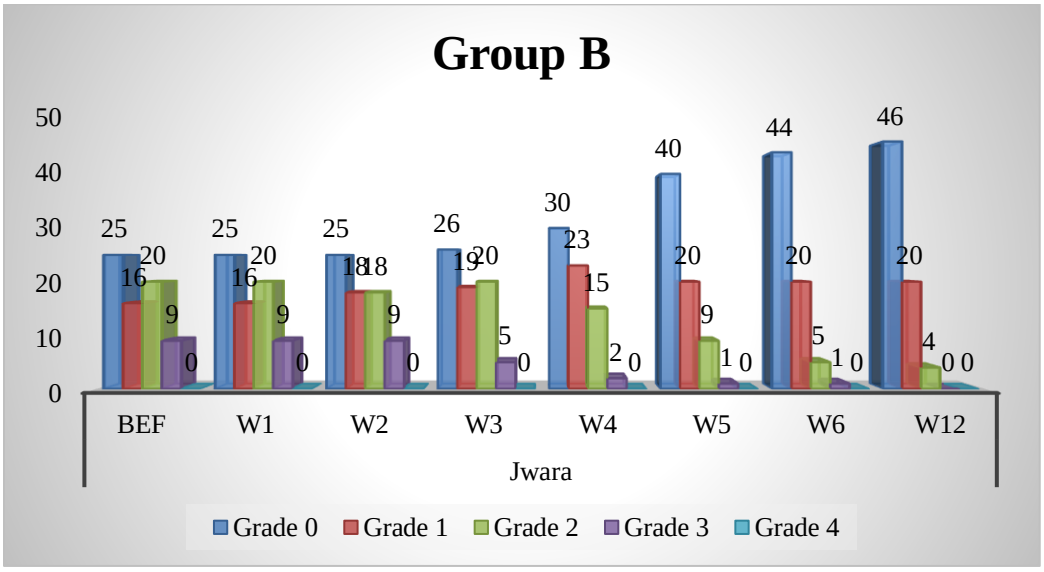
Here is the study of effect of Navayasa loha on the group B for the lakshan Jwara and observations are as follows

Table No: 4.26

Incidence of symptom Jwara in group B

Group B	Jwara							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	25	25	25	26	30	40	44	46
Grade 1	16	16	18	19	23	20	20	20
Grade 2	20	20	18	20	15	9	5	4
Grade 3	9	9	9	5	2	1	1	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 23:



Here is the study of effect of Conventional iron supplement on the group C for the lakshan Jwara and observations are as follows

Table No: 4.27

Incidence of symptom Jwara in group C

Group C	Jwara							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	26	26	26	26	26	27	34	35
Grade 1	13	13	13	13	14	21	30	29
Grade 2	30	30	30	31	30	22	6	6
Grade 3	1	1	1	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 24:

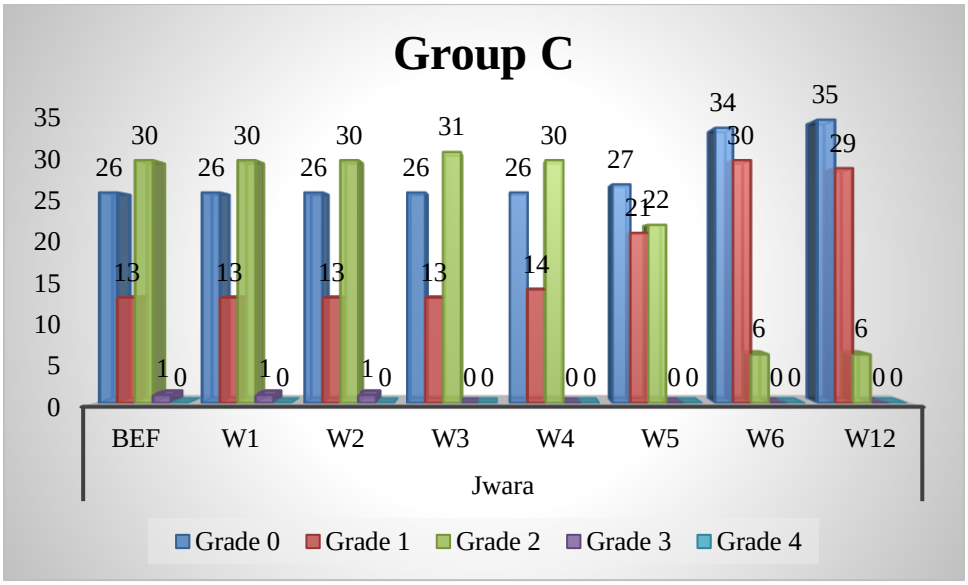


Table No: 4.28

Intra Group Comparative Analysis of Jwara

Jwara	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	1	0	0	-7.307	0.000	66.3	Significant
Group B	1	0	0	-6.051	0.000	60.2	Significant
Group C	1	1	0.5	-5.507	0.000	44.7	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 25:

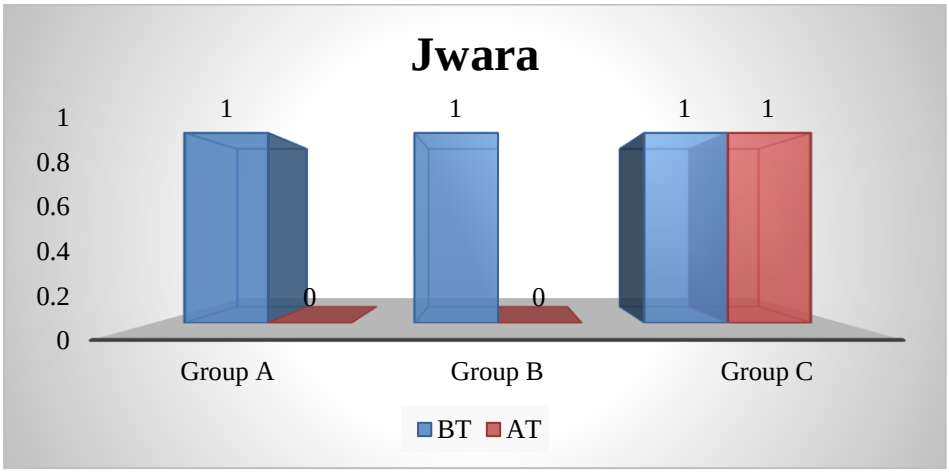


Table No: 4.29

Inter group Analysis of Jwara

Jwara	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	122.09	14.879	0.001
Group B	70	107.03		
Group C	70	87.39		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group A is more hence we conclude that effect observed in Group A is more than Group B and Group C.

Daha:

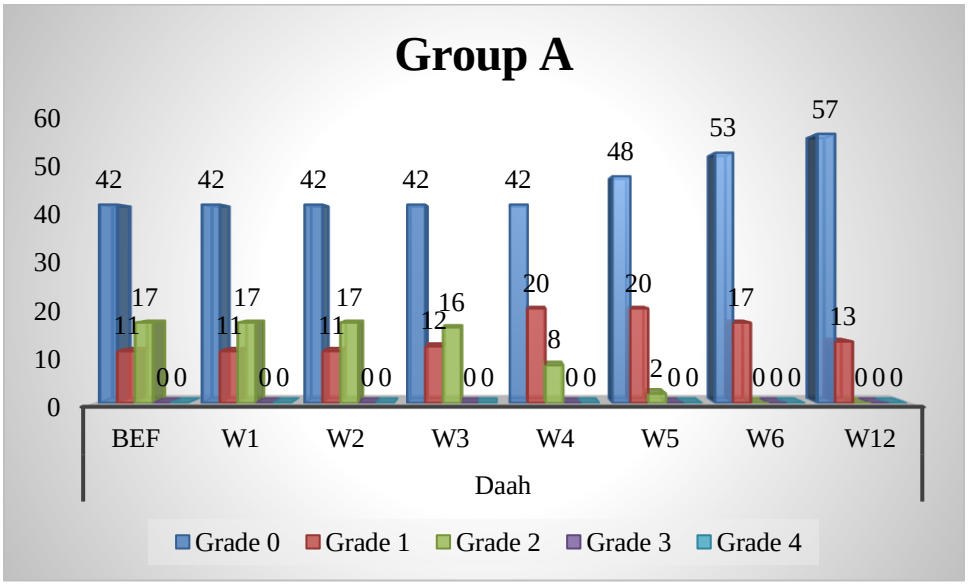
Daha is one of symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan daha and observations are as follows.

Table No: 4.30

Incidence of symptom Daah in group A

Group A	Daah							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	42	42	42	42	42	48	53	57
Grade 1	11	11	11	12	20	20	17	13
Grade 2	17	17	17	16	8	2	0	0
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 26:



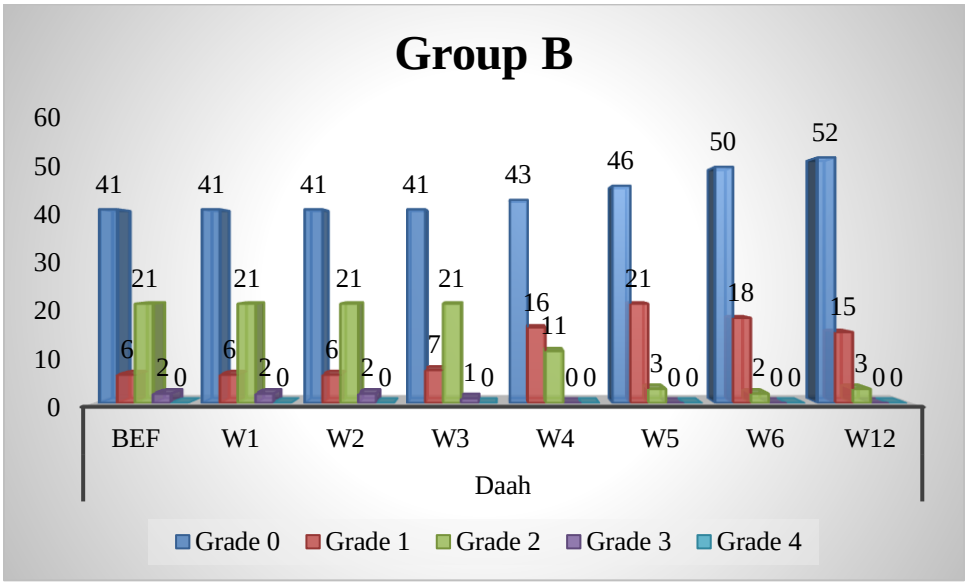
Here is the study of effect of Navayasa loha on the group B for the lakshan daha and observations are as follows

Table No: 4.31

Incidence of symptom Daah in group B

Group B	Daah							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	41	41	41	41	43	46	50	52
Grade 1	6	6	6	7	16	21	18	15
Grade 2	21	21	21	21	11	3	2	3
Grade 3	2	2	2	1	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 27:



Here is the study of effect of Conventional iron supplement on the group C for the lakshan daah and observations are as follows

Table No: 4.32

Incidence of symptom Daah in group C

Group C	Daah							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	48	48	48	48	48	48	48	49
Grade 1	4	4	4	4	4	4	14	14
Grade 2	16	16	16	16	16	16	8	7
Grade 3	2	2	2	2	2	2	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 28:

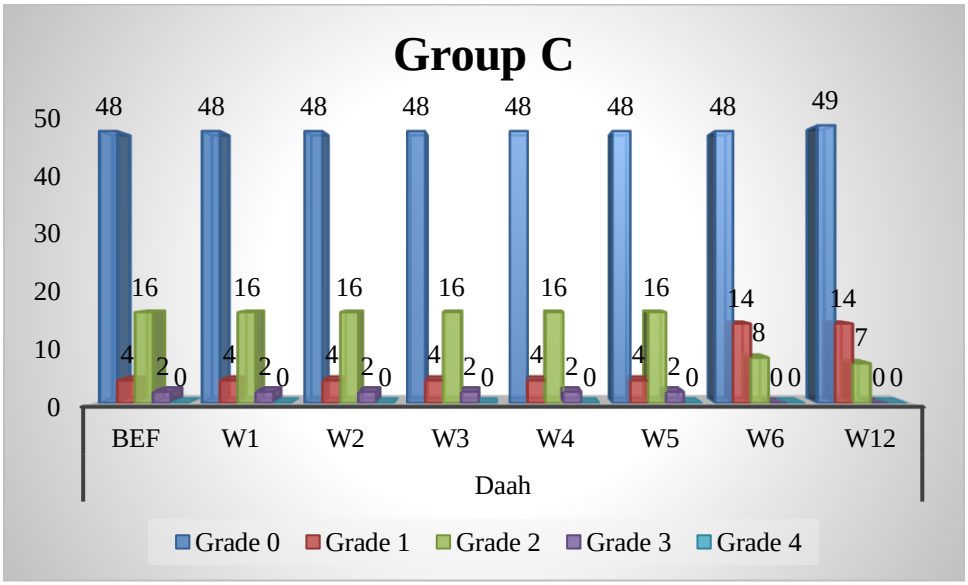


Table No: 4.33

Intra Group Comparative Analysis of Daha

Daah	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-4.772[a]	0.000	62.2	Significant
Group B	0	0	0	-4.866[a]	0.000	59.3	Significant
Group C	0	0	0	-3.464[a]	0.001	28.6	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant

Graph No 29:

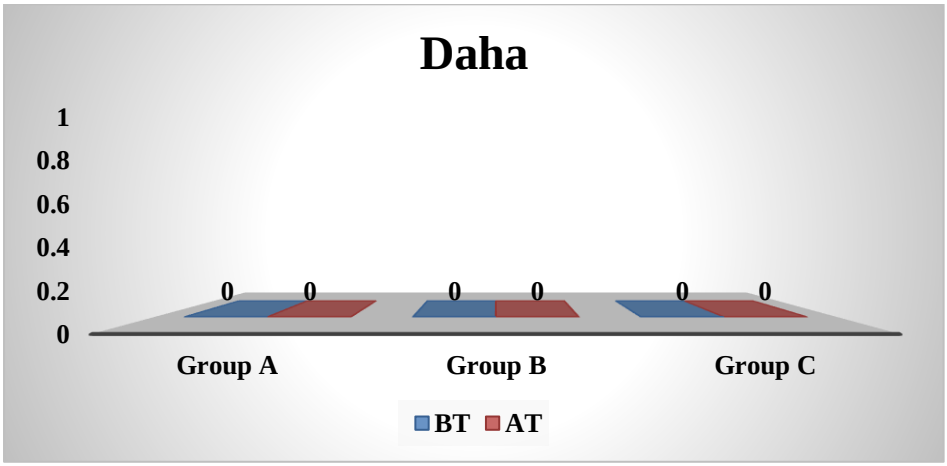


Table No: 4.34

Inter group Analysis of Daha

Daah	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	110.94	9.721	0.008
Group B	70	114.74		
Group C	70	90.81		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Trishna:

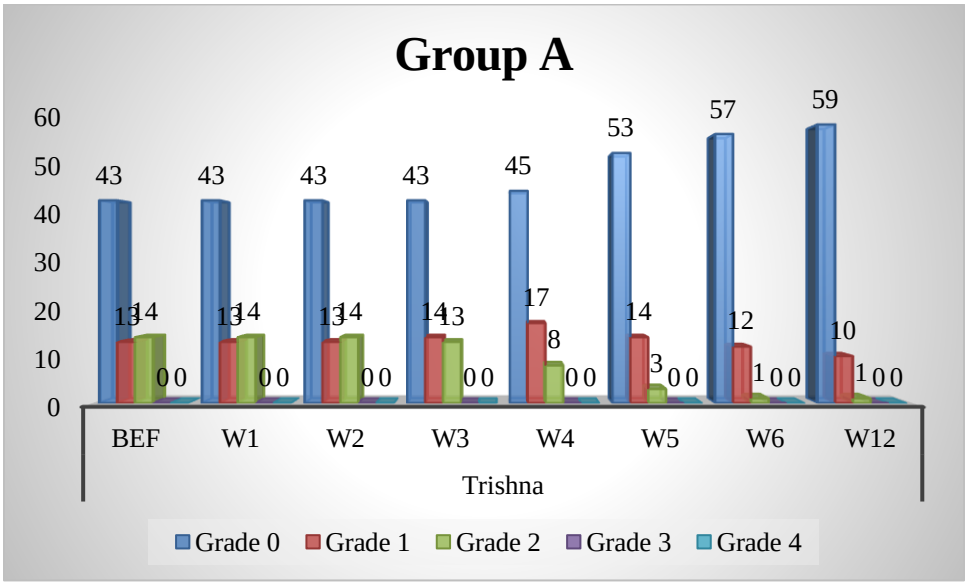
Trishna is one of symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan trishna and observations are as follows.

Table No: 4.35

Incidence of symptomTrishna in group A

Group A	Trishna							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	43	43	43	43	45	53	57	59
Grade 1	13	13	13	14	17	14	12	10
Grade 2	14	14	14	13	8	3	1	1
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 30:



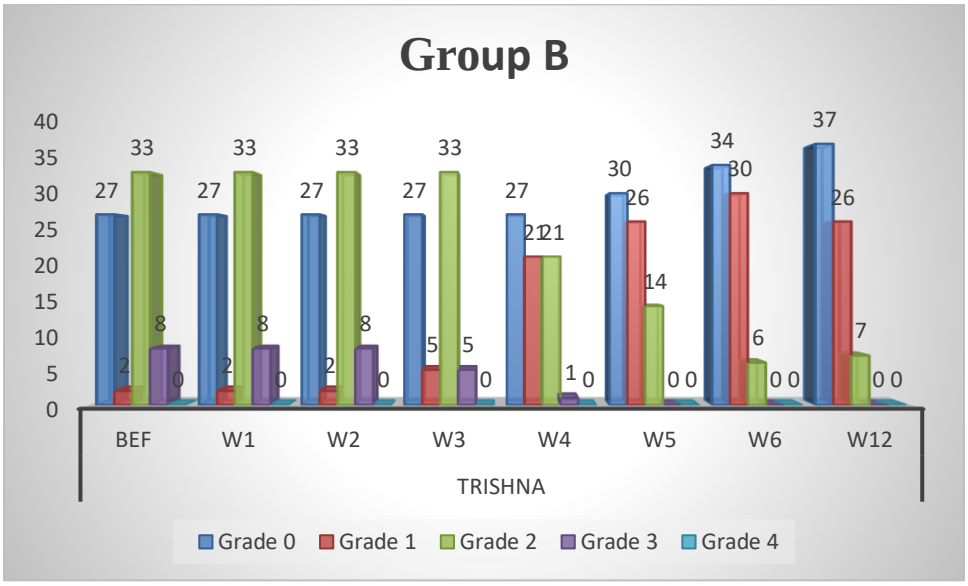
Here is the study of effect of Navayasa loha on the group B for the lakshan trishna and observations are as follows

Table No: 4.36

Incidence of symptom Trishna in group B

Group B	Trishna							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	27	27	27	27	27	30	34	37
Grade 1	2	2	2	5	21	26	30	26
Grade 2	33	33	33	33	21	14	6	7
Grade 3	8	8	8	5	1	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 31:



Here is the study of effect of Conventional iron supplements on the group C for the lakshan Trishna and observations are as follows

Table No: 4.37

Incidence of symptom Trishna in group C

Group C	Trishna							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	45	45	45	45	45	45	46	46
Grade 1	2	2	2	2	4	6	13	14
Grade 2	20	20	20	20	18	17	10	10
Grade 3	3	3	3	3	3	2	1	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 32:

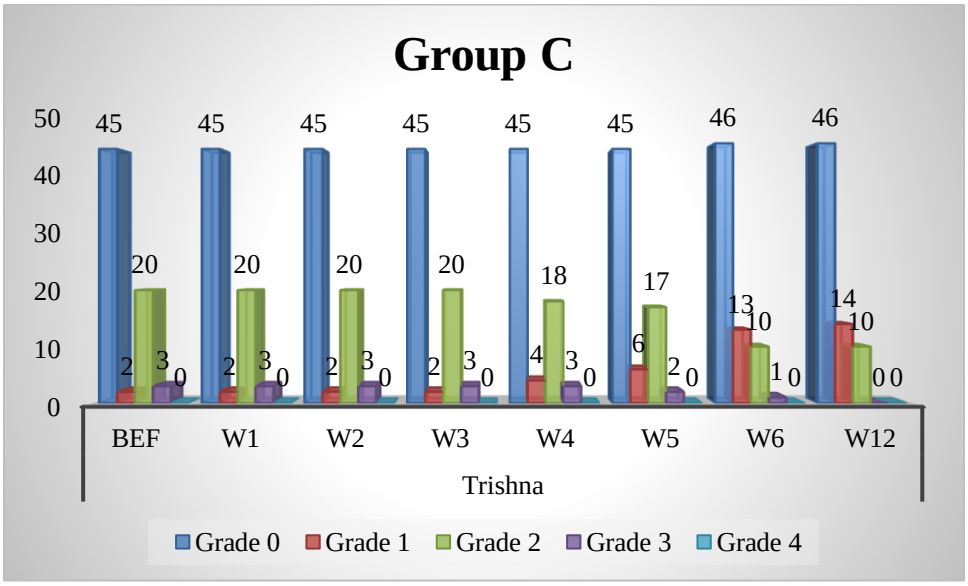


Table No: 4.38

Intra Group Comparative Analysis of Trishna

Trishna	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-4.838[a]	0.000	65.9	Significant
Group B	2	1	0	-5.719[a]	0.000	53.7	Significant
Group C	0	0	0	-3.638[a]	0.000	29.4	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effects observed in all three groups are significant.

Graph No 33:

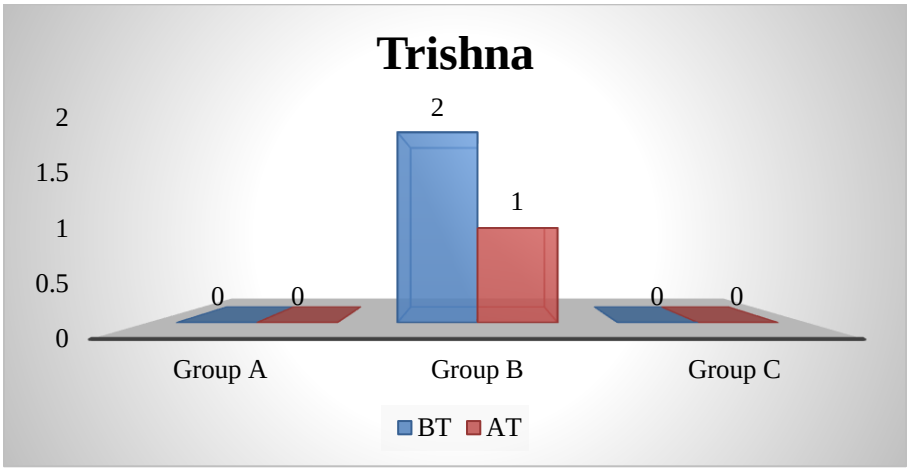


Table No: 4.39

Inter group Analysis of Trishna

Trishna	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	102.61	21.906	0.000
Group B	70	127.23		
Group C	70	86.66		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Murcha:

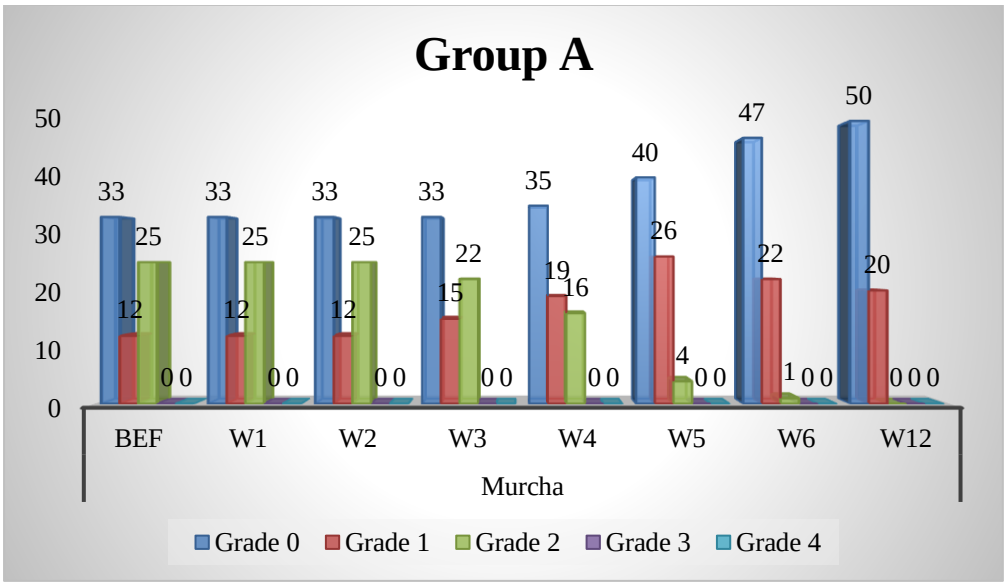
Murcha is one of major symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan murcha and observations are as follows.

Table No: 4.40

Incidence of symptomMurcha in group A

Group A	Murcha							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	33	33	33	33	35	40	47	50
Grade 1	12	12	12	15	19	26	22	20
Grade 2	25	25	25	22	16	4	1	0
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 34:



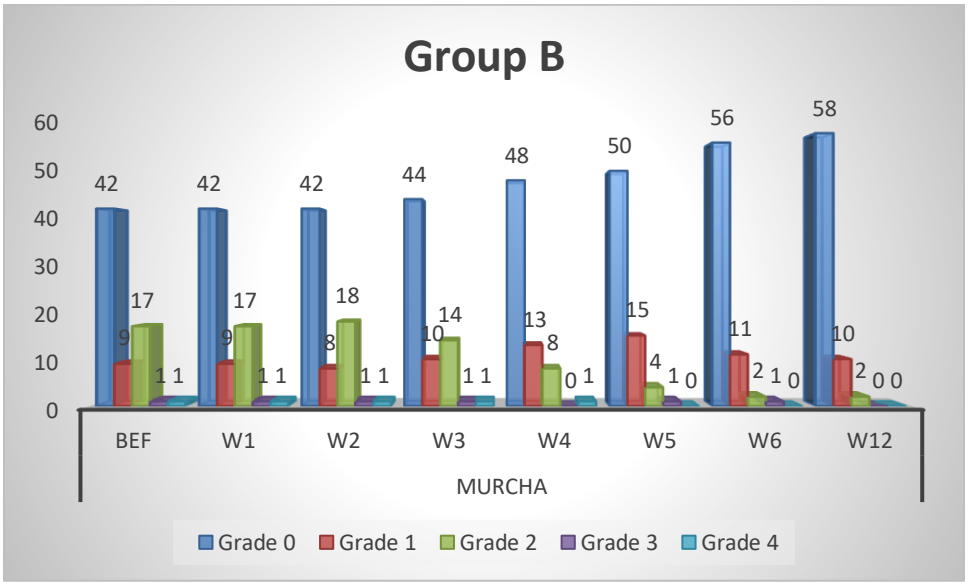
Here is the study of effect of Navayasa loha on the group B for the lakshan murcha and observations are as follows

Table No: 4.41

Incidence of symptom Murcha in group B

Group B	Murcha							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	42	42	42	44	48	50	56	58
Grade 1	9	9	8	10	13	15	11	10
Grade 2	17	17	18	14	8	4	2	2
Grade 3	1	1	1	1	0	1	1	0
Grade 4	1	1	1	1	1	0	0	0

Graph No 35:



Here is the study of effect of Conventional iron supplement on the group C for the lakshan murcha and observations are as follows

Table No: 4.42

Incidence of symptom Murcha in group C

Group C	Murcha							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	41	41	41	41	41	41	43	45
Grade 1	1	1	1	1	1	4	16	17
Grade 2	23	23	23	23	23	22	11	8
Grade 3	5	5	5	5	5	3	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 36:

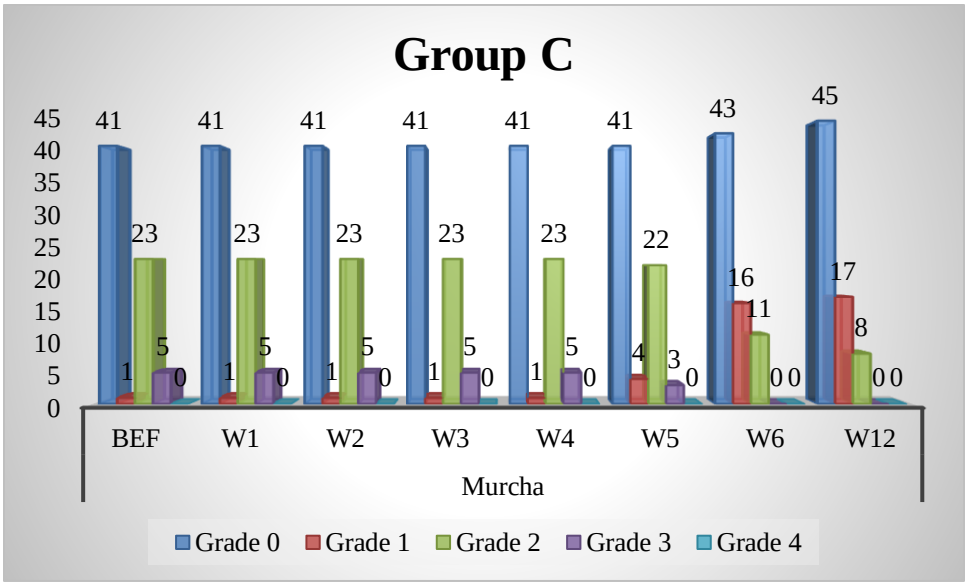


Table No: 4.43

Intra Group Comparative Analysis of Murcha

Murcha	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	1	0	0	-5.652	0.000	61.9	Significant
Group B	0	0	0	-4.590	0.000	64.0	Significant
Group C	0	0	0	-4.707	0.000	38.7	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 37:

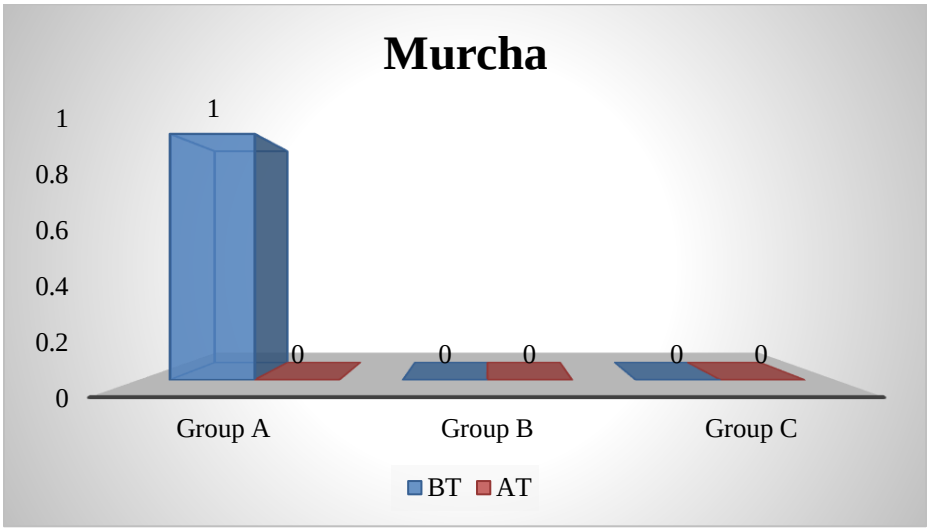


Table No: 4.44

Inter group Analysis of Murcha

Murcha	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	115.87	4.656	0.048
Group B	70	103.51		
Group C	70	97.12		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is greater than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group A is more hence we conclude that effect observed in Group A is more than Group B and Group C.

Sweda:

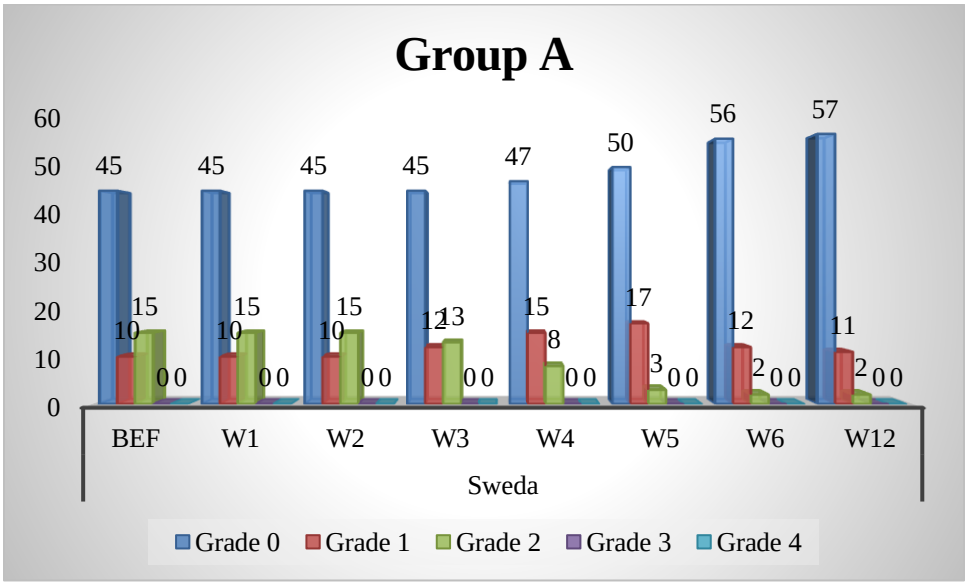
Sweda is one of symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan sweda and observations are as follows.

Table No: 4.45

Incidence of symptom Sweda in group A

Group A	Sweda							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	45	45	45	45	47	50	56	57
Grade 1	10	10	10	12	15	17	12	11
Grade 2	15	15	15	13	8	3	2	2
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 3 :



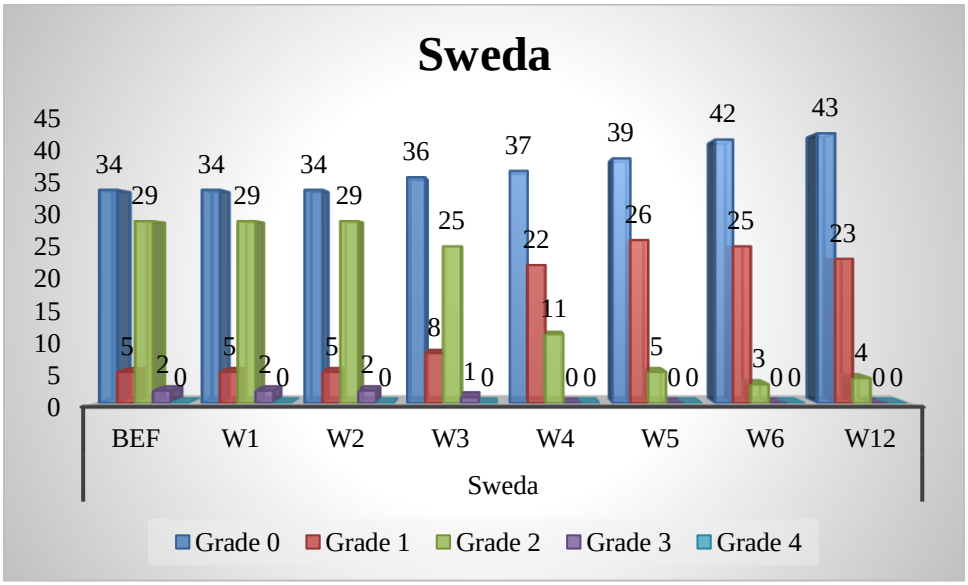
Here is the study of effect of Navayasa loha on the group B for the lakshan sweda and observations are as follows

Table No: 4.46

Incidence of symptom Sweda in group B

Group B	Sweda							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	34	34	34	36	37	39	42	43
Grade 1	5	5	5	8	22	26	25	23
Grade 2	29	29	29	25	11	5	3	4
Grade 3	2	2	2	1	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 39:



Here is the study of effect of Conventional iron supplements on the group C for the lakshan sweda and observations are as follows

Table No: 4.47

Incidence of symptom Sweda in group C

Group C	Sweda							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	37	37	37	37	37	37	38	38
Grade 1	0	0	0	0	1	3	8	9
Grade 2	25	25	25	25	25	24	21	20
Grade 3	8	8	8	8	7	6	3	3
Grade 4	0	0	0	0	0	0	0	0

Graph No 40:

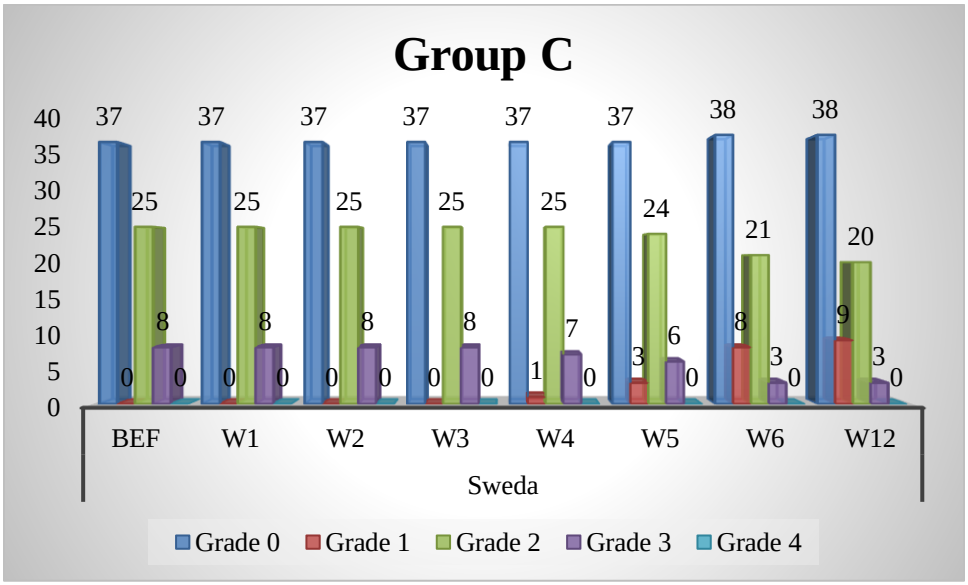


Table No: 4.48

Intra Group Comparative Analysis of Sweda

Sweda	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-4.021[a]	0.000	60.0	Significant
Group B	1	0	0	-5.291[a]	0.000	55.1	Significant
Group C	0	0	0	-3.638[a]	0.000	20.3	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 41:

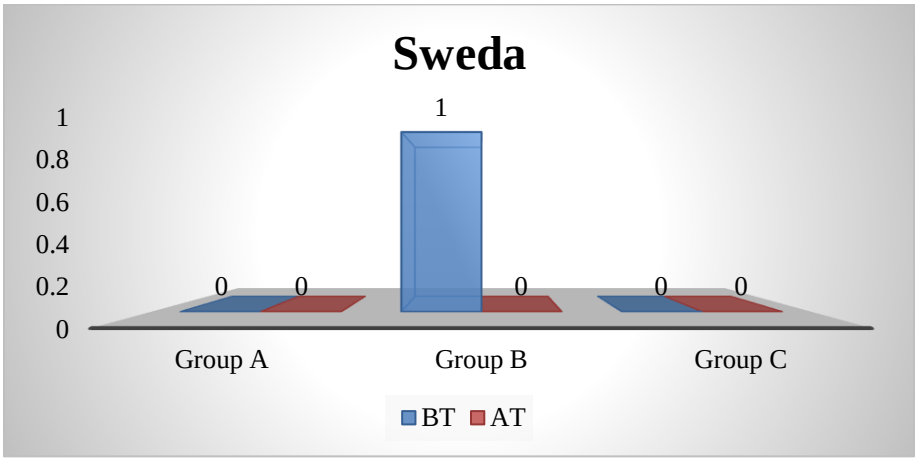


Table No: 4.49

Inter group Anaiysis of Sweda

Sweda	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	102.19	11.649	0.003
Group B	70	121.04		
Group C	70	93.26		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Shitakamata:

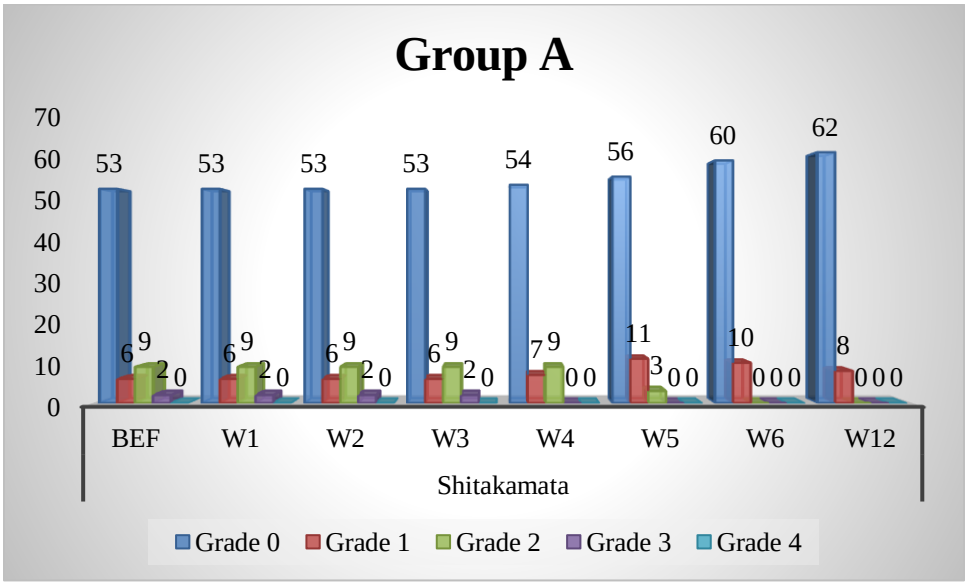
Shitakamata is one of the symptoms of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan shitakamata and observations are as follows.

Table No: 4.50

Incidence of symptom Shitakamata in group A

Group A	Shitakamata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	53	53	53	53	54	56	60	62
Grade 1	6	6	6	6	7	11	10	8
Grade 2	9	9	9	9	9	3	0	0
Grade 3	2	2	2	2	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 42:



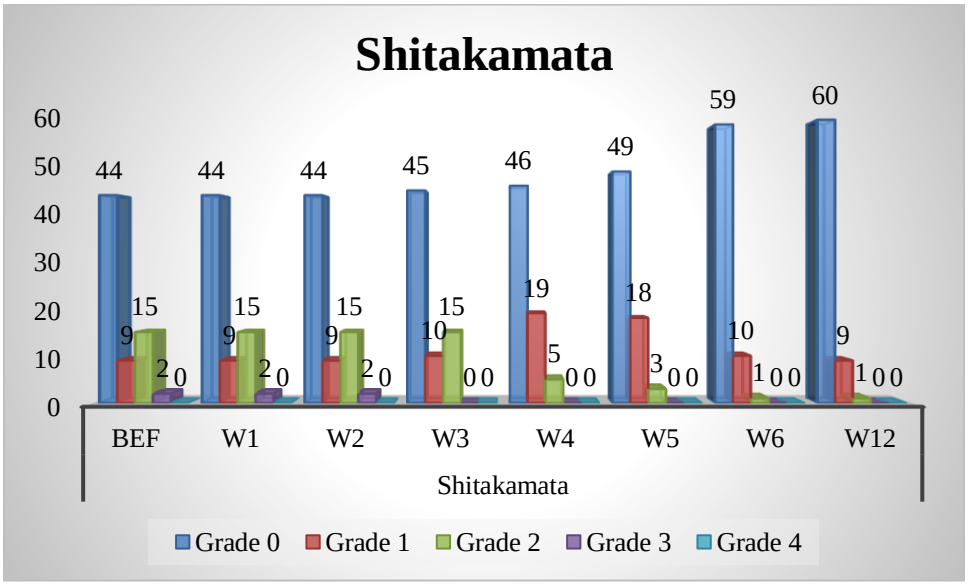
Here is the study of effect of Navayasa loha on the group B for the lakshan Shitakamata and observations are as follows

Table No: 4.51

Incidence of symptom Shitakamata in group B

Group B	Shitakamata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	44	44	44	45	46	49	59	60
Grade 1	9	9	9	10	19	18	10	9
Grade 2	15	15	15	15	5	3	1	1
Grade 3	2	2	2	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 43:



Here is the study of effect of Conventional iron supplements on the group C for the lakshan Shitakamata and observations are as follows

Table No: 4.52

Incidence of symptom Shitakamata in group C

Group C	Shitakamata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	52	52	52	52	52	52	52	52
Grade 1	2	2	2	2	2	4	10	11
Grade 2	16	16	16	16	16	14	8	7
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 44:

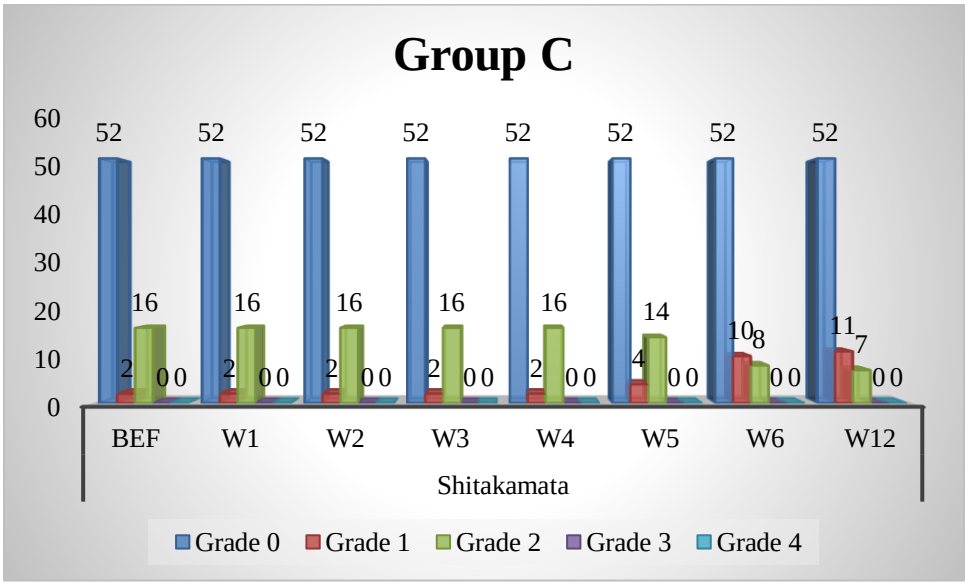


Table No: 4.53

Intra Group Comparative Analysis of Shitakamata

Shitakamata	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-3.704[a]	0.000	66.7	Significant
Group B	0	0	0	-4.562[a]	0.000	73.3	Significant
Group C	0	0	0	-2.828[a]	0.005	23.5	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 45:

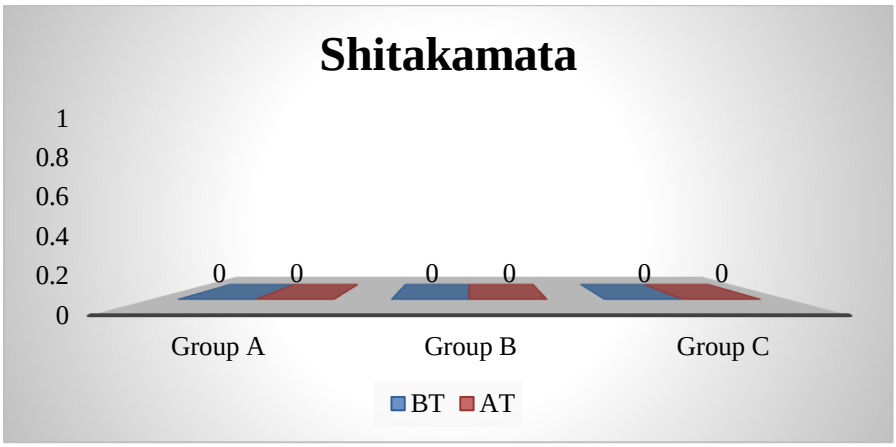


Table No: 4.54

Inter group Analysis of Shitakamata

Shitakamata	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	105.03	12.573	0.002
Group B	70	119.16		
Group C	70	92.31		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Annabhinandana:

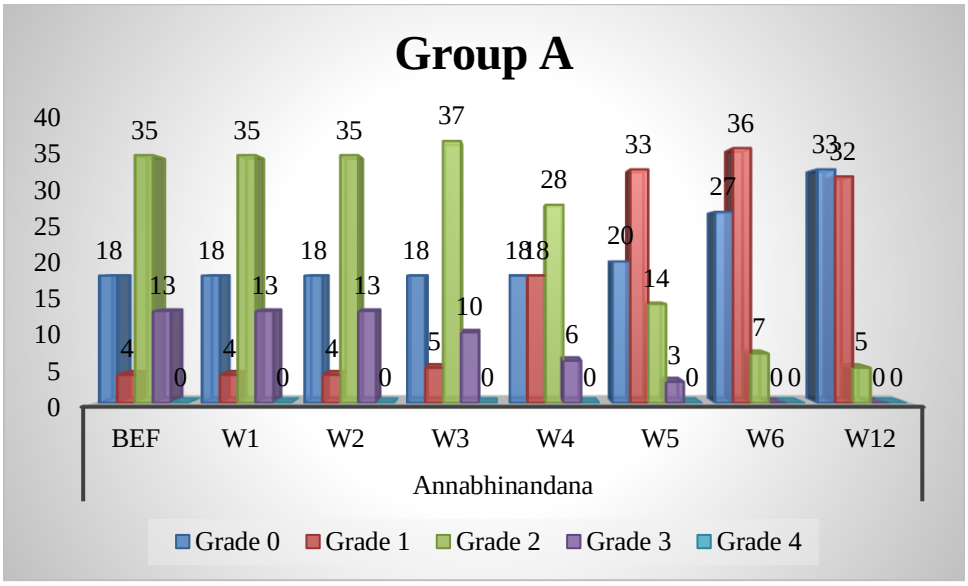
Annabhinandana is one of major symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan Annabhinandana and observations are as follows.

Table No: 4.55

Incidence of symptom Annabhinandana in group A

Group A	Annabhinandana							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	18	18	18	18	18	20	27	33
Grade 1	4	4	4	5	18	33	36	32
Grade 2	35	35	35	37	28	14	7	5
Grade 3	13	13	13	10	6	3	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 46:



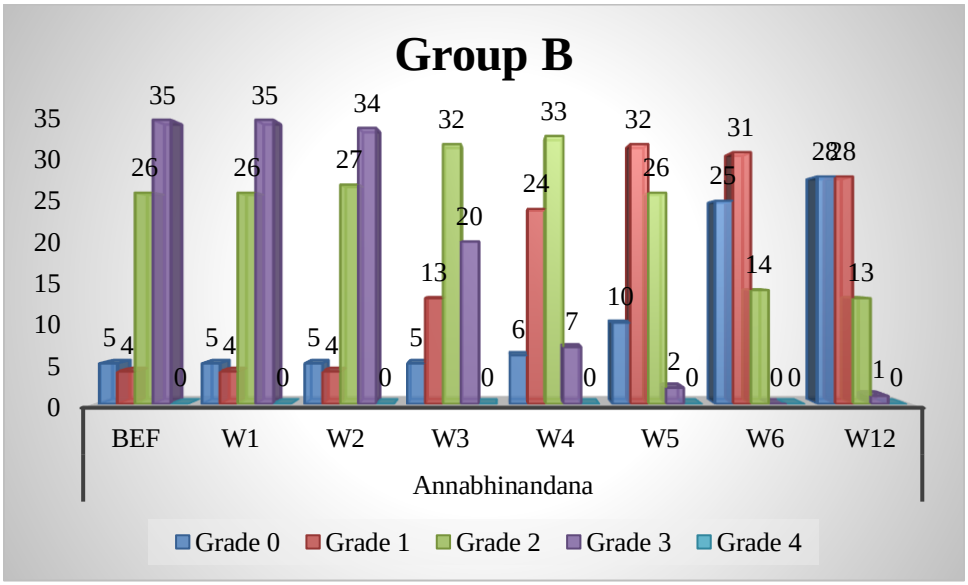
Here is the study of effect of Navayasa loha on the group B for the lakshan Annabhinandana and observations are as follows

Table No: 4.56

Incidence of symptom Annabhinandana in group B

Group B	Annabhinandana							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	5	5	5	5	6	10	25	28
Grade 1	4	4	4	13	24	32	31	28
Grade 2	26	26	27	32	33	26	14	13
Grade 3	35	35	34	20	7	2	0	1
Grade 4	0	0	0	0	0	0	0	0

Graph No 47:



Here is the study of effect of Conventional iron supplements on the group C for the lakshan Annabhinandana and observations are as follows

Table No: 4.57

Incidence of symptom Annabhinandana in group C

Group C	Annabhinandana							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	14	14	14	14	14	15	16	19
Grade 1	1	1	1	1	2	7	23	23
Grade 2	31	31	31	31	35	33	30	28
Grade 3	24	24	24	24	19	15	1	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 48:

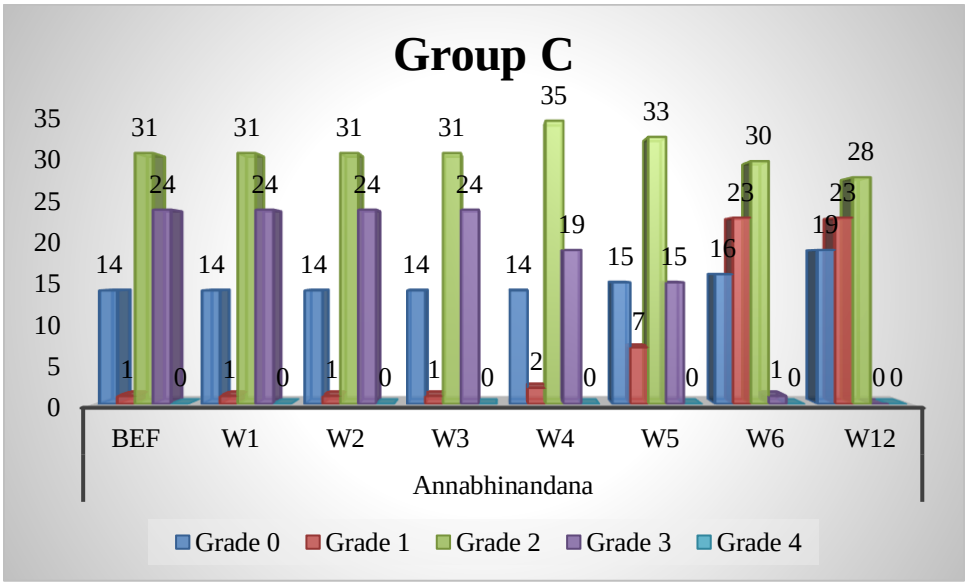


Table No: 4.58

Intra Group Comparative Analysis of Annabhinandana

Annabhinandana	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	2	1	1	-6.594	0.000	55.8	Significant
Group B	2.5	1	1	-7.114	0.000	63.4	Significant
Group C	2	1	1	-6.726	0.000	36.3	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 49:

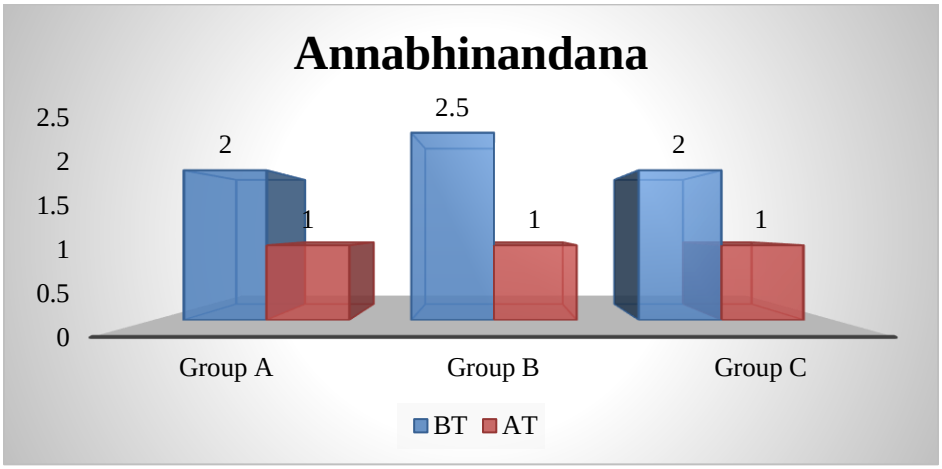


Table No: 4.59

Inter group Analysis of Annabhinandana

Annabhinandana	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	96.55	41.982	0.000
Group B	70	139.30		
Group C	70	80.65		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Katukasyata:

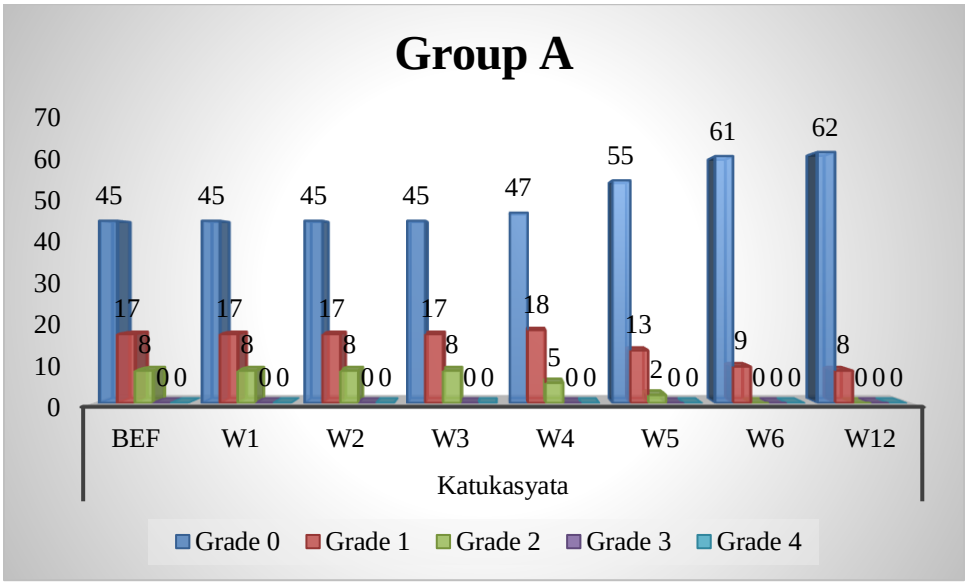
Katukasyata is one of major symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan Katukasyata and observations are as follows.

Table No: 4.60

Incidence of symptom Katukasyata in group A

Group A	Katukasyata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	45	45	45	45	47	55	61	62
Grade 1	17	17	17	17	18	13	9	8
Grade 2	8	8	8	8	5	2	0	0
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 50:



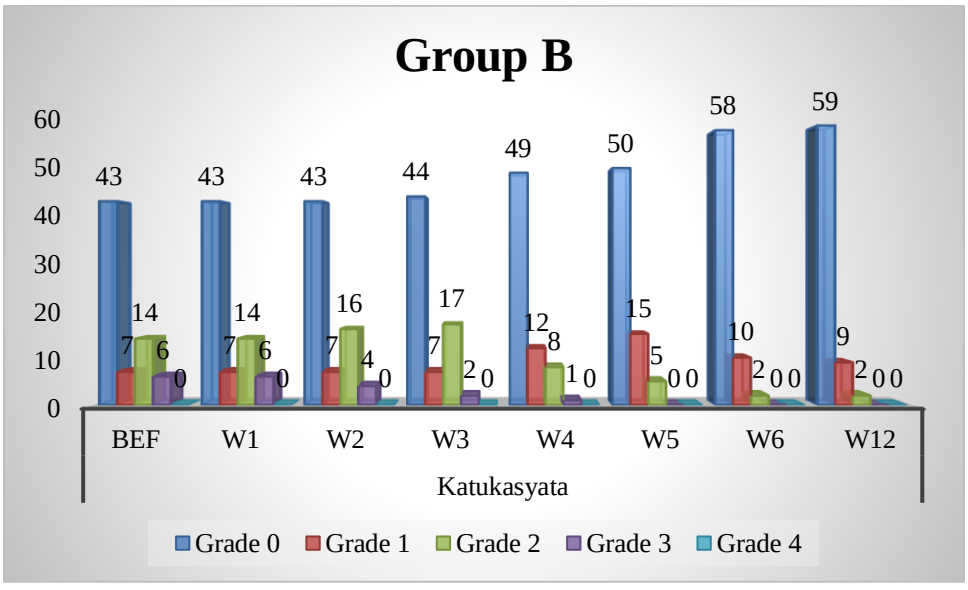
Here is the study of effect of Navayasa loha on the group B for the lakshanKatukasyata and observations are as follows

Table No: 4.61

Incidence of symptom Katukasyata in group B

Group B	Katukasyata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	43	43	43	44	49	50	58	59
Grade 1	7	7	7	7	12	15	10	9
Grade 2	14	14	16	17	8	5	2	2
Grade 3	6	6	4	2	1	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 51:



Here is the study of effect of Conventional iron supplement on the group C for the lakshan Katukasyata and observations are as follows

Table No: 4.62

Incidence of symptom Katukasyata in group C

Group C	Katukasyata							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	51	51	51	51	51	52	53	53
Grade 1	5	5	5	5	5	6	14	15
Grade 2	14	14	14	14	14	12	3	2
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 52:

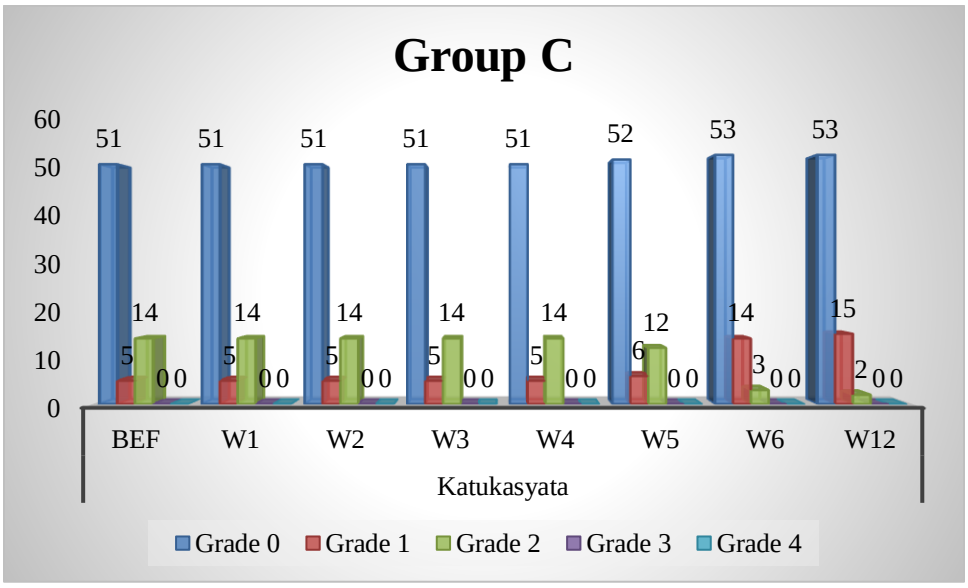


Table No: 4.63

Intra Group Comparative Analysis of Katukasyata

Katukasyata	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-4.523[a]	0.000	72.7	Significant
Group B	0	0	0	-4.584[a]	0.000	73.6	Significant
Group C	0	0	0	-3.606[a]	0.000	39.4	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 53:

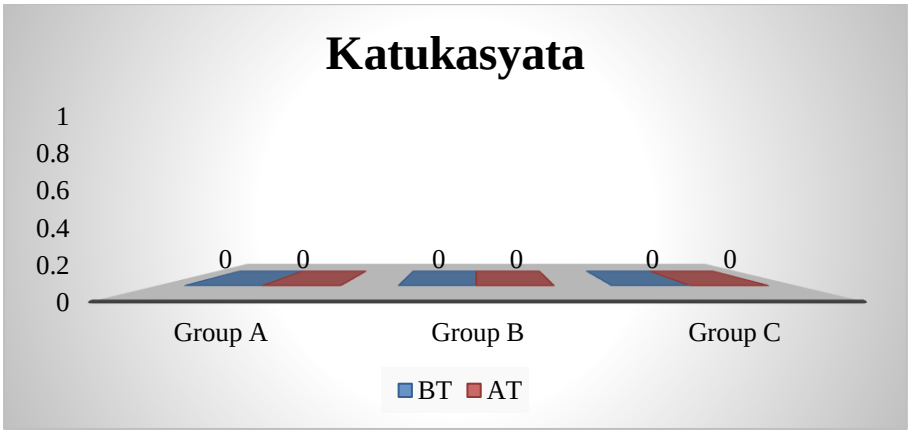


Table No: 4.64

Inter group Analysis of Katukasyata

Katukasyata	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	106.66	8.311	0.016
Group B	70	116.64		
Group C	70	93.20		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Ushananupashayta:

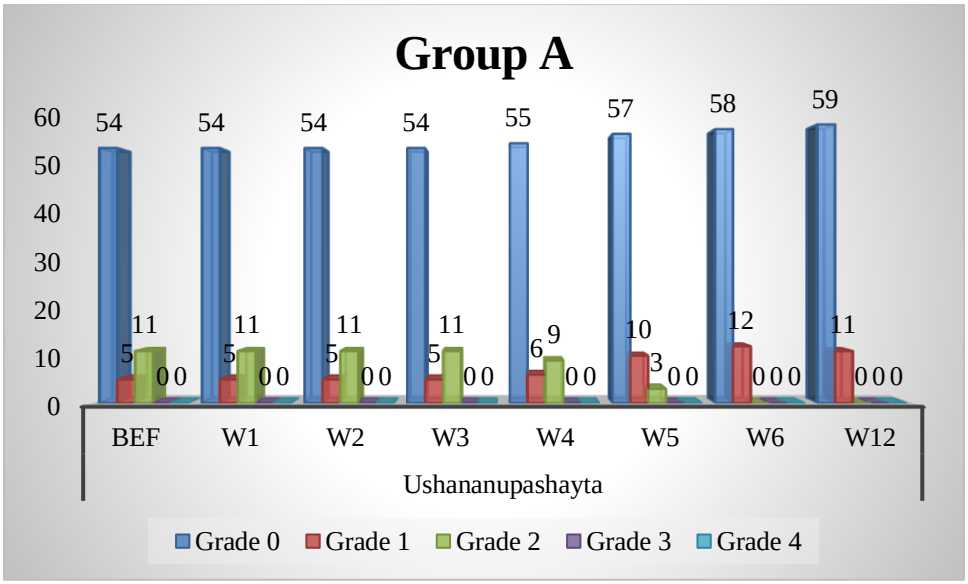
Ushananupashayta is one of symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan Ushananupashayta and observations are as follows.

Table No: 4.65

Incidence of symptom Ushananupashayta in group A

Group A	Ushananupashayta							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	54	54	54	54	55	57	58	59
Grade 1	5	5	5	5	6	10	12	11
Grade 2	11	11	11	11	9	3	0	0
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 54:



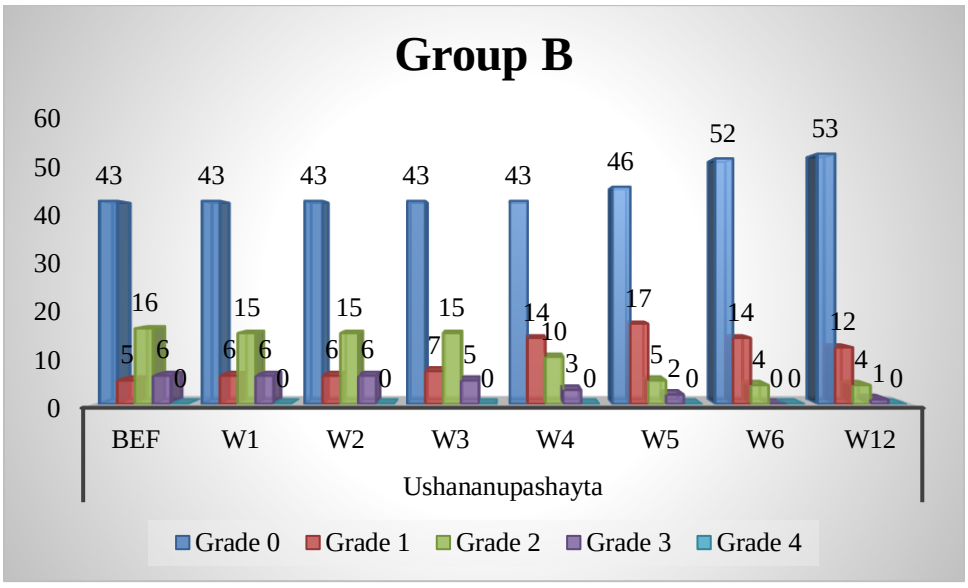
Here is the study of effect of Navayasa loha on the group B for the lakshan Ushananupashayta and observations are as follows

Table No: 4.66

Incidence of symptom Ushananupashayta in group B

Group B	Ushananupashayta							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	43	43	43	43	43	46	52	53
Grade 1	5	6	6	7	14	17	14	12
Grade 2	16	15	15	15	10	5	4	4
Grade 3	6	6	6	5	3	2	0	1
Grade 4	0	0	0	0	0	0	0	0

Graph No 55:



Here is the study of effect of Conventional iron supplements on the group C for the lakshan Ushananupashayta and observations are as follows

Table No: 4.67

Incidence of symptom Ushananupashayta in group C

Group C	Ushananupashayta							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	47	47	47	47	47	48	49	49
Grade 1	4	4	4	4	4	6	11	12
Grade 2	17	17	17	17	17	15	10	9
Grade 3	2	2	2	2	2	1	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 56:

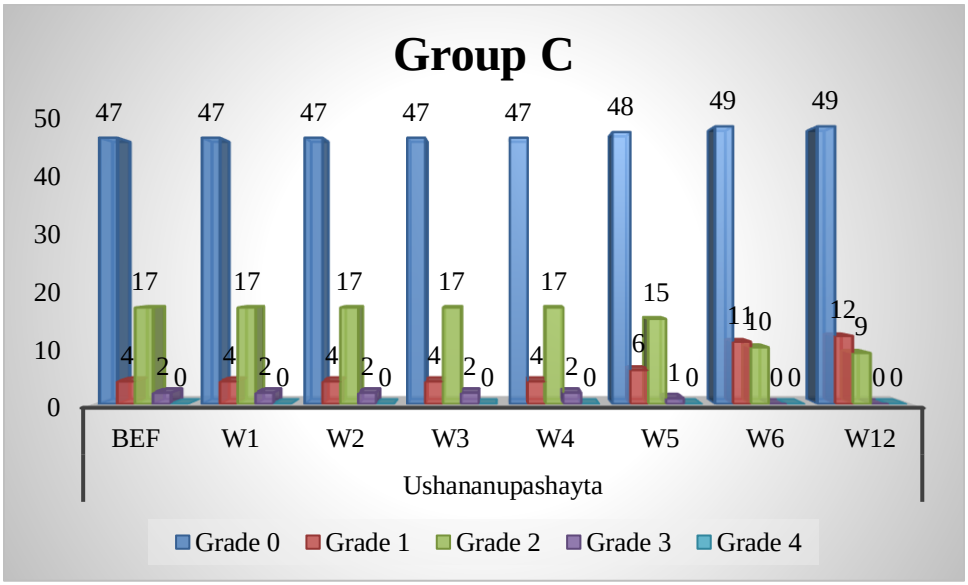


Table No: 4.68

Intra Group Comparative Analysis of Ushananupashayta

Ushananupashayta	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-3.638[a]	0.000	55.6	Significant
Group B	0	0	0	-4.562[a]	0.000	60.0	Significant
Group C	0	0	0	-3.606[a]	0.000	29.5	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effects observed in all three groups are significant.

Graph No 57:

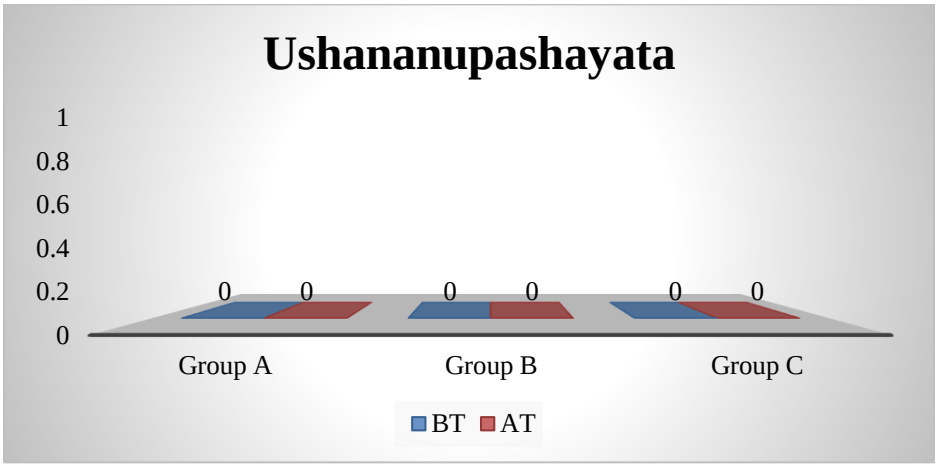


Table No: 4.69

Inter group Analysis of Ushananupashayta

Ushananupashayta	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	99.97	8.377	0.015
Group B	70	118.36		
Group C	70	98.16		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Vidaha:

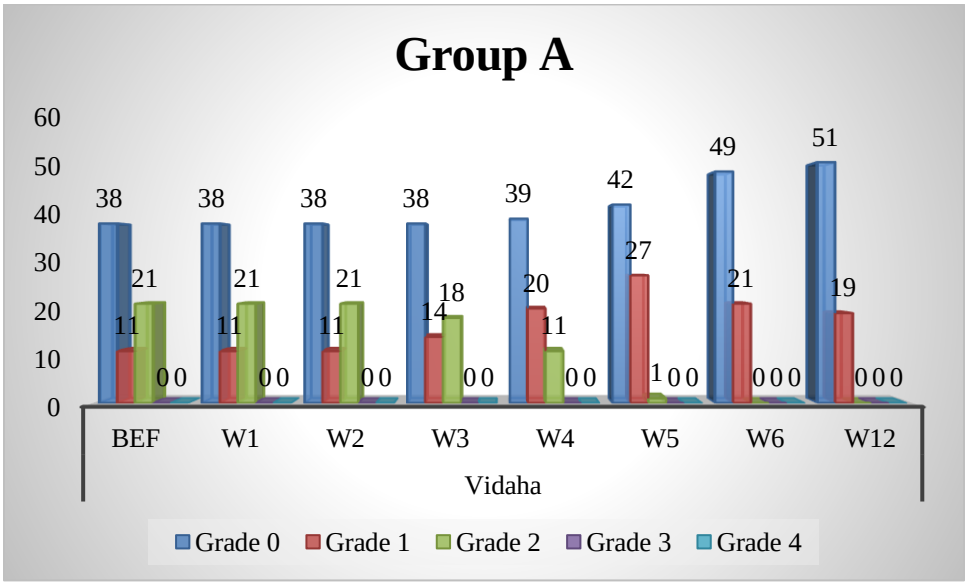
Vidaha is one of major symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan Vidaha and observations are as follows.

Table No: 4.70

Incidence of symptom Vidaha in group A

Group A	Vidaha							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	38	38	38	38	39	42	49	51
Grade 1	11	11	11	14	20	27	21	19
Grade 2	21	21	21	18	11	1	0	0
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 58:



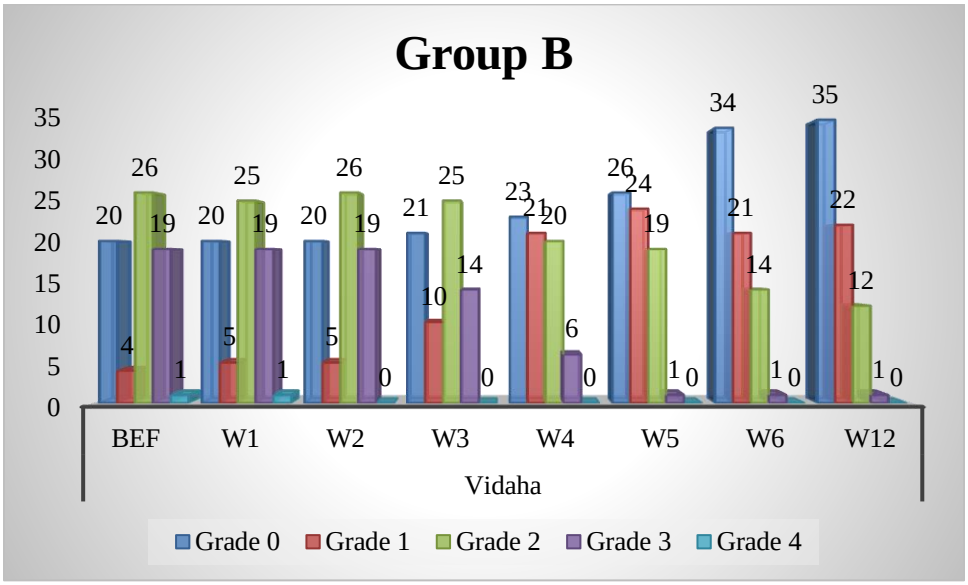
Here is the study of effect of Navayasa loha on the group B for the lakshan Vidaha and observations are as follows

Table No: 4.71

Incidence of symptom Vidaha in group B

Group B	Vidaha							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	20	20	20	21	23	26	34	35
Grade 1	4	5	5	10	21	24	21	22
Grade 2	26	25	26	25	20	19	14	12
Grade 3	19	19	19	14	6	1	1	1
Grade 4	1	1	0	0	0	0	0	0

Graph No 59:



Here is the study of effect of Conventional iron supplement on the group C for the lakshan Vidaha and observations are as follows

Table No: 4.72

Incidence of symptom Vidaha in group C

Group C	Vidaha							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	34	34	34	34	34	35	36	36
Grade 1	5	5	5	5	6	7	19	21
Grade 2	25	25	25	25	24	23	13	10
Grade 3	6	6	6	6	6	5	2	3
Grade 4	0	0	0	0	0	0	0	0

Graph No 60:

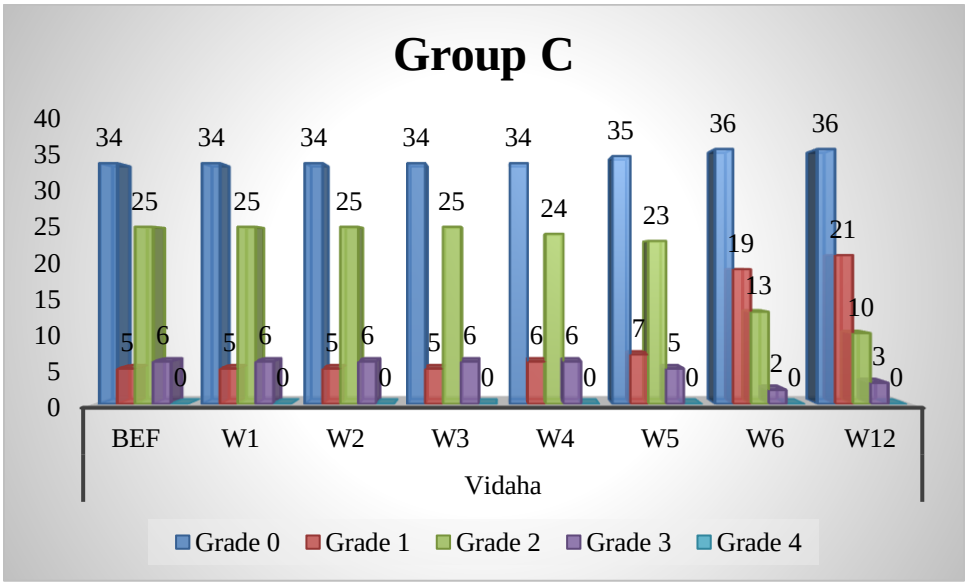


Table No: 4.73

Intra Group Comparative Analysis of Vidaha

Vidaha	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-5.013[a]	0.000	60.4	Significant
Group B	2	1	0.5	-5.954[a]	0.000	55.6	Significant
Group C	1	0	0	-4.315[a]	0.000	30.1	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 61:

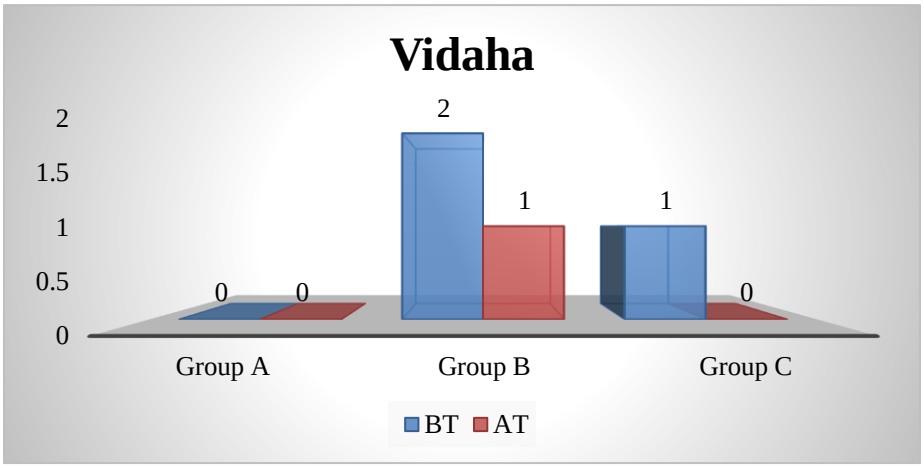


Table No: 4.74

Inter group Analysis of Vidaha

Vidaha	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	98.46	23.241	0.000
Group B	70	130.29		
Group C	70	87.75		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Daurgandhya:

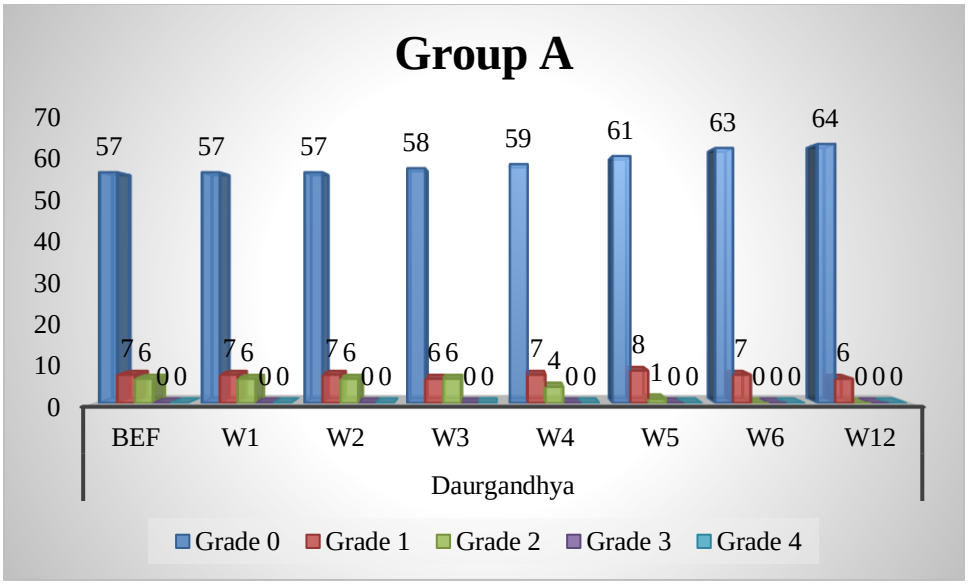
Daurgandhya is one of the symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan Daurgandhya and observations are as follows.

Table No: 4.75

Incidence of symptom Daurgandhya in group A

Group A	Daurgandhya							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	57	57	57	58	59	61	63	64
Grade 1	7	7	7	6	7	8	7	6
Grade 2	6	6	6	6	4	1	0	0
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 62:



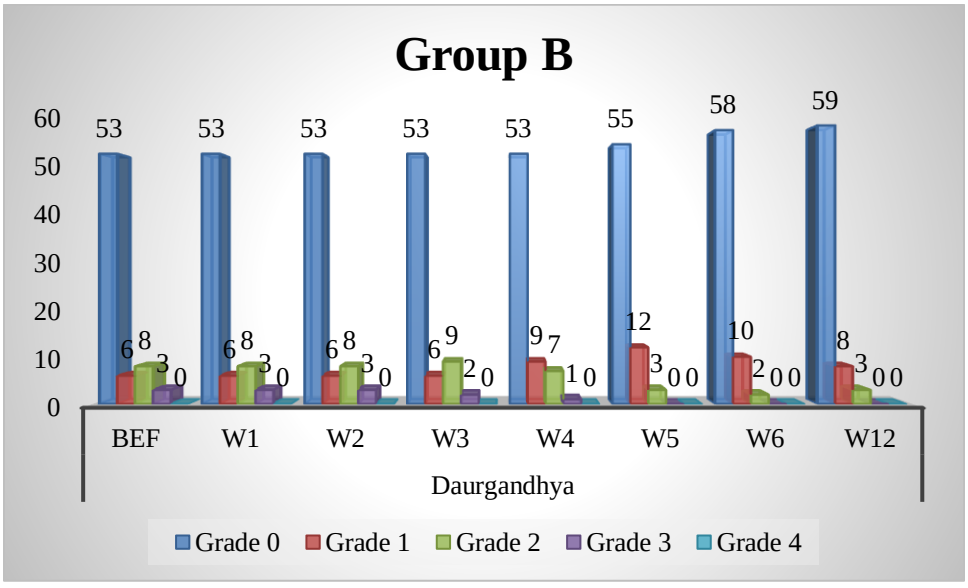
Here is the study of effect of Navayasa loha on the group B for the lakshana Daurgandhya and observations are as follows

Table No: 4.76

Incidence of symptom Daurgandhya in group B

Group B	Daurgandhya							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	53	53	53	53	53	55	58	59
Grade 1	6	6	6	6	9	12	10	8
Grade 2	8	8	8	9	7	3	2	3
Grade 3	3	3	3	2	1	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 63:



Here is the study of effect of Conventional iron supplements on the group C for the lakshan Daurgandhya and observations are as follows

Table No: 4.77

Incidence of symptom Daurgandhya in group C

Group C	Daurgandhya							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	45	45	45	45	45	46	47	47
Grade 1	6	6	6	6	6	5	9	10
Grade 2	16	16	16	16	17	17	12	11
Grade 3	3	3	3	3	2	2	2	2
Grade 4	0	0	0	0	0	0	0	0

Graph No 64:

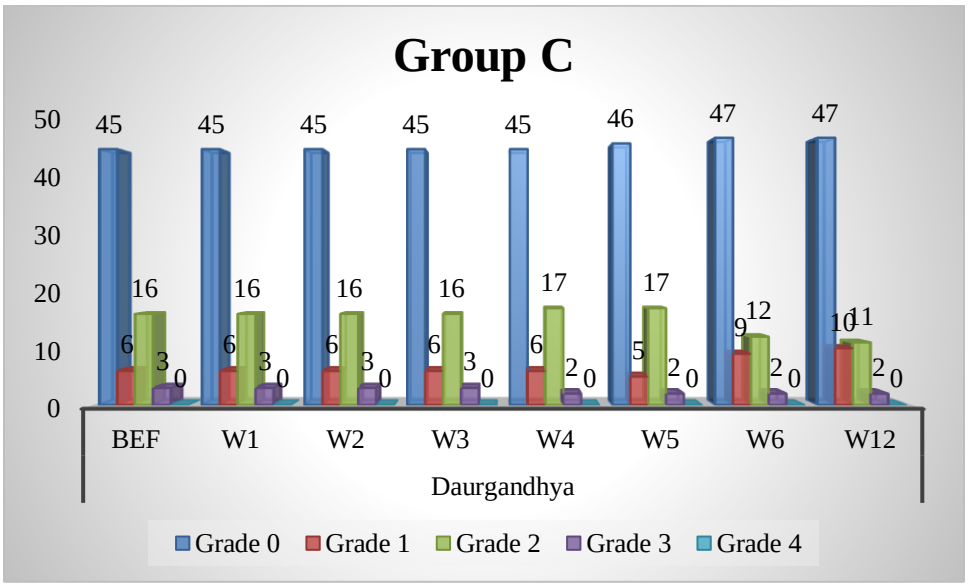


Table No: 4.78

Intra Group Comparative Analysis of Daurgandhya

Daurgandhya	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-3.207[a]	0.001	63.2	Significant
Group B	0	0	0	-3.690[a]	0.000	54.8	Significant
Group C	0	0	0	-2.540[a]	0.036	12.8	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 65:

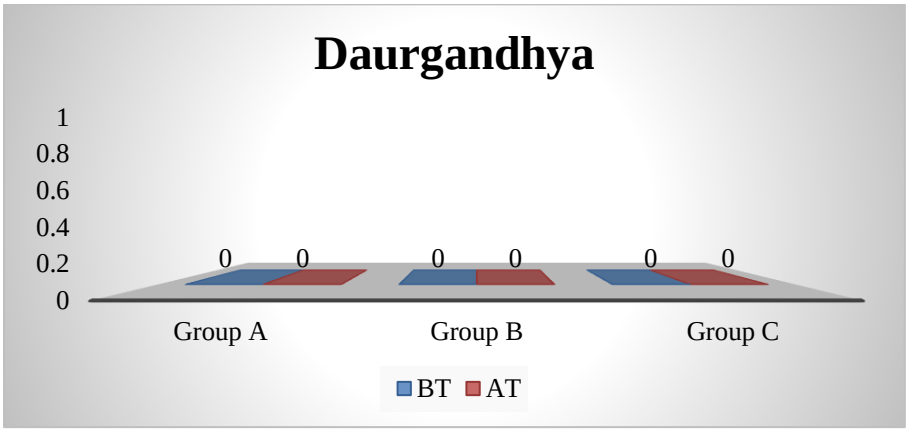


Table No: 4.79

Inter group Analysis of Daurgandhya

Daurgandhya	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	105.84	4.058	0.131
Group B	70	111.94		
Group C	70	98.72		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is greater than 0.05. Hence we conclude that there is no significant difference among effect of three groups.

Daurbalya:

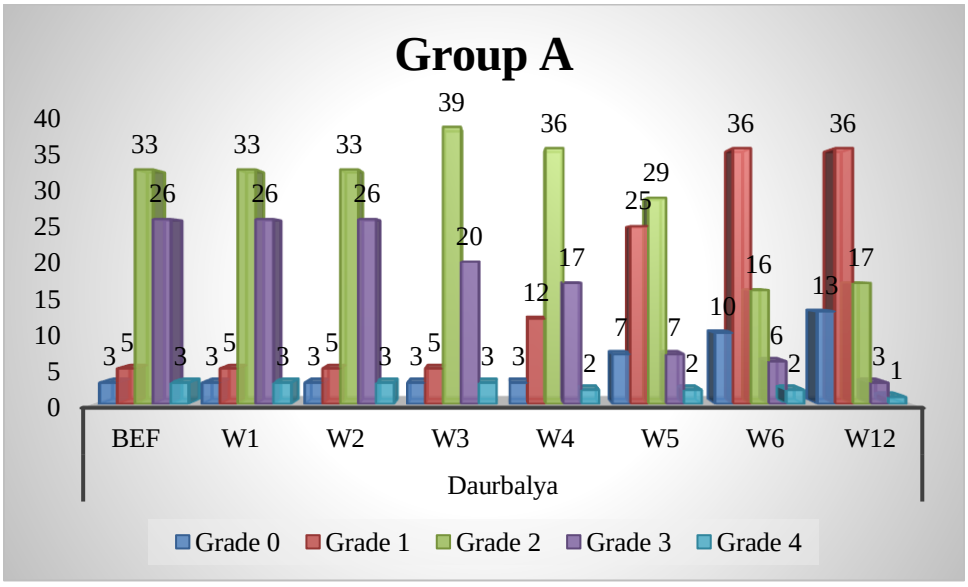
Daurbalya is one of major symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan Daurbalya and observations are as follows.

Table No: 4.80

Incidence of symptom Daurbalya in group A

Group A	Daurbalya							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	3	3	3	3	3	7	10	13
Grade 1	5	5	5	5	12	25	36	36
Grade 2	33	33	33	39	36	29	16	17
Grade 3	26	26	26	20	17	7	6	3
Grade 4	3	3	3	3	2	2	2	1

Graph No 66:



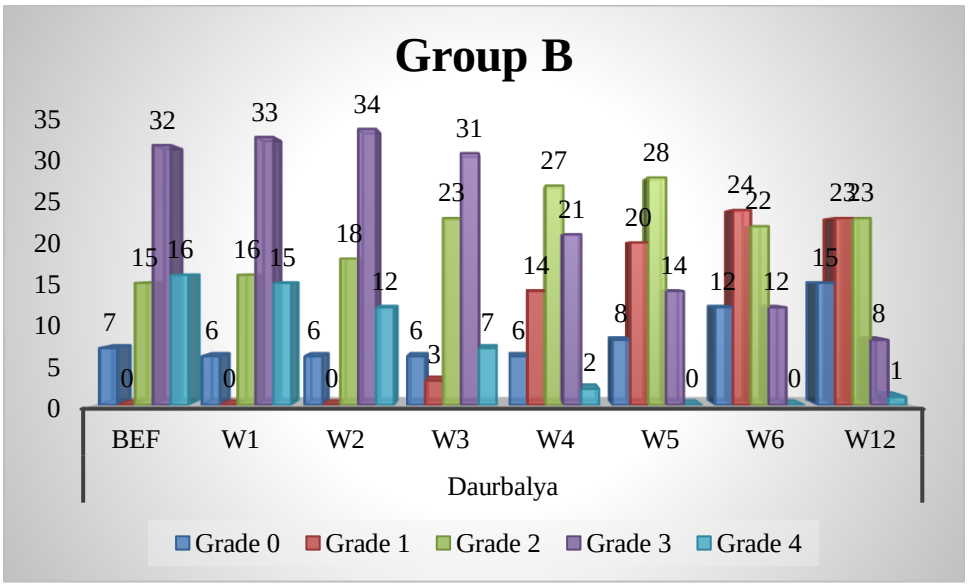
Here is the study of effect of Navayasa loha on the group B for the lakshan Daurbalya and observations are as follows

Table No: 4.81

Incidence of symptom Daurbalya in group B

Group B	Daurbalya							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	7	6	6	6	6	8	12	15
Grade 1	0	0	0	3	14	20	24	23
Grade 2	15	16	18	23	27	28	22	23
Grade 3	32	33	34	31	21	14	12	8
Grade 4	16	15	12	7	2	0	0	1

Graph No 67:



Here is the study of effect of Conventional iron supplements on the group C for the lakshan Daurbalya and observations are as follows.

Table No: 4.82

Incidence of symptomDaurbalya in group C

Group C	Daurbalya							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	6	6	6	6	6	6	6	10
Grade 1	0	0	0	0	0	7	25	23
Grade 2	26	26	26	26	29	27	36	34
Grade 3	38	38	38	38	35	30	3	3
Grade 4	0	0	0	0	0	0	0	0

Graph No 68:

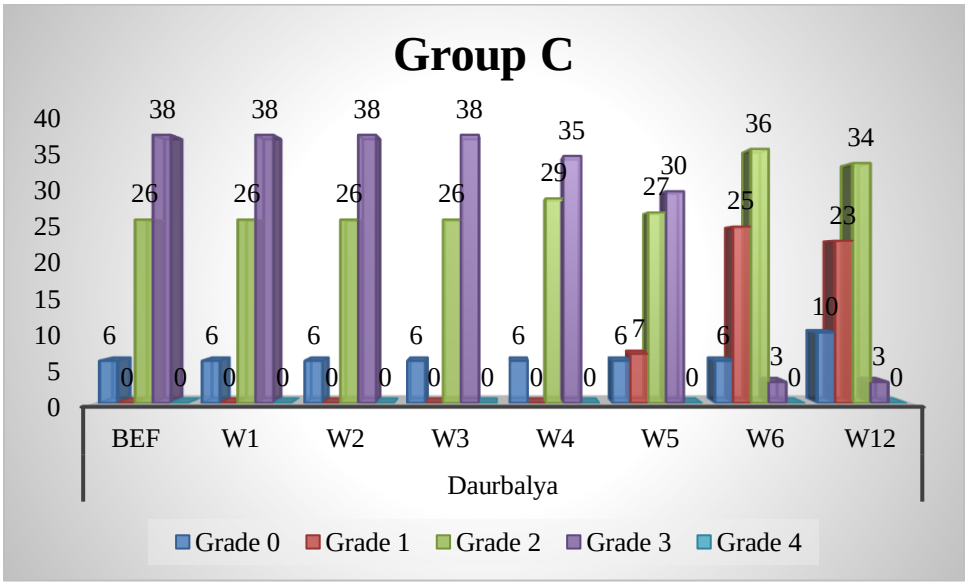


Table No: 4.83

Intra Group Comparative Analysis of Daurbalya

Daurbalya	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	2	1	1	-7.101[a]	0.000	41.6	Significant
Group B	3	1	1	-6.813[a]	0.000	45.3	Significant
Group C	3	2	2	-7.382[a]	0.000	36.1	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 69:

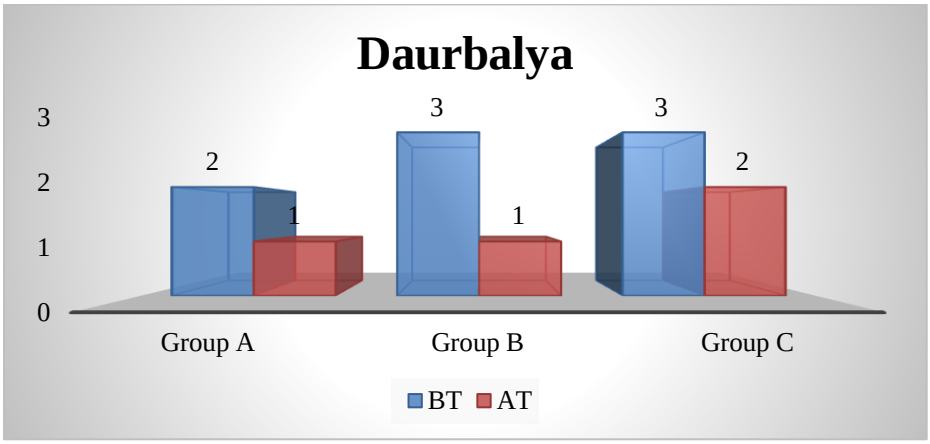


Table No: 4.84

Inter group Analysis of Daurbalya

Daurbalya	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	101.87	11.545	0.003
Group B	70	121.41		
Group C	70	93.22		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Tama:

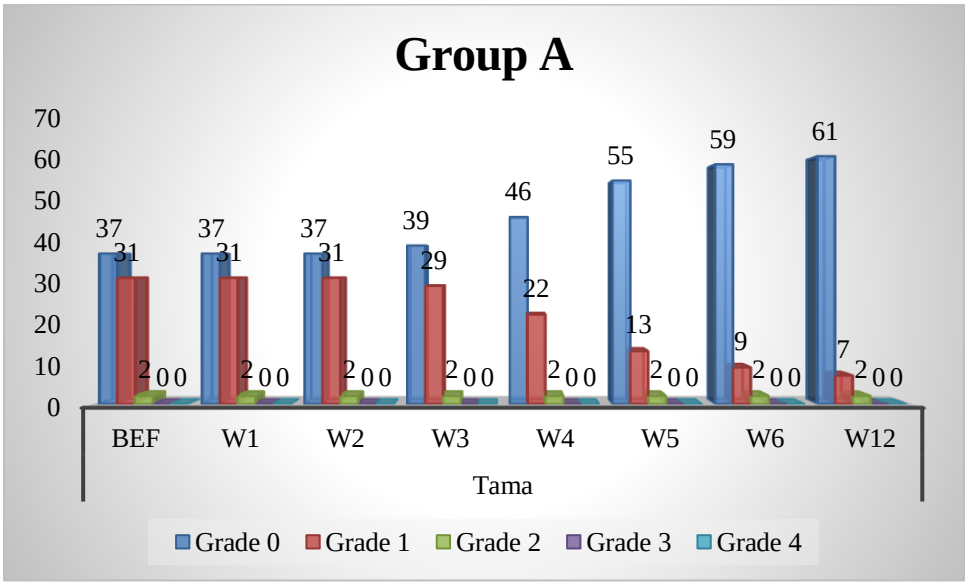
Tama is one of major symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan Tama and observations are as follows.

Table No: 4.85

Incidence of symptom Tama in group A

Group A	Tama							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	37	37	37	39	46	55	59	61
Grade 1	31	31	31	29	22	13	9	7
Grade 2	2	2	2	2	2	2	2	2
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 70:



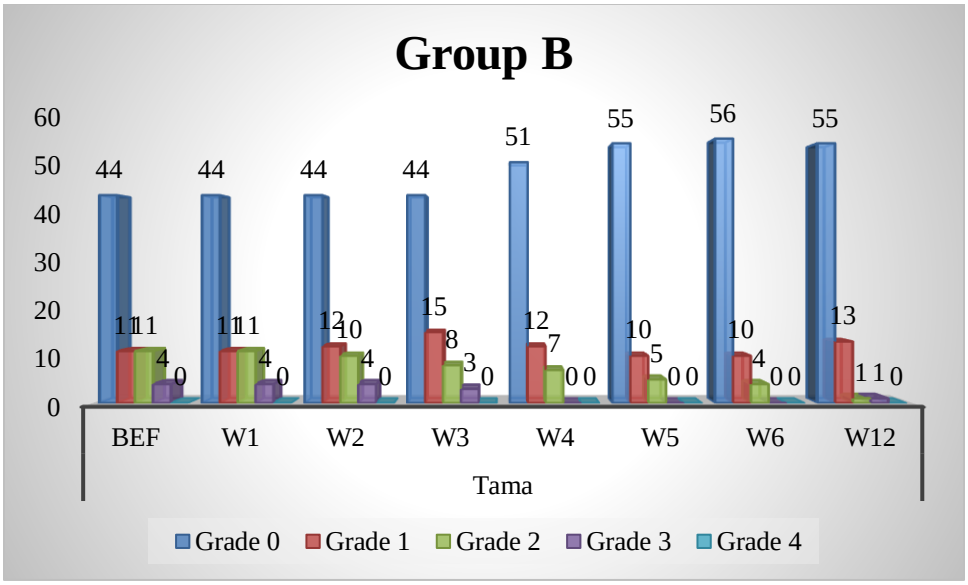
Here is the study of effect of Navayasa loha on the group B for the lakshan Tama and observations are as follows

Table No: 4.86

Incidence of symptom Tama in group B

Group B	Tama							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	44	44	44	44	51	55	56	55
Grade 1	11	11	12	15	12	10	10	13
Grade 2	11	11	10	8	7	5	4	1
Grade 3	4	4	4	3	0	0	0	1
Grade 4	0	0	0	0	0	0	0	0

Graph No 71:



Here is the study of effect of Conventional iron supplements on the group C for the lakshan Tama and observations are as follows

Table No: 4.87

Incidence of symptom Tama in group C

Group C	Tama							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	32	32	32	32	33	34	41	41
Grade 1	14	14	14	14	13	15	21	23
Grade 2	23	23	23	23	23	20	8	6
Grade 3	1	1	1	1	1	1	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 72:

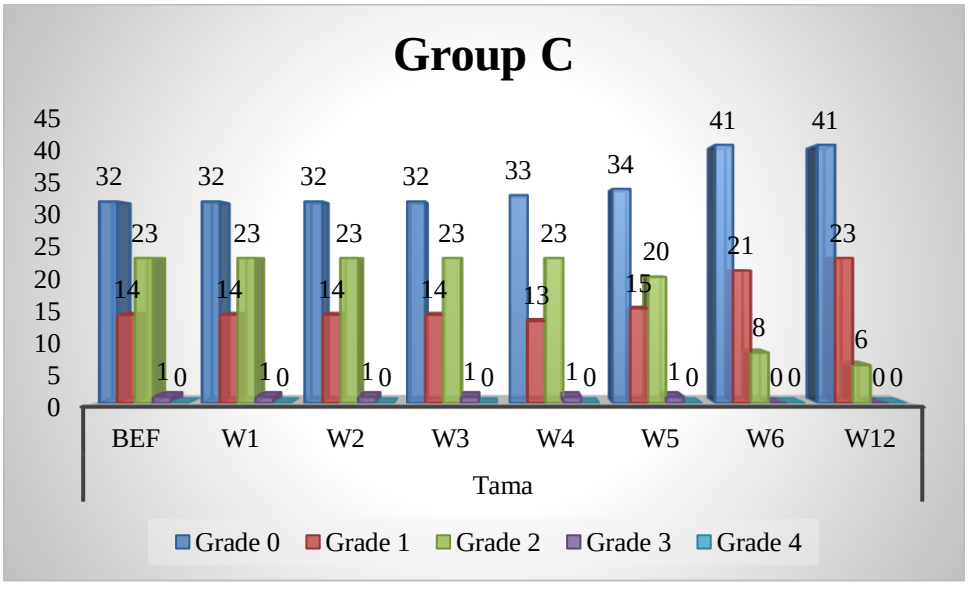


Table No: 4.88

Intra Group Comparative Analysis of Tama

Tama	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-4.690[a]	0.000	62.9	Significant
Group B	0	0	0	-4.354[a]	0.000	60.0	Significant
Group C	1	0	0	-5.099[a]	0.000	41.3	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 73:

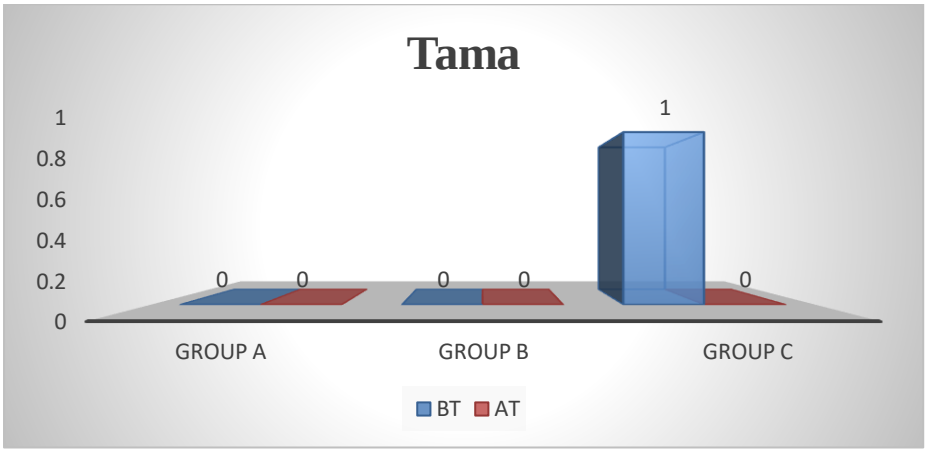


Table No: 4.89

Inter group Analysis of Tama

Tama	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	102.71	0.486	0.784
Group B	70	105.21		
Group C	70	108.57		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is greater than 0.05. Hence we conclude that there is no significant difference among effect of three groups.

Bhinnavarcha:

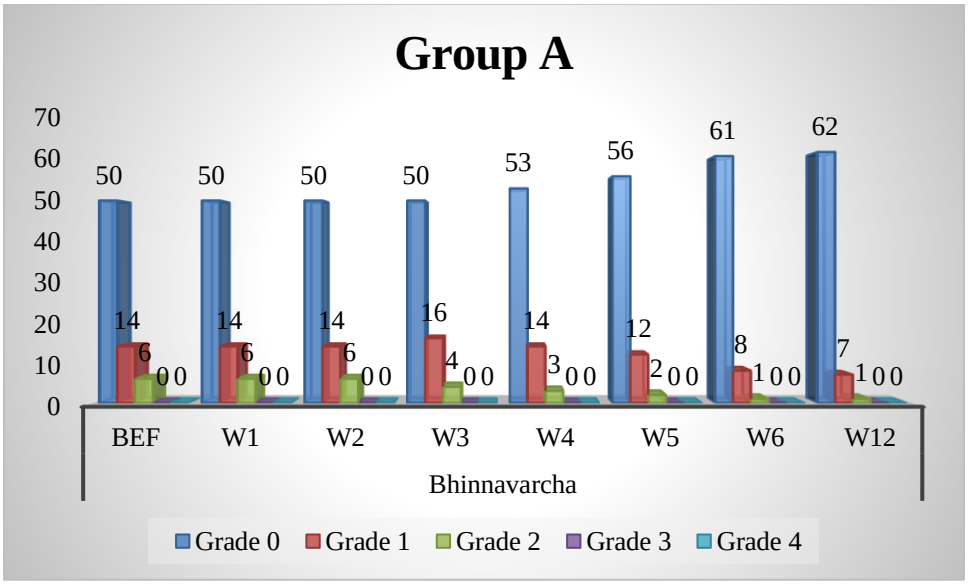
Bhinnavarcha is one of major symptom of Pittaj pandu, here is the study of effect of dhatryarishta on the group A for the lakshan Bhinnavarcha and observations are as follows.

Table No: 4.90

Incidence of symptom Bhinnavarcha in group A

Group A	Bhinnavarcha							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	50	50	50	50	53	56	61	62
Grade 1	14	14	14	16	14	12	8	7
Grade 2	6	6	6	4	3	2	1	1
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 74:



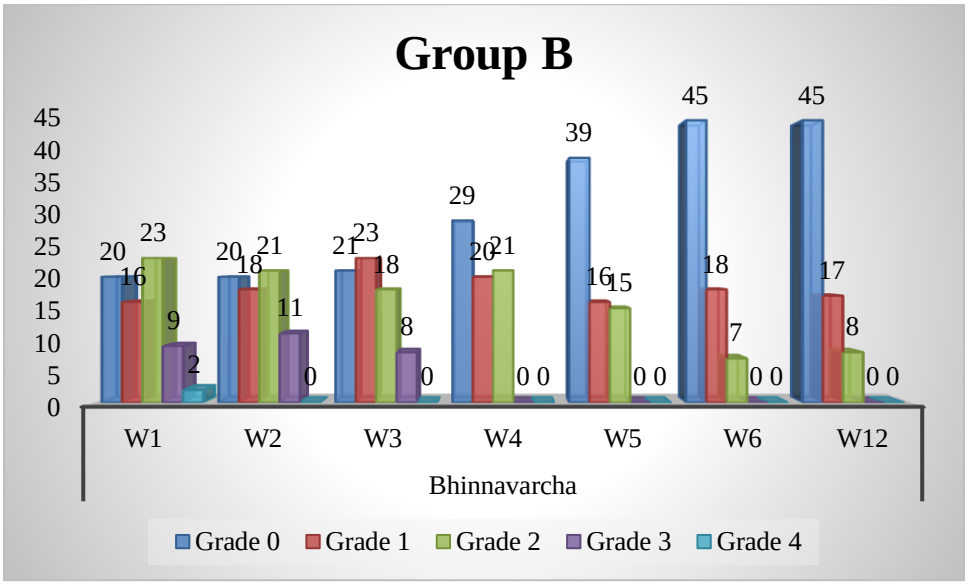
Here is the study of effect of Navayasa loha on the group B for the lakshan Bhinnavarcha and observations are as follows

Table No: 4.91

Incidence of symptom Bhinnavarcha in group B

Group B	Bhinnavarcha						
	W1	W2	W3	W4	W5	W6	W12
Grade 0	20	20	21	29	39	45	45
Grade 1	16	18	23	20	16	18	17
Grade 2	23	21	18	21	15	7	8
Grade 3	9	11	8	0	0	0	0
Grade 4	2	0	0	0	0	0	0

Graph No75:



Here is the study of effect of Conventional iron supplements on the group C for the lakshan Bhinnavarcha and observations are as follows

Table No: 4.92

Incidence of symptom Bhinnavarcha in group C

Group C	Bhinnavarcha							
	BEF	W1	W2	W3	W4	W5	W6	W12
Grade 0	38	38	38	38	38	40	46	49
Grade 1	14	14	14	14	16	19	20	17
Grade 2	18	18	18	18	16	11	4	4
Grade 3	0	0	0	0	0	0	0	0
Grade 4	0	0	0	0	0	0	0	0

Graph No 76:

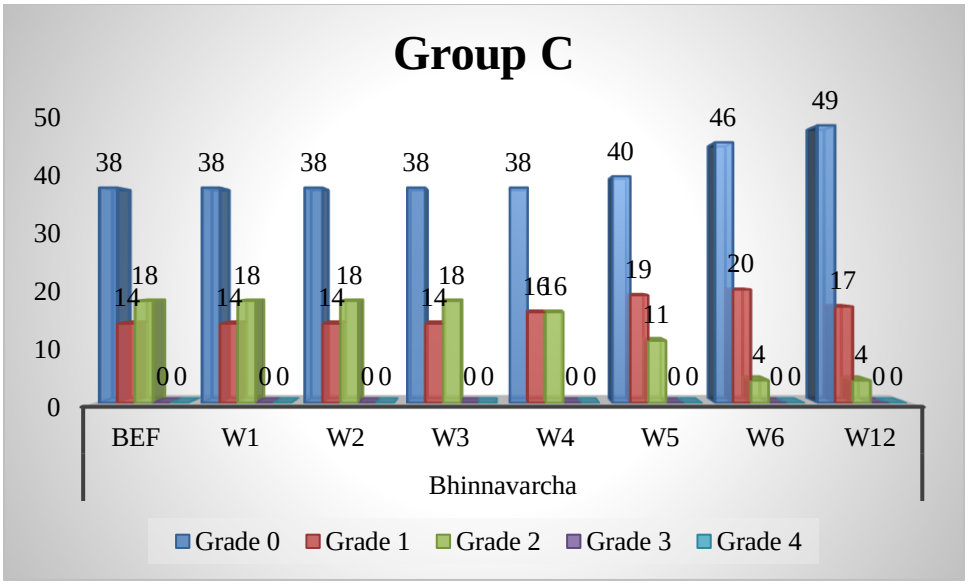


Table No: 4.93

Intra Group Comparative Analysis of Bhinnavarcha

Bhinnavarcha	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	W12				
Group A	0	0	0	-3.557[a]	0.000	61.5	Significant
Group B	1	0	0	-5.956[a]	0.000	67.0	Significant
Group C	0	0	0	-4.690[a]	0.000	44.0	Significant

Since observations are on ordinal scale (gradation), we have used Wilcoxon Signed Rank test to test efficacy in Group A, Group B and Group C. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05. Hence we conclude that effect observed in all three groups is significant.

Graph No 77:

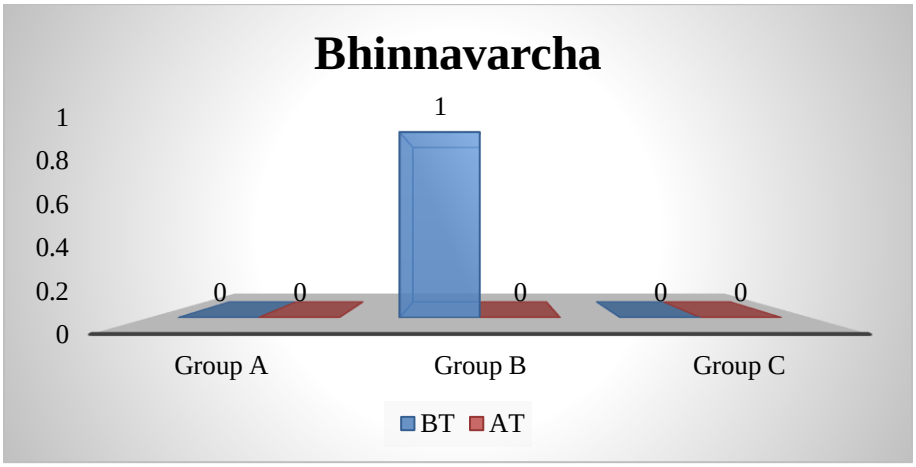


Table No: 4.94

Inter group Analysis of Bhinnavarcha

Bhinnavarcha	N	Mean Rank	Kruskall Wallis Test	P-Value
Group A	70	85.60	35.955	0.000
Group B	70	135.54		
Group C	70	95.36		
Total	210			

For comparison among three groups, we have used Kruskal Wallis test (Non parametric one way ANOVA). From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference among effect of three groups. Further we can observe that mean rank for Group B is more hence we conclude that effect observed in Group B is more than Group A and Group C.

Table No: 4.95

Effect of Drugs according to Haemoglobin percentage

HB%		Mean	N	SD	SE	Z-Value	P-Value	% Change	Result
Group A	BT	9.6	70	1.67	0.20	-7.338	0.000	5.2	Significant
	AT	10.1	70	1.73	0.21				
Group B	BT	9.8	70	1.77	0.21	-10.780	0.000	9.8	Significant
	AT	10.8	70	1.68	0.20				
Group C	BT	9.0	70	1.60	0.19	-12.759	0.000	13.6	Significant
	AT	10.3	70	1.56	0.19				

Since observations are quantitative and sample size is more than 30. We have used Z-test to test significance. From above table we can observe that P-Values for Group A, Group B and Group C are less than 0.05 hence we conclude that effect observed in all three groups are significant.

Graph No 78:

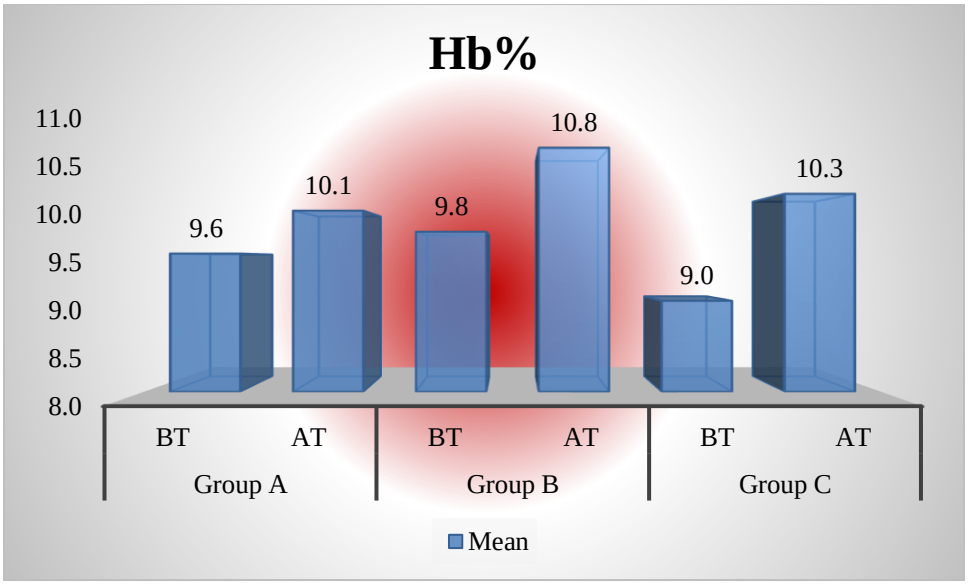


Table No: 4.96

Comparison among Group A, Group B and Group C

Group	N	Mean Diff	SD	SE	F-Value	P-Value
Group A	70	0.49	0.45	0.05	52.001	0.000
Group B	70	0.97	0.46	0.05		
Group C	70	1.23	0.39	0.05		
Total	210	0.90	0.53	0.04		

For comparison among three groups, we have used one way ANOVA test. From above table we can observe that P-Value is less than 0.05. Hence we conclude that there is significant difference in the effect of Group A, Group B and Group C.

Further we can observe that mean difference for Group C is more hence we conclude that effect observed in Group C is greater than Group A and Group B.

DISCUSSION

Discussion about Disease

In every Nija disease there are two main reasons which we call vyadhighataka i. e. mandagni[1] and Aama[2]

Mandagni is inability to digest any type food. Unhealthy, unscientific diet, junk food etc. are thefactors which may result in slower rate of digestion and produce Aama. Aama is product of harmful digested material which further creates many diseases. Aamafurther adds structural damage to digestive system known as kha-vaigunya. Aama travels with Aahar Rasa and is distributed to rasa, rakta, mansa, meda, asthi, majja and shukra dhatu and creates dhatwagnimandya of affected dhatu i.e. unable to assimilate in respective dhatu and hamper dhatuposhana.It causes malnutrition or under nutrition.

The principle pathological factors of Pandu are related to vitiation of pitta dosha[3]. Due to Hetus of amla, tikta, lavana rasa and ushnagunaahara, asatmyaahara, kama, chinta, bhaya, krodha, vyayama, excess maithuna etc. it results in pittapradhantridoshprakopa.

Patients having Pitta prakrutiare more susceptible to Pittaprakropa, as compared to other prakruti patients, when they consume same Hetusevana.

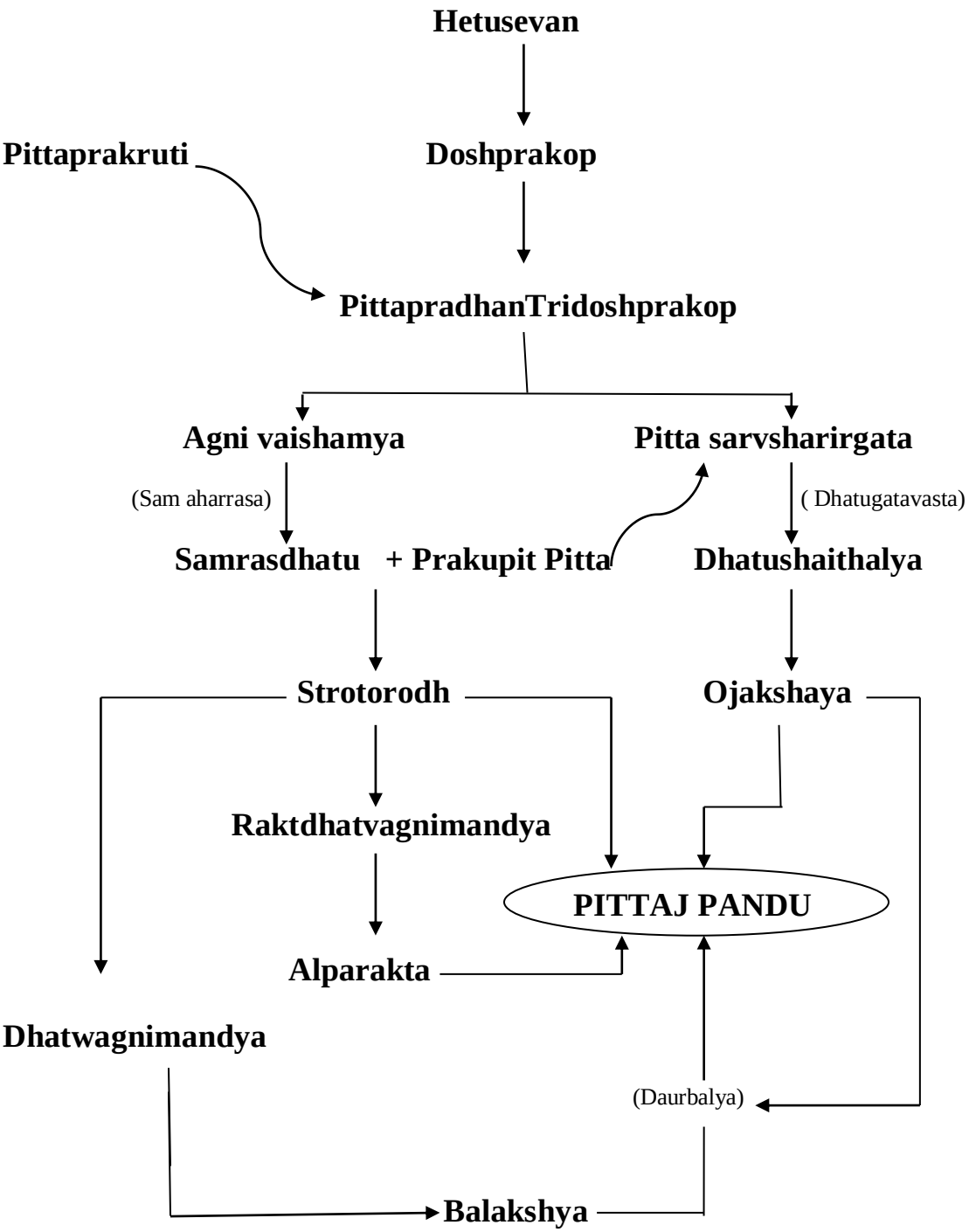
Due to these doshaprakopa and tikshnaguna of prakupit pitta[3]agnivaishamya takes place and leads to samaaahara rasa production, which further leads to production of SaamRasadhatu. This SaamaRasadhatu leads to a chain of srotorodh and dhatwagnimandya which ultimately results in saamaraktadhatu formation. The saamata hampers the quality and quantity of Rakta dhatu which results in alpapramana (lower quantity of Rakta dhatu), also known as Pandu.

Due to dhatwagnimandya the nourishment of all the dhatus are hampered and as a consequence there may be dhatuksaya and further balakshaya occurs. Due to balakshaya person loses the ability to do routine daily work.

This vitiated pitta spreads in all over cells in body and leads to dhatushaithilya and further ojakshaya takes place due to which skin becomes lacklusterd.[3]Jwaradi other lakshanas appear as well, which are again associated with pittaprakopa, vitiated pitta, agnimandya, aama, dhatwagnimandya and ojakshaya.

In Pandu disease balakshya i.e. loss of ability to do any work is one of the major manifesting symptoms. Considering this symptom Pandu is neither categorized in over nutritional nor in under nutritional but it comes under the malnutritional category. If untreated, it gets transferred to the category of under nutrition in which doshas becomes less active, which is aptly described as doshakshaya, where doshas are unable to express its symptoms and unable to perform their designated functions.

Samprati of PittajPandu



That concludes that in PittajPandu, the symptoms are mostly influenced by three pathological factors. i.e.

1. Pitta prakop and vitiation

2.Agnimandya and production of aam

3.Dhatwagnimandya and ojakshaya

The demonstration of relation of these factors and symptoms can be shown as below.

Signs and Symptom due to	**Signs and Symptom**
Pitta prakop and vitiation.	Amlodgara, jwara, Daah, Trishna, Sweda, Sheetakamata, Ushnanupasyata, Vidaha, Daurgandhya, Bhinnavarcha, Pitabhata, Haritabhata
Agnimandya and Aama.	Jwara, Annabhinandana, Katukasyata, Vidaha, Bhinnavarcha
Dhatwagnimandya /Ojakshaya.	Pitabhata, Haritabhata, Murcha, Daurbalya,Sheetakamata, TamaUshnanupashyata,

The reason why Pittaj Pandu is selected to be studied:

A) In every type of Pandu disease Pitta dosha plays an inevitable part. i. e. every type of Pandu is Pittanubandhatmak.

B) Pittadosha prakopa is leading cause of Pittaj Pandu.

Discussion about Treatment

The proposed line of treatment of Pittaj Pandu is

- Pacify dosha(mainly pitta dosha)
- Amapachna
- Niramdosha shaman
- Dhatwagnivardhana
- Dhatu poshana

Discussion about Selected Drugs

Drugs chosen and administered in this study are Dhatryarishta and Navayasaloha. Dhatryarishtais being selected because of its unique preparation method i.e. amalakiswarasa is used to prepare arishta.It has been referenced in Charaksamhita Pandurogaadhaya.

Navayasaloha is selected because it is the most used treatment of Pandu in practice, but is it really a good treatment in PittajPandu?

In spite of many references in all literatures, no specific kalpa has been correlated to be used according to type of Pandu.

1) Navayasa loha[4]

It contains: 1 Triphala

2 Trikatu

3 Trimada

4 Lohabhasma

Probable mode of action

- Considering vitiated Pitta dosha as leading factor in Pittaj Pandu, the contents haritaki[5], bibhitaka[6], amalaki[7] and nagarmotha[10] by virtue of its tikta rasa acts on sama pitta to carry out pachana karma and pacifies pitta.
- Shunthi[8], pippali[9], bibhitaka[6], amalaki[7], and haritaki[5], also has madhura vipaka property which pacifies pitta.
- Mustaka[10], vidanga[11], chitraka[12], shunthi[8], maricha[14] and pippali[9] having property of katu rasa and ushnavirya, pacify kapha and carry out amapachana.
- Haritaki, amalaki and bibhitaka having kashayarasa, pacifies pitta and kapha dosha.
- Haritaki, bibhitaka, vidanga, chitraka, shunthi, maricha and pippali are ushnaviryatmaka and it pacifies kapha and helps for amapachana.
- Amalaki and nagarmotha are having property sheetavirya and it pacifies pitta.
- In Navayasaloha majority of drugs have the deepanpachan property. These laghu, ruksha, tikshnaguna and katu rasa increase the jatharagni and dhatwagni to reach to normal level and dhatu nirman prakriya gets toned up which results in dhatu pushti and dhatu prasadana.
- These ways dravyas act to 1) Pacify pitta and kapha
  2) Amapachana
  3) Sama pitta pachana
  4) Dhatu poshana

  and breaks the chain of pathology.

- Trimada acts on parasites residing in intestines and paralyse (prakruti vighata) them so it can be easily erradicated[15].
- Triphala, pippali, shunthi and lohabhasma are the ones having rasayana property. With the administration of these rasayana dravyas, rakta dhatu gets adequate nourishment thereby increasing the quantity of raktadhatu.
- Lohabhasma is kantivardhak, tridoshashamaka, shreshtha rasayana, pliha, agnimandyahara.[16]

- Lohabhasma itself is nutrient one which act by law of dravyasamanya karma as dhatuposhana which is useful for raktadhatuposhana. It reduces iron deficiency as well as enhances the quality of blood.
- Due to Sheeta and tikta guna of lohabhasma, navayasaloha is more specifically applicable in PittajPandu prakara.[17]
- Amalaki is rich source of vitamin C[18] and in the presence of vitamin C, iron absorption is promoted.
- The gentle laxative effect of triphala prevents the adverse effect of constipation resulting from iron.
- Anupana- Goghrit is a well-established pittashamak[19], agnideepaka, saptadhatuvardhak, ojavardhak. It is the best anupana in Pittaj Pandu so far and if given with madhu, drug acts faster due to its yogavahi guna.[20]

2) Dhatryarishta[21]

It contains: 1 Amalakiswarasa

2 Pippali

3Madhu[22]

4 Sharkara[23]

- Its main contain is amalaki swarasa and amalaki is the best rasayan. Due to its tikta rasa it acts on sama pitta carries out pachana karma and pacifies pitta. Its sheet virya and madhura vipaka property also pacifies pitta.
- Amalaki is tridoshahara, pittashamak and vatanulomak.
- Amalaki is rich source of vitamin C and in presence of vitamin C the capacity of iron absorption is promoted.
- Arishta is prepared through sandhan kalpana[24]. And it is a fact that due to ashukari and vyvayi gunas it gets easily absorbed in the srotasa and thus exhibit the properties of applied medicine much faster level[25].

Discussion on observations:

Age

In age wise distribution of PittajPandu, It was found that maximum number of patients i.e.49.45% were between age group of 30 to 40 year and 32.40% were between age group 20 to 30 year .The reason behind this may be in age 20 to 40 year it is the kala of pittadhikata so that Pitta doshaj vyadhi has been seen increased in this age. 20 to 40year age is the age of physiological growth, this is the age of maximum stress regarding job, study, duty etc. Due to this proper nutritional diets may be ignored.

Gender

In present study it was found that incidence of male was 26.96% and in female it was 73.03% of the cases. Thus, we can say that prevalent of females is more than the males in PittajPandu. The possible cause behind this may be the diet, as females are found attracted towards amla, katu, and tikshna ahara in financially privileged group of society. In lower income class group of society most females are working, who are unable to have a balanced diet.Their diet is mostly comprised of vidahi, stale and nutritionally insufficient food which is almost always a likely occurrence. Regular loss of blood due to heavy menstruation is one of the possible causes in females for the development of Pandu.

Females show more emotional instabilities than males. There are more manifestations of nervousness, irritability etc. in females than male counterparts. As Per reference in Charaka Samhita, these psychological instabilities contribute tremendously in manifestation of Pandu.

Religion

In group A 61(85.9%) patients were Hindu and 7(9.9%) patients were Muslim, while in group B 51(71.8%) patients were Hindu and 11(16.9%) patients Muslim and in group C 62(87.3%) patients were Hindu and 6(9.9%) patients were Muslim. The percentages of other community were very negligible. The prevalence of Hindu community is more in the community where this clinical trial has been conducted.

The likely possible reasons for this may be because most of Hindus are vegetarian and low incomes are contributary factors for not being able to afford the balance diet, that causes limited carbohydrates, proteins and vitamins in their daily diet. This deficient diet in long run gives rise to Pandu. Muslim community is mostly non-vegetarian and they got all the nutrition from their diet.

Marital status

As far marital status goes, 79.26% were married, 19.1% were unmarried while 1.9% were widow/widower. The large population of sample belongs to the married group, whereas very few were unmarried.

In this clinical study percentage of females is ¾ than male counterparts. In married female's physiological conditions like deliveries, abortions made married women susceptible towards diseases. The unfortunate traditions in families about restrictions for married women to eat at the end/last person to eat and to eat stale food might be one of the major contributing factors.

For this study age criteria is 16 to 50 years and by Indian govt. rule of marriage for female is minimum 18 years.

Occupation

Among all the patients 41.42% patients were laborers, 24.76% were house wife, 11.42% were in business, 12.38 were in education and 10% were in service. This shows that a wide range of population has been affected by this problem. Most of the females are in laborers categories have to work hard allday and eat stale, insufficient food. The house maker women are observed of having ushnatikshna (spicy) ahara and having excess amounts of tea, leading to pittaprakopa and agnimandya. All these are leadinghetus of PittajPandu.

Diet

In the sample of 210 patients of PittajPandu71.87% patients were vegetarian while 28.13% were eating nonveg in their meal.

In today's world every one lives a fast and almost mechanical life. They food habits to have been shifted from fresh and healthy to fast food and unhealthy, having very few nutritional values. The green vegetables which are available throughout the year are grown under high concentration of fertilizers. Because of this the percentage of nutritional components decreases to a far lesser extent. These conditions contribute to the malnourished status in high and middle economic classes especially in vegetarians. Non vegetarians get those essential nutrients from their diet, therefore the percentage observed here is higher in vegetarian people.

Prakruti

Here the majority of patients 35.7% having pittavataprakruti followed by vatapitta 23.3%. 22% patients of pittakaphaprakruti and 19.26% patients in kaphapittaprakruti.

Pittaj Pandu manifested in pitta prakruti patients due to consumption of pitta prakopaahar-vihara. Pitta doshaprakruti has the prevalence here, taking first or second place. Promoted pitta vitiates rasaraktadi dhatus and causes PittajPandu.

Economic status

In concern with the economical status 45.73% patients were from lower economic class, 37.07% were from middle economic class while 17.2% patients were from upper economic class. Even though this disease is affecting all the groups of socioeconomical status but the patients are more found in lower economic class which is about 50%.

Here again cause of this is poverty, low nutritional value diet, insufficient food, no proper time for eating etc… seen in low economic class. In middle class it may be due to fast life style, fast food habit, mental stress, low nutritional value diet etc… and in high class the causes of Pandu may be mechanical life style, low nutritional value of fast food, high concentration of fertilizers and insecticides which are used to grow vegetables and fruits. This type of food does not nourish the rasaraktadi dhatus.

Discussion on Sign and Symptoms and Results:

Amlodgara:

It is one of the major symptoms of Pittaj Pandu. In our study 72.38% had been found suffering from this symptom before the treatment. After the treatment improvement in both groups was remarkable.

With reference to table no 4.13(Wilcoxon Signed Rank test is used) it has been observed that the effect provided by Group A on the symptom Amlodgara is 62.8% whereas in Group B is 51.6% and Group C is 29%. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Amlodgara

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$).The mean rank of Group A is 109.21, Group B is 125.64 and Group C is 81.64. We can observe that mean rank of Group B is more. Hence concluding that effect observed in group B is more than Group A and Group C (refer table no. 4.19)

Follow up in the 12^{th}week: It is observed that in group A symptom of amlodgara has been increased mildly (3.2%). In group B the effect of drug still found persist and in group C also symptom amlodgara is found to be increased.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Pitabhata:

It is one of the major symptoms of Pittaj Pandu. In our study 97.14% had suffering from this symptom before the treatment. After the treatment improvement in both groups was remarkable.

With reference to table no 4.18(Wilcoxon Signed Rank test is used) it has been observed that the effect provided by Group A on the symptom of Pitabhata is 42.6% whereas in Group B is 44.1% and Group C is 32.0%. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom of Pitabhata.

After evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$).The mean rank of Group A is 99.11, Group B is 125.49 and Group C is 91.90. We can observe that Group B has leading mean rank, concluding that effect observed in group B is more than Group A and Group C (refer table no. 4.19).

Follow up in the 12thweek: It is observed that in group A symptom of pitabhata has been decreased significantly. In group B, effect of drug is found persistently significant and in group C symptom of pitabhata is found to be increased.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Haritabhata:

Symptom haritabhata has been observed in only 12.38% patients in our study. We can say that it is a minor symptom or it may be observed in chronic stage. But improvement in the symptom of haritabhata by drugs in both groups was found acceptable.

With reference to table no 4.23(Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Haritabhata is 50.0% whereas in Group B is 30.3% and Group C is 22.2% .All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom of Haritabhata.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is no significant difference among the effect of three groups ($P>0.05$) Hence we conclude that all used drugs provided almost equal effect on Haritabhata. (refer table no. 4.24).

Follow up in the 12th week: It is observed that in group A symptom of haritabhata has been decreased mildly. In group B the effect of drug has been found very low and in group C symptom haritabhata is found to be increased.

The results here show that there is no difference in the relief of symptoms supported by statistical values.

Jwara:

It is one of the major symptoms of Pittaj Pandu. In our study 70.00% had suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.28 (Wilcoxon Signed Rank test is used it has been observed that the effect provided in Group A on the symptom Jwara is 66.3 % whereas in Group B is 60.2 % and Group C is 44.7 %. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Jwara.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$). The mean rank of Group A is 122.09, Group B is 107.03 and Group C is 87.39. We can observe that mean rank of Group A is more that rest of two groups. Hence, we can conclude that effect observed in group A is more than Group B and Group C (refer table no. 4.29).

Follow up in the 12^{th} week: It is observed that in group A patients with complete relief of symptom are leading with 4 numbers with persistent drug effect. In group B patients with complete relief of symptoms increased by 2.No patients were in marked grade. All patients in this group are categorized in to moderate as well as mild grade. 4 patients remained in moderate grade the effect of drug still found persistent. In group C complete relief of symptom was increased by 1 and the effect of drug found persistent.

The results here show that Dhatryraishta is better treatment than Navayasaloha, supported by statistical values.

Daha:

It is one of the minor symptoms of Pittaj Pandu. In our study 37.61% had suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.33 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided by Group A on the symptom Daha is 62.2 %where as in Group B, it is 59.3 % and in Group C it is 28.6%. All three groups, has been provided statistically significant relief (P<0.05) in the symptom Daha.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups (P<0.05) the mean rank of Group A is 110.94, Group B is 114.74 and Group C is 90.81. We can observe that mean rank of Group B is more than rest of the groups, concluding the effect observed in group B is more than Group A and Group C (refer table no. 4.34).

Follow up in the 12^{th} week

No change observed in group A patients with persistent effect of the drug.ent. In group B, patients with complete relief increased by 2. No patients found in marked grade.All patients in this group found converted to moderate as well as mild grade. 3 patients remained in moderate grade and 15 patients remained in mild grade with the effect of drug found persistent. In group C patients with complete relief increased by 1 as well and the effect of drug was found to be persistent.

The results here show that Navayasaloha is a better treatment than Dhatryraishta supported by statistical values.

Trishna:

It is one of the major symptoms of Pittaj Pandu. In our study 45.23% patients had been found suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.38 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A, on the symptom Trishna is 65.9 %where as in Group B it is 53.7 % and in Group C it is 29.4 %. All three groups, has been provided statistically significant relief (P<0.05) in the symptom Trishna.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) the mean rank of Group A is 102.6, Group B, it is 127.23 and Group C, it is 86.66. We can observe that mean rank of Group B is more than rest of the groups. Concluding the effect observed in group B is more than Group A and Group C (refer table no. 4.39.)At Follow up in the 12th week in group A, number of patients with complete relief increased by 2 and the effect of drug found persistently. In group B number of patients with complete relief increased by 3.No patients found in marked grade. All patients in this group found to be converted in to moderate as well as mild grade. 7 patients remained in moderate grade and 26 patients remained in mild grade with persistent effect of the drug. In group C, no change observed in patients with complete relief, but in mild grade group the number of patients increased by 1 with persistent effect of drug.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values**.**

Murcha:

It is one of the major symptoms of Pittaj Pandu. In our study 44.76% of patients had been found suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.43 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Murcha is 61.9 % whereas in Group B it is 64.0 % and Group C is 38.7 %. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Murcha .

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is no significant difference among the effect of three groups ($P>0.05$) Hence we conclude that all of the drugs used in the study provided almost equal effect on Murcha (refer table no. 4.44)

Follow up in the 12th week

In group A patients with complete relief increased by number 3 with effect of drug found persistent. In group B patients with complete relief found to be increased by number 2. No patients are found in marked grade. 10 patients remained in mild grade with persistent effect of drug.In group C patients with complete relief found to be increased by 2.No patients found in marked grade. 8 patients remained in moderate grade with persistent effect of drug.

Statistically it is proven that no drug worked better than other here.

Sweda:

It is one of the major symptoms of Pittaj Pandu. In our study 44.76% patients had suffered from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.48 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Sweda is 60.0 %whereas in Group B it is 55.1 % and Group C it is 20.3 %. All three groups, has been provided statistically significant relief ($P<0.05$) for the symptom Sweda.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) The mean rank of Group A is 102.19, Group B is 121.04 and Group C is 93.26. We can observe that mean rank of Group B is more, concluding the effect observed in group B is more than Group A and Group C (refer table no. 4.49).

Follow up in the 12^{th} week

In group A patients with complete relief found to be increased by 1 with persistent effect of drug.As well as in group B patients with complete relief increased by 1.No patient remained in marked grade.All patients in this group converted in to moderate grade. 4 patients remained in moderate grade and 23 patients remained in mild grade with persistent effect of drug.In group C, no change observed in patients with complete relief but in mild grade number of patients increased by 1changing to moderate with persistent effect of drug.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Shitakamata:

It is one of the minor symptoms of Pittaj Pandu. In our study 29.04% patients suffered from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.53 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Shitakamata is 66.7 %, whereas in Group B it is 73.3 % and Group C it is 23.5 %. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Shitakamata.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) the mean rank of Group A is 105.03, Group B is 119.16 and Group C is 92.31. We can observe that mean rank of Group B is more; hence concluding that effect observed in group B is more than Group A and Group C (refer table no. 4.54).

Follow up in the 12^{th}week

In group A patients with complete relief increased by 2 with persistent effect of the drug. In group B as well, patients with complete relief increased by number 1. No patients remained in marked grade and only one remained in moderate grade. Patients in this group converted in to mild grade with persistent effect of the drug. In group C, no change observed in patients with complete relief but in mild grade number increased by 1, which moved to moderate grade with persistent effect of the drug.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Annabhinandana:

It is one of the major symptoms of Pittaj Pandu. In our study 82.38% had been found suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.58 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Annabhinandana is 55.8 %, where as in Group B it is 63.4 % and Group C is 36.3 %. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Annabhinandana.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) the mean rank of Group A is 96.55, Group B is 139.30 and Group C is 80.65. We can observe that mean rank of Group B is more, hence concluding that effect observed in group B is more than Group A and Group C (refer table no. 4.59) Follow up in the 12^{th}week ; it is observed that in group A patients with complete relief increased by 6 with persistent effect of the drug..In group B patients with complete relief increased by 3, with persistent effect of the drug. And in group C also patients with complete relief increased by 3 and the effect of drug still found persist.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Katukasyata:

It is one of the minor symptoms of Pittaj Pandu. In our study 33.80% had suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.63 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Katukasyata is 72.7 % whereas in Group B is 73.6 % and Group C is 39.4 % .All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Katukasyata**.**

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) the mean rank of Group A is 106.66 Group B is 116.64 and Group C is 93.20. We can observe that mean rank of Group B is more, hence concluding that effect observed in group B is more than Group A and Group C (refer table no. 4.64)

Follow up in the 12th week

In group A patients with complete relief increased by 1 with persistent effect of the drug. In group B no change found in patients with complete,mild and moderate grade with persistent effect of the drug.In group C no change observed in patients with complete relief but in mild grade number increased by 1, it came from moderate with persistent effect of the drug.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Ushnanupashyata:

It is one of the minor symptoms of Pittaj Pandu. In our study 31.42% had suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.68 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Ushnanupashyata is 55.6 % whereas in Group B is 60.0 % and Group C is 29.5 %. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Ushnanupashyata**.**

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) the mean rank of Group A is 99.97, Group B is 118.36 and Group C is 98.16. We can observe that mean rank of Group B is more; hence concluding that effect observed in group B is more than Group A and Group C (refer table no. 4.69)

Follow up in the 12th week

In group A patients with complete relief increased by 1 with persistent effect of the drug.In group B as well,patients with complete relief increased by 1, but in marked grade number increased by 1 and in group C no change observed in patients with complete relief but in mild grade number increased by 1, it came from moderate with persistent effect of the drug.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Vidaha:

It is one of the major symptoms of Pittaj Pandu. In our study 59.04% had suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.73 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Vidahais 60.4 %whereas in Group B is 55.6 % and Group C is 30.1 %. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Vidaha.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) the mean rank of Group A is 98.46, Group B is 130.29 and Group C is 87.75. We can observe that mean rank of Group B is more, hence concluding that effect observed in group B is more than Group A and Group C (refer table no. 4.69)

Follow up in the 12^{th} week

In group A,patients with complete relief increased by 2 with persistent effect of the drug.In group B patients with complete relief increased by 1 with persistent effect of the drug.In group C, no change observed in patients with complete relief but in mild grade number increased by 2, it came from moderate with persistent effect of the drug.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Daurgandhya:

It is one of the minor symptoms of Pittaj Pandu. In our study 26.19% had suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.78 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Daurgandhya is 63.2 % whereas in Group B,it is 54.8 % and Group C it is 12.8 %. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Daurgandhya.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is no significant difference among the effect of three groups ($P>0.05$) Hence we conclude that all drugs used in the study provided almost equal effect on Daurgandhya. (refer table no. 4.79)

Follow up in the 12^{th} week

In group A patients with complete relief increased by 1 with persistent effect of the drug.In group B as well, patients with complete relief increased by 1 and in mild grade also number increased by 1 with persistent effect of the drug.In group C, no change observed in patients with complete relief but in mild grade number increased by 1, it came from moderate with persistent effect of the drug.Statistically, it shows that no drug gives better results than other.

Daurbalya:

It is one of the major symptoms of Pittaj Pandu. In our study 92.38% had suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.83 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Daurbalyais 41.6 % whereas in Group B it is 45.3 % and Group C it is 36.1 %. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Daurbalya.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) The mean rank of Group A is 101.87, Group B is 121.41 and Group C is 93.22. We can observe that mean rank of Group B is more; hence concluding that effect observed in group B is more than Group A and Group C (refer table no. 4.84)

Follow up in the 12th week

In group A as well as in group B patients with complete relief increased by 3 with persistent effect of the drug.In group C patients with complete relief increased by 4 with persistent effect of the drug.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Tama:

It is one of the major symptoms of Pittaj Pandu. In our study 46.19% patients had been suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.88 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom of Tama is 62.9 %, whereas in Group B, it is 60.0 % and Group C, it is 41.3 %. All three group, has been provided statistically significant relief ($P<0.05$) in the symptom of Tama.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) the mean rank of Group A is 102.71, Group B is 105.21 and Group C is 108.57. We can observe that mean rank of Group C is more, hence concluding that effect observed in group C is more than Group B and Group A. Here Iron supplements gave better result in symptom tama. Rank of Group B is more than Group A (refer table no. 4.89).

Follow up in the 12th week

In group A,patients with complete relief increased by 2 with persistent effect of the drug. In group B patients with complete relief increased by 1 with persistent effect of the drug.In group C, no change observed in patients with complete relief but in mild grade number increased by 2, it came from moderate with persistent effect of the drug.

Our result is Navayasaloha is better treatment than Dhatryarishta and it proved statistically

Bhinnavarcha:

It is one of the major symptoms of Pittaj Pandu. In our study 48.57% had been suffering from this symptom before the treatment. After treatment improvement in both groups was remarkable.

With reference to table no 4.93 (Wilcoxon Signed Rank test is used) it has been observed that the effect provided in Group A on the symptom Bhinnavarcha is 61.5 %whereas in Group B, it is 67.0 % and Group C, it is 44.0 %. All three groups, has been provided statistically significant relief ($P<0.05$) in the symptom Bhinnavarcha.

On evaluating the effect of therapy by using Kruskal Wallis test (Non parametric one-way ANOVA) it is found that there is significant difference among the effect of three groups ($P<0.05$) the mean rank of Group A is 85.60, Group B is 135.54 and Group C is 95.36. We can observe that mean rank of Group B is more, hence concluding that effect observed in group B is more than Group A and Group C (refer table no. 4.94)

Follow up in the 12^{th} week

In group A patients with complete relief increased by 1 with persistent effect of the drug. In group B no change found in patients with complete relief but in mild and moderate patients increased by 1 and in group C patients with complete relief increased by 3 with persistent effect of the drug.

The results here show that Navayasaloha is better treatment than Dhatryraishta supported by statistical values.

Hemoglobin Percentage:

Hemoglobin % is the most important investigation which gives us idea of severity of anaemia. In this study all the cases were investigated for Hb% before and After the treatment. All the drugs were found to be effective in increasing the haemoglobin percentage.

With reference to table no 4.95 (Z test is used)-It was observed that the effect provided in Group A, average change in % is 5.2, whereas in Group B, it is 9.8 and Group C, it is 13.6. All three groups, has been provided statistically significant result ($P<0.05$) with increase in the Hb%.

On evaluating the effect of therapy by using one-way ANOVA test, it is found that there is significant difference among the effect of three groups ($P<0.05$) the mean difference between Group A is 0.49, Group B, it is 0.97 and Group C, it is 1.23. We can observe that mean difference of Group C is more than group A and B, concluding the effect observed in group C is more than Group A and Group B (refer table no. 4.96)

The statistical result here proves that, Iron supplements are better treatment than Dhatryarishta and Navayasaloha.

Chapter -V

CONCLUSION

- Dhatryarishta and Navayasa Loha both are effective treatment for Pittaj Pandu.
- Patients treated with Navayasa Loha shown better improvement in symptoms Amlodgara, Pitabhata, Annabhinandahna, Daha, Trishna, Sweda, Sheetakamata, Katukasyata , Daurbalya , Ushnanupasyata, Vidaha, Bhinnavarcha as compaired to Dhatryarishta
- Patients treated with Dhatryarishta shown better improvement in symptoms Jwara and Murcha as compaired to Navayasa Loha.
- Both Ayurvedic drugs are useful to increase the haemoglobin percentage.
- The durability in effect of NavayasaLoha found better than Dhatryarishta.
- In overall effect, it is concluded that Navayasa Loha is comparatively more effective treatment than Dhatryarishta in Pittaj Pandu.

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CASE PAPER

Comparative study of effect of Dhatryarishta and Navayasa Loha in the management of Pittaj Pandu

Patient's Name-

Date

O.P.D/I.P.D. NO-

Age- years

Sex-M/F

Religion- H/M/Ch/J/B/Other

Occupation- Student/Housewife/Labour/Service/Business

Marital status-Married/unmarried

Economic status-Lower/Middle/Upper

Education- UE/PS /HS/GR/PG

Address-

Contact No-

History (Chief compliant)

Present Lakshana			
Amlodgara		Annabhinandana	
Pitabhata		Katukasyata	
Haritabhata		Ushnanupasyata	
Jwara		Vidaha	
Daha		Daurgandhya	
Trishna		Daurbalya	
Murcha		Tama	
Swed		Bhinnavarcha	
Shitkamata			

History of present illness-

History of past illness-

Family history

Menstrual history

Personal history

- Aahara
    - veg/non veg
    - regular time/irregular time
    - samashana/vishamashana/adhyashana/anashana
    - Dominant rasa in diet-

      Madhura/Amla/Lavana/Katu/Tikta/Kashaya
    - Dietary habits- Akalabhojana/ Kalabhojana/ Abhojana/

      Samashana/ Adhyashana/ Vishamashana/ Anashana

      Quantity- Good/Poor

      Appetite: - Good/Moderate/Poor/Excessive

      Agni Manda/ Sama/ tikshna/ Vishama

- Vihara
  - Nature of work- Sedentary/Heavy
  - Exercise-

    No/Less/Excess/Regular/Irregular
  - Sleep- Sound/Disturbed/Irregular

    Divaswap/ratrijagarana
  - Habits-

    Alcohol/Tobacco/smoking/betel
  - Bowel: Regular/Irregular/

    Constipation/Lose motion.

    Frequency: Times/day

    Consistency: Hard/ Semisolid/ Liquid

    Colour:

    Mucous:

    Odour:

    Pain or any discomfort while passing stool:

    Flatus passed along with stool:
  - Micturation

    Frequency: times /day& night

    Associate complaint: Burning/ Itching / Dysurea /

    Other

Manasika avastha

Bhaya	Moha	Priti	Shoka
chinta	Harsha	Krodha	Dainya

GENERAL EXAMINATION

Ashtavidha pariksha

Nadi : /min vataj/pittaj/kaphaj
regular /irregular

Mala : sama/nirama

regular/irregular/constipated/loose motion /semisolid

Varna- pandura/ harita/ shweta/ peeta/ samanya

Gandha- teevra /alpa/ samanya

Mutra : times/day colour: burning, pain

Varna- pandura/ harita/ shweta/ peeta/ samanya

Gandha- teevra /alpa/ samanya

Jivha : sama/alpsama/nirama

Varna- pandura/harita/ raktabha/ krishnabha/

Shabda: kshina/prakruta

Sparsha: ushna/anushana/ruksha/ snigdha

Druk : pandura/ haritabha/ raktabha/shyava/ tamra
Prabhahina/prabhaukta

Akruti: Sthula/madhyama/krusha

Prakriti pariksha

Doshaj -VP/VK/PV/PK/KV/KP

Manasa -Satvik/Rajasa/Tamas

GENERAL PHYSICAL EXAMINATION:

Sr. No	Signs	Measurements
1	Pulse rate	/min
2	Respiratory rate	/min
3	Temp	^{0}F
4	Blood pressure	mm of Hg
5	Body weight	Kg

- Built - Thin/Moderate/ Obese
- General appearence – ill looking/ anxious/ normal
- Skin- pandura/haritabha/krushnabha /araktvarna
- Nails- pandura/haritabha/krushnabha /araktvarna
- Lymphadenopathy-
- Oedema- present/absent
- Hairs-
- Thyroid- normal/enlarged
- Any congenital deformity-

Treatment Group:

Dhtryarishta (I Group)
Navayasa loha (II Group)
Conventional Iron supplements (III Group)

Weekly Observations:

Present Lakshana		1st week A. T.	2nd week A.T.	3rd week A.T.	4th week A.T.	5th week A.T.	6th week A.T.	12th week A.T.
Amlodgara								
Pitabhata								
Haritabhata								
Jwara								
Daha								
Trishna								
Murcha								
Swed								
Shitkamata								
Annabhinandana								
Katukasyata								
Usnanupasyata								
Vidaha								
Daurgandhya								
Daurbalya								
Tama								
Bhinnavarcha								
Hb%								

Researcher's Sign,

संमती पत्रक

मी ..... वय वर्षे

खालील संपूर्ण माहीती वाचली आहे / मला वाचून दाखवली आहे. माझ्या सर्व प्रश्नांची मला समाधानकारक उत्तरे मिळाली असून माझा पित्तज पांडूच्या चिकित्सा उपक्रमामध्ये धात्र्यारिष्ठ व नवयसलोह यांच्या परिणामांचा तुलनात्मक अभ्यासासाठी अंर्तभाव करण्यात यावा. यासाठी मी संमती प्रदान करत आहे.

- मी संपूर्ण माहिती वाचली असून मला समजली आहे.
- संमती पत्रक मला समजावून सांगितले आहे.
- या चिकित्सेचे स्वरुप स्पष्ट केलेले आहे व मी ते समजावून घेतले आहे.
- माझी कर्तव्ये मला समजावून सांगितली आहेत.
- चिकित्सा सुरु करणे अगोदर व चिकित्सा संपल्यानंतर (किंवा चिकित्से दरम्यान कधीही) रक्त तपासणी करण्यास माझी तयारी आहे.
- चिकित्सेतील व रक्त तपासणी संदर्भातील संभाव्य धोके मला समजावून सांगितले आहेत.
- मी चिकित्सकांना घेत असलेल्या सर्व औषधोपचाराची माहिती दिली आहे.
- मी चिकित्सकांना पूर्ण सहकार्य करेन तसेच काही त्रास झाल्यास त्यांना तत्काळ सूचीत करेन.
- माझी वैद्यकीय माहिती प्रसिध्द होणार आहे परंतू माझी ओळख गोपनिय ठेवण्यात येणार आहे. याची मला कल्पना दिलेली आहे.
- माझ्या सर्व प्रश्नांची समाधान कारक उत्तरे मिळाली आहेत.

रुग्णाची सही / अंगठा : दिनांक

रुग्णाचे नांव :

संमती पत्रक

(अल्पवयीन रुग्ण)

मी ..... वय वर्षे

खालील संपूर्ण माहीती वाचली आहे / मला वाचून दाखवली आहे. माझ्या सर्व प्रश्नांची मला समाधानकारक उत्तरे मिळाली असून माझा मुलगा /मुलगी ..... वय वर्षे याचा /हिचा पित्तज पांडूच्या चिकित्सा उपक्रमामध्ये धात्र्यारिष्ठ व नवायसलोह यांच्या परिणामांचा तुलनात्मक अभ्यासासाठी अंर्तभाव करण्यात यावा. यासाठी मी संमती प्रदान करत आहे.

- मी संपूर्ण माहिती वाचली असून मला समजली आहे.
- संमती पत्रक मला समजावून सांगितले आहे.
- या चिकित्सेचे स्वरुप स्पष्ट केलेले आहे व मी ते समजावून घेतले आहे.
- माझी कर्तव्ये मला समजावून सांगितली आहेत.
- चिकित्सा सुरु करणे अगोदर व चिकित्सा संपल्यानंतर (किंवा चिकित्से दरम्यान कधीही) रक्त तपासणी करण्यास माझी तयारी आहे.
- चिकित्सेतील व रक्त तपासणी संदर्भातील संभाव्य धोके मला समजावून सांगितले आहेत.
- माझा मुलगा /मुलगी घेत असलेल्या सर्व औषधोपचाराची माहिती मी चिकित्सकांना दिली आहे.
- मी चिकित्सकांना पूर्ण सहकार्य करेन तसेच माझ्या मुलास/मुलीस काही त्रास झाल्यास त्यांना तत्काळ सूचीत करेन.
- माझा मुलगा /मुलगी यांची वैद्यकीय माहिती प्रसिध्द होणार आहे परंतू त्यांची ओळख गोपनिय ठेवण्यात येणार आहे. याची मला कल्पना दिलेली आहे.
- माझ्या सर्व प्रश्नांची समाधान कारक उत्तरे मिळाली आहेत.

पालकाची सही / अंगठा : दिनांक

पालकाचे नांव :

VAIDYARATNAM
OUSHADHASALA PVT. LTD.

CERTIFICATE OF ANALYSIS
[Form 50]
[See Rule 160D (f)]
As per Drugs & Cosmetics Act 1940 and the rules 1945

Date:-21/03/2014

Name and address of Customer : Dr.Milind Rajguru
Professor in V.PAMC Sangali

Name of the sample : Dhatryarishtam

Sample Details : B.No: 3334
Mfg date:-02/2014

Date of Receipt : 02/02/2014.

Date Of Analysis : 02/02/2014-4/02/2014

S. No	Parameters Tested	Result	Reference
1	pH	3.05	API
2.	Total solids	20%	API
3.	Specific gravity	1.04	API
4.	Acidity (as 4N NaOH)	3.9ml	
5.	Alcohol content	6.1%	API
6.	Total Sugar	13.68%	API
7.	Non reducing sugar	13.63%	API
8.	Test for methanol	Absent	API
9.	Total Phenol content	1.5%	API

Place:-Thaikattussery
Date:- 21/03/2014

Work Done by

Devi K. N.
Senior Chemist

Authorized Signatory

Note
1. Analyzed samples shall be retained for one month after completion of testing unless otherwise specified.
2. Test results are confined to the sample submitted. Vaidyaratnam Oushadhasala Quality Testing Laboratory shall not be responsible for uneven sampling which in turn shall lead to the non – conformance in quality with respect to the whole batch/lot.
3. This report does not endorse the quality of the product and should not be used for advertisement or as an evidence of litigation. This report should not be reproduced partly or in full unless written permission is obtained.

VAIDYARATNAM OUSHADHASALA (P) LTD. Quality Testing Laboratory

ASHTAVAIDYAN THAIKKATTU MOOSS
VAIDYARATNAM

Registered Office: Ollur, Thaikkattussery, Thrissur, Kerala - 680 306.
Ph.: +91 487 2432732, Fax: +91 487 2355898
E-mail: mail@vaidyaratnammooss.com; www.vaidyaratnammooss.com

AUSHADHI BHAVAN
Ayurved Seva Sangh

Ganeshwadi, Panchavati, Nashik 422 003.

CERTIFICATE OF ANALYSIS
(Choorna)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	AR/072/13
2.	Name	:	Rangari Hirda
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013
5.	Batch Size	:	200 gm

- **Results of Analysis :-**

6.	Description	:	Fruit Yellowish brown in colour,Ovoid,Taste astringent : Powder brownish in colour
7.	Loss on Ignition	:	N.A.
8.	Ash Value	:	**3.500%**
9.	Acid Insoluble Ash	:	**2.2015 %**
10.	Water Soluble Extractive	:	**62.8998%**
11.	Alcohol Soluble Extractive	:	**42.1500%**

OPINION- The sample Complies / ~~Doesnot complies~~ with the prescribed standards. The sample refferred to the above is of Standard Quality / ~~Not of Standard Quality~~ with respect to above tests only.

Analysed By
27/10/13

Q.C. Incharge
27/10/13

AUSHADHI BHAVAN
Ayurved Seva Sangh,
Near Gadge Maharaj Bridge,
Ganeshwadi, Panchavati,
NASHIK

AUSHADHI BHAVAN
Ayurved Seva Sangh

Ganeshwadi, Panchavati, Nashik 422 003.

CERTIFICATE OF ANALYSIS
(Choorna)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	AR/073/13
2.	Name	:	Beheda
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013
5.	Batch Size	:	200 gm

- **Results of Analysis :-**

6.	Description	:	**Uniformly fine powder colour grey with slightly wrinkled appearance,taste astringent.**
7.	Loss on Ignition	:	N.A.
9.	Ash Value	:	**4.6580%**
10.	Acid Insoluble Ash	:	**0.8910 %**
11.	Water Soluble Extractive	:	**40.3850 %**
12.	Alcohol Soluble Extractive	:	**12.0185%**
13.	Assay For	:	------

OPINION- The sample Complies / ~~Doesnot complies~~ with the prescribed standards. The sample refferred to the above is of Standard Quality / ~~Not of Standard Quality~~ with respect to above tests only.

Analysed By
27/10/13

Q.C. Incharge
27/10/13

AUSHADHI BHAVAN
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Ganeshwadi, Panchavati,
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Ayurved Seva Sangh

Ganeshwadi. Panchavati. Nashik 422 003.

CERTIFICATE OF ANALYSIS
(Choorna)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	AR/070/13
2.	Name	:	Amalaki Choorna
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013
5.	Batch Size	:	200 gm

- **Results of Analysis :-**

6.	Description		:Fine powder uniformaly thickened
			:straight walled isodiametric parenchyma
			:cells with irregular thickened walls
			: occasionally short fiberes and tracheids
7.	Ash Value	:	1.500 %
8.	Acid Insoluble Ash	:	0.5 %
9.	Water Soluble Extractive	:	65.7500 %
10.	Alcohol Soluble Extractive	:	47.2850 %

OPINION- The sample Complies / ~~Doesnot complies~~ with the prescribed standards. The sample refferred to the above is of Standard Quality / ~~Not of Standard Quality~~ with respect to above tests only.

REFERANCE - As per in house Specifications.

Analysed By
Date : 27/10/13

Q.C. Incharge
Date : 27/10/13

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Ganeshwadi, Panchavati,
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Ayurved Seva Sangh

Ganeshwadi, Panchavati, Nashik 422 003.

CERTIFICATE OF ANALYSIS
(Choorna)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	AR/076/13
2.	Name	:	Kale Mire Choorna
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013
5.	Batch Size	:	200 gm

- **Results of Analysis :-**

6.	Description		:Uniformly fine powder greyish black to black odour aromatic taste pungrnt.
7.	Ash Value	:	4.4197 %
8.	Acid Insoluble Ash	:	0.3857 %
9.	Water Soluble Extractive	:	17.9961 %
10.	Alcohol Soluble Extractive	:	15.9198%

OPINION- The sample Complies / ~~Doesnot complies~~ with the prescribed standards. The sample refferred to the above is of Standard Quality / ~~Not of Standard Quality~~ with respect to above tests only.

REFERANCE - As per in house Specifications.

Analysed By
Date : 27/10/13

Q.C. Incharge
Date : 27/10/13

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Ganeshwadi, Panchavati,
NASHIK

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Ayurved Seva Sangh

Ganeshwadi, Panchavati, Nashik 422 003.

CERTIFICATE OF ANALYSIS
(Choorna)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	AR/075/13
2.	Name	:	Shunth Choorna
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013
5.	Batch Size	:	200 gm

- **Results of Analysis :-**

6.	Description	:	Uniformly fine powder Yellowish brown in colour odour agreeable and aromatic taste, agreeable and pungent.
7.	Ash Value	:	3.7500 %
8.	Acid Insoluble Ash	:	0.5 %
9.	Water Soluble Extractive	:	19.8850 %
10.	Alcohol Soluble Extractive	:	8.5046 %

OPINION- The sample Complies / ~~Doesnot complies~~ with the prescribed standards. The sample refferred to the above is of Standard Quality / ~~Not of Standard Quality~~ with respect to above tests only.

REFERANCE - As per in house Specifications.

Analysed By
Date : 27/10/13

Q.C. Incharge
Date : 27/10/13

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Ayurved Seva Sangh,
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Ayurved Seva Sangh

Ganeshwadi, Panchavati, Nashik 422 003.

CERTIFICATE OF ANALYSIS
(Choorna)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	ARC/069/13
2.	Name	:	Pimpali Choorna
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013
5.	Batch Size	:	200 gm

- **Results of Analysis :-**

6.	Description	:	Brownish Green coloured fine powder having charectrestic odour & bitter taste.
7.	Loss on Ignition	:	N.A.
8.	Ash Value	:	9.1632 %
9.	Acid Insoluble Ash	:	--
10.	Water Soluble Extractive	:	11.002 %
11.	Alcohol Soluble Extractive	:	35.3417 %

OPINION-The sample Complies / ~~Doesnot complies~~ with the prescribed standards. The sample refferred to the above is of Standard Quality / ~~Not of Standard Quality~~ with respect to above tests only.

REFERANCE- As per in house Specifications.

Analysed By

Date : 27/10/13

Q.C. Incharge

Date : 27/10/13

AUSHADHI BHAVAN
Ayurved S... ...gh,
Near Gadge M... ...y Bridge,
Ganeshwadi, ...nchavati,
NASHIK

AUSHADHI BHAVAN
Ayurved Seva Sangh

Ganeshwadi, Panchavati, Nashik 422 003.

CERTIFICATE OF ANALYSIS
(Choorna)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	AR/074/13
2.	Name	:	Chitrak
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013
5.	Batch Size	:	200 gm

- **Results of Analysis :-**

6.	Description	:	**Dried cut pieces of root reddish to deep brown, scars of rootlets present, bark thin and brown, internal structure striated, odour, disagreeable, taste, acrid.**
7.	Loss on Ignition	:	N.A.
9.	Ash Value	:	**1.7500 %**
10.	Acid Insoluble Ash	:	**0.8500%**
11.	Water Soluble Extractive	:	**20.4520 %**
12.	Alcohol Soluble Extractive	:	**17.2545%**
13.	Assay For	:	------

OPINION- The sample Complies / ~~Doesnot complies~~ with the prescribed standards. The sample refferred to the above is of Standard Quality / ~~Not of Standard Quality~~ with respect to above tests only.

Analysed By
27/10/13

Q.C. Incharge
27/10/13

AUSHADHI BHAVAN
Ayurved Seva Sangh,
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Ganeshwadi, Panchavati,
NASHIK

AUSHADHI BHAVAN
Ayurved Seva Sangh

Ganeshwadi, Panchavati, Nashik 422 003.

CERTIFICATE OF ANALYSIS
(Choorna)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	AR/071/13
2.	Name	:	Vidanga Choorna
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013
5.	Batch Size	:	200 gm

- **Results of Analysis :-**

6.	Description	:	Brown coloured fine content having charectrestic odour .
7.	Loss on Ignition	:	N.A.
8.	Ash Value	:	16.2852 %
9.	Acid Insoluble Ash	:	0.5021 %
10.	Water Soluble Extractive	:	36.7250 %
11.	Alcohol Soluble Extractive	:	23.7180 %

OPINION- The sample Complies / ~~Doesnot complies~~ with the prescribed standards. The sample refferred to the above is of Standard Quality / ~~Not of Standard Quality~~ with respect to above tests only.

REFERANCE - As per in house Specifications.

Analysed By
Date : 27/10/13

Q.C. Incharge
Date : 27/10/13

AUSHADHI BHAVAN
Ayurved Seva Sangh,
Near Gadge Maharaj Bridge,
Ganeshwadi, Panchavati,
NASHIK

AUSHADHI BHAVAN
Ayurved Seva Sangh

Ganeshwadi, Panchavati, Nashik 422 003.

CERTIFICATE OF ANALYSIS
(Choorna)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	AR/077/13
2.	Name	:	Nagarmotha Choorna
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013
5.	Batch Size	:	200 gm

- **Results of Analysis :-**

6.	Description	:	Uniformly fine powder cremish slightly brown powder odour pleasant taste not specific.
7.	Ash Value	:	4.7302 %
8.	Acid Insoluble Ash	:	2.1134 %
9.	Water Soluble Extractive	:	11.1256 %
10.	Alcohol Soluble Extractive	:	5.7878%

OPINION- The sample Complies / Doesnot complies with the prescribed standards. The sample refferred to the above is of Standard Quality / Not of Standard Quality with respect to above tests only.

REFERANCE - As per in house Specifications.

Analysed By
Date : 27/10/13

Q.C. Incharge
Date : 27/10/13

AUSHADHI BHAVAN
Ayurved Seva Sangh,
Near Gadge Maharaj Bridge,
Ganeshwadi, Panchavati,
NASHIK

AUSHADHI BHAVAN
Ayurved Seva Sangh
Ganeshwadi, Panchavati, Nashik 422 003.

CERTIFICATE OF ANALYSIS
(BHASMA)

- **Particulars of the Sample Submitted :-**

1.	Analysis Report Number	:	AR/68/13
2.	Name	:	Loha Bhasma
3.	Date of Sampling	:	22/10/13
4.	Batch / Lot Number	:	1013

- **Results of Analysis :-**

6.	Description	:	A Brick red Coloured powder	
		:	Odourless, tasteless	
		:		
7.	Loss on Drying at 110°C	:	0.3057 %	(**N:-** NMT 0.5%)
8.	Loss on Ignition	:	0.6082 %	(**N:- NMT 1%**)
9.	Ash Value	:	N.A.	(N:- ---------- %)
10.	Acid Insoluble Ash	:	N.A.	**(N:-** NMT 40-65%)
11.	Identification	:	N.A.	
12.	Assay For Iron	:	N.A.	(N:- 35 - 40 %)

OPINION- The sample Complies / ~~Doesnot complies~~ with the prescribed standards.The sample refferred to the above is of Standard Quality / ~~Not of Standard Quality~~ with respect to above tests only.

REFERANCE- Pharmacopoeial Standards for Ayurvedic Formulations. P. No. 47

Analysed By
Date : 27/10/13

Q.C. Incharge
Date : 27/10/13

AUSHADHI BHAVAN
Ayurved Sev. . . th,
Near Gadge Ma. . . ridge,
Ganeshwadi, P. . . vati,
NASHIK

ISO 9001-2008 CERTIFIED

Central Govt. Approved for *AGMARK*

NIKHIL ANALYTICAL & RESEARCH PVT. LTD.

NARL

Opposite Sadhana Petrol Pump, Kolhapur Road, Sangli - 416 416 Maharashtra (Bharat)
• Email : nikhil_lab@yahoo.com • Phone : +919552574418

CERTIFICATE OF ANALYSIS

Ch3/P461			11/07/2016
Name/ Organization	Dr. Milind Gokul Rajguru, Sangli.		
Sample Description	Navayas Loha		
Sample Collected by	Party	Sample Received on	04/07/2016
Sample Analysed by	Smt. Geetanjali	Analysis Completed on	11/07/2016
Reference			

Sr.	Parameter	Unit	Value
1.	pH (10% Solution)	-	04.13
2.	Loss On Drying at 105°C	%	03.91
3.	Total Ash	%	51.79
4.	Acid Insoluble Ash	%	42.56
5.	Water Soluble Extractives	%	14.18
6.	Alcohol Soluble Extractives	%	01.18
7.	Iron	%	03.28
8.	Rf Value	-	-

Analyst / Lab In-Charge

Managing Director
Nikhil Suhas Khambe
B.Tech (Bio-tech)

Note :- The report can not be used for court purpose. we are not responsible for any legal matter.

FOOD, FEED, WATER, SOIL, PLANT MATERIAL, ORGANIC MANURE, CHEMICAL- BIOLOGICAL FERTILIZER, PGR, AYURVEDIC & PHARMACEUTICALS, INDUSTRIAL MATERIAL, SOLID WASTE, WASTE WATER, AIR POLLUTION, ENVIRONMENTAL MONITORING & ETP CONSTRUCTION.

AGMARK Approval No. Q-11036/8/2011/Lab From Ministry of Agriculture, Department of Marketing & Inspection, Govt of India & State Govt. Approved for Soil & Water Analysis (SNG/STLR No. 1207/2012), Approved for Fertilizer Testing.

MASTER CHART FOR PATIENTS REGISTERED IN GROUP A

SL	OPD NO	AGE	Gender	RELGN	MARITAL	OCCUP	DIET	PRAKRUTI	AGNI	ECON STATUS	Aamlodgar								Pitabhata								Haritabhata							
											BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	
1	719	24	female	hindu	U	STU	VG	PK	MODRAT	MID	2	2	2	1	1	1	0	0	3	3	3	2	2	2	1	1	0	0	0	0	0	0	0	0
2	573	23	female	hindu	U	STU	NV	VP	POOR	MID	1	1	1	1	0	0	0	1	3	3	3	3	3	2	2	2	0	0	0	0	0	0	0	0
3	676	40	male	hindu	M	SER	VG	PV	EXCE	UPPER	2	2	2	1	1	1	0	0	3	3	3	2	2	2	1	1	0	0	0	0	0	0	0	0
4	1642	23	female	hindu	U	HW	NV	KP	POOR	LOWER	2	2	2	1	1	1	1	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
5	1725	40	male	hindu	M	BUS	NV	PV	MODRAT	MID	2	2	2	1	1	1	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
6	1922	24	male	hindu	U	LAB	NV	VP	POOR	LOWER	2	2	2	2	1	1	1	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
7	1952	22	female	hindu	U	STU	NV	KP	GOOD	MID	2	2	2	2	1	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
8	2007	24	male	hindu	U	LAB	NV	VP	POOR	LOWER	2	2	2	2	1	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
9	2075	27	male	hindu	U	LAB	VG	KP	POOR	LOWER	2	2	2	2	1	1	1	1	2	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0
10	2246	25	female	hindu	M	HW	VG	KP	POOR	MID	1	1	1	1	1	0	0	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
11	2418	33	female	boudh	M	SER	NV	KP	MODRAT	UPPER	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
12	2419	26	female	hindu	M	HW	NV	VP	POOR	UPPER	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
13	2501	33	female	hindu	M	HW	NV	PV	MODRAT	MID	2	2	2	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
14	2606	35	male	hindu	M	SER	NV	VP	GOOD	UPPER	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
15	2608	37	female	hindu	M	HW	VG	KP	GOOD	UPPER	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
16	3108	36	male	hindu	M	LAB	NV	PV	POOR	LOWER	1	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
17	3151	30	male	hindu	M	SER	NV	PK	MODRAT	UPPER	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
18	3152	35	male	hindu	M	LAB	NV	VP	POOR	LOWER	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
19	3195	28	male	hindu	M	BUS	VG	KP	POOR	UPPER	1	1	1	1	1	0	0	0	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0
20	3198	35	male	hindu	M	SER	NV	VP	MODRAT	UPPER	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0
21	3249	34	male	hindu	M	LAB	VG	VP	GOOD	LOWER	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	3262	22	female	hindu	M	HW	NV	VP	EXCE	MID	3	3	3	3	3	2	2	2	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0	0
23	3329	20	male	jain	U	STU	VG	PV	MODRAT	MID	3	3	3	3	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
24	3387	38	male	hindu	M	SER	VG	PV	MODRAT	MID	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
25	3460	34	female	hindu	M	LAB	NV	PK	POOR	LOWER	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0
26	4113	24	female	hindu	M	HW	NV	PV	MODRAT	MID	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
27	4115	20	male	hindu	U	STU	VG	PV	POOR	MID	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
28	IG3	38	female	hindu	M	LAB	NV	KP	EXCE	LOWER	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0
29	IG12	35	female	hindu	M	LAB	NV	PV	MODRAT	LOWER	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
30	IG47	34	female	hindu	M	LAB	VG	PK	POOR	LOWER	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0
31	IG49	40	female	muslim	M	LAB	VG	VP	GOOD	LOWER	2	2	2	2	2	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
32	IG57	40	female	hindu	M	LAB	VG	PV	POOR	LOWER	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	IG72	40	female	hindu	M	LAB	NV	PK	MODRAT	LOWER	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
34	IG90	37	female	hindu	U	LAB	VG	KP	MODRAT	LOWER	3	3	3	3	2	2	1	1	3	3	3	3	3	2	1	1	1	1	1	1	1	0	0	0
35	IG93	26	female	hindu	M	LAB	VG	PV	POOR	LOWER	2	2	2	1	1	1	0	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
36	IG97	38	female	MUSLIM	M	LAB	NV	PV	POOR	LOWER	2	2	2	2	2	1	1	1	3	3	3	3	2	2	1	1	0	0	0	0	0	0	0	0
37	IG105	38	female	hindu	M	LAB	NV	KP	GOOD	LOWER	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0
38	IG108	36	female	hindu	M	LAB	VG	PV	MODRAT	LOWER	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
39	IG111	24	female	hindu	U	LAB	VG	PV	MODRAT	LOWER	2	2	2	2	2	1	1	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
40	IG117	30	female	hindu	M	LAB	NV	PV	POOR	LOWER	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
41	IG121	28	female	hindu	M	LAB	VG	KP	POOR	LOWER	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	0	0	0	0	0	0	0	0
42	IG140	34	female	MUSLIM	M	LAB	NV	VP	MODRAT	LOWER	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
43	IG145	29	female	MUSLIM	M	LAB	NV	PV	POOR	MID	2	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0
44	IG160	35	female	hindu	M	LAB	NV	PK	MODRAT	LOWER	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
45	IG203	25	female	hindu	M	LAB	NV	KP	POOR	LOWER	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0
46	IG209	35	female	hindu	M	LAB	VG	PV	GOOD	LOWER	2	2	2	2	1	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
47	2675	35	female	hindu	M	HW	VG	PK	MODRAT	MID	0	0	0	0	0	0	0	0	3	3	3	3	3	2	2	2	0	0	0	0	0	0	0	0
48	4564	27	female	hindu	M	HW	NV	VP	POOR	LOWER	2	2	2	2	1	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
49	4926	39	female	hindu	M	SER	VG	KP	POOR	UPPER	2	2	2	1	1	1	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	0
50	4961	38	male	hindu	M	LAB	NV	PV	EXCE	LOWER	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
51	5031	34	male	hindu	M	BUS	NV	PV	EXCE	MID	1	1	1	1	1	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
52	5123	40	male	hindu	M	LAB	NV	VP	GOOD	LOWER	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
53	5290	22	female	hindu	M	HW	VG	KP	POOR	MID	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
54	5388	38	female	hindu	M	HW	NV	VP	POOR	MID	2	2	2	2	1	0	0	0	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0	0
55	5447	35	male	hindu	M	BUS	VG	KP	POOR	UPPER	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0
56	5624	23	female	hindu	M	HW	VG	KP	POOR	MID	2	2	1	1	2	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
57	5808	40	female	hindu	M	HW	NV	PV	MODRAT	MID	0	0	0	0	0	0	0	0	3	3	3	3	3	2	2	2	0	0	0	0	0	0	0	0
58	5909	26	male	hindu	M	BUS	VG	KP	POOR	UPPER	1	1	1	1	0	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
59	6192	36	female	hindu	M	HW	VG	PV	GOOD	LOWER	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0
60	6201	20	female	hindu	M	HW	NV	VP	MODRAT	MID	2	2	2	1	1	1	1	2	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1
61	6362	34	male	MUSLIM	M	LAB	NV	PV	POOR	LOWER	2	2	2	2	1	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
62	6363	23	female	MUSLIM	M	LAB	NV	KP	POOR	LOWER	2	2	1	1	1	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0
63	6402	25	male	hindu	U	STU	VG	VP	MODRAT	MID	2	2	2	2	2	1	1	1	3	3	3	3	3	3	2	2	1	1	1	1	1	1	1	0
64	6811	19	male	hindu	U	LAB	NV	PV	POOR	LOWER	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
65	6938	40	female	MUSLIM	M	HW	NV	PK	POOR	MID	2	2	2	2	2	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
66	7042	38	male	hindu	M	SER	VG	PV	MODRAT	UPPER	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
67	7109	30	female	hindu	M	HW	NV	PV	POOR	MID	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1
68	7434	20	female	hindu	U	STU	VG	VP	POOR	MID	2	2	2	2	2	1	1	1	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0
69	7491	28	male	hindu	M	LAB	NV	PV	POOR	LOWER	2	2	2	2	1	1	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0
70	7612	38	female	hindu	M	HW	VG	KP	EXCE	LOWER	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1

	Jwara								Daah								Trishna								Murcha								
W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF
0	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	2	2	2	1	1	1	0	0	2	2	2	1	1	1	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2	2	2	2	1	1	1	0	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	1	1	1	0	0	0	0	2	2	2	2	1	1	0	0	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0
0	2	2	2	2	2	1	1	1	2	2	2	1	1	1	0	0	2	2	2	2	1	1	1	0		0	0	0	0	0	0	0	0
0	3	3	3	2	2	2	1	1		2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	1
0	1	1	1	1	1	0	0	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	2	2	2	1	1	1	1	1	0
0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
0	1	1	1	1	1	0	0	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	0
0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	0
0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	0
0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	1
0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0
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0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	1
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Sweda							Shitakamata								Annabhinandana								Katukasyata										
W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2
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Ushananupashayta						Vidaha								Daurgandhya								Daurbalya								Tar			
W3	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	1	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0
0	0	0	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	1	1	1	1	1
2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0
0	0	0	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	3	3	3	3	3	2	2	1	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	1	1	1	1
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0	0	0	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	3	3	3	3	2	2	2	2	1	1	1	1
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0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	0	0	0	0
1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	3	3	3	3	1	1	1	1
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	2	2	2	1	1	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	2	2	2	1	1	1	1
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2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	3	3	2	1	1	1	1
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1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
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0	0	0	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	1	1	1	1
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0	0	0	0	0	0	1	1	1	1	1	1	0	0	2	2	2	2	2	2	1	0	1	1	1	1	1	1	0	0	0	0	0	0
0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	4	4	4	4	4	4	4	1	1	1	1	1

na				Bhinnavarcha								Hb%		
W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BT	W7	W12
0	0	0	0	2	2	2	1	1	1	0	0	8.2	8.4	8.5
0	0	0	0	0	0	0	0	0	0	0	0	9	9.2	9.8
0	0	0	0	0	0	0	0	0	0	0	0	12.3	12.8	12.6
0	0	0	0	0	0	0	0	0	0	0	0	11	11.9	12.3
0	0	0	0	0	0	0	0	0	0	0	0	9.2	9.5	9.3
0	0	0	0	0	0	0	0	0	0	0	0	11.4	11.6	11.9
0	0	0	0	0	0	0	0	0	0	0	0	8.5	9.6	9.4
0	0	0	0	2	2	2	1	1	1	0	0	10	11.3	11.3
0	0	0	0	1	1	1	1	0	0	0	0	10.5	11.7	11.6
0	0	0	0	1	1	1	1	1	0	0	0	6.9	7.8	7.7
0	0	0	0	0	0	0	0	0	0	0	0	13.4	13.6	13.3
0	0	0	0	0	0	0	0	0	0	0	0	11	11.9	11.2
0	0	0	0	0	0	0	0	0	0	0	0	10.8	11.6	11.5
0	0	0	0	0	0	0	0	0	0	0	0	10.8	11.1	11.4
0	0	0	0	0	0	0	0	0	0	0	0	8.7	9.4	9.4
1	1	0	0	0	0	0	0	0	0	0	0	9.3	9.8	10.2
0	0	0	0	1	1	1	1	1	0	0	0	10.7	10.8	10.5
0	0	0	0	0	0	0	0	0	0	0	0	11.2	11.6	11.9
1	1	1	0	0	0	0	0	0	0	0	0	7.7	8.4	8.6
1	0	0	0	2	2	2	2		1	1	1	8.1	8	7.8
1	0	0	0	0	0	0	0	0	0	0	0	10.6	11.3	11.5
0	0	0	0	0	0	0	0	0	0	0	0	7.9	8.6	8.5
0	0	0	0	0	0	0	0	0	0	0	0	10.4	11	10.5
0	0	0	0	0	0	0	0	0	0	0	0	12.6	13.2	13.4
0	0	0	0	0	0	0	0	0	0	0	0	8.2	9.3	9
1	1	1	1	1	1	1	1	1	1	1	1	8.4	8.4	7.6
1	0	0	0	0	0	0	0	0	0	0	0	11.3	12	12
0	0	0	0	2	2	2	2	2	2	1	1	8.9	9.4	9.4
1	0	0	0	0	0	0		0	0	0	0	11.5	11.8	11.6
0	0	0	0	0	0	0	0	0	0	0	0	11	11.3	11
1	0	0	0	2	2	2	2	2	1	1	1	10.5	11.1	11.3
2	2	2	2	2	2	2	2	2	2	2	2	11.2	10.8	10.7
0	0	0	0		0	0	0	0	0	0	0	10.4	10.8	11.1
1	1	1	1	0	0	0	0	0	0	0	0	7.9	8.4	8.4
0	0	0	0	1	1	1	1	0	0	1	0	11	11	10.7
0	0	0	0	0	0	0	0	0	0	0	0	7.7	7.6	8.1
0	0	0	0	1	1	1	1	1	1	1	1	9.7	10.3	10.1
0	0	0	0	0	0	0	0	0	0	0	0	8.7	9.2	9
0	0	0	0	1	1	1	1	1	0	0	0	11.5	12.1	12.3
1	0	0	0	1	1	1	1	1	1	0	0	11	11.6	11.4
2	2	2	2	0	0	0	0	0	0	0	0	8.9	9.2	8.7
0	0	0	0	1	1	1	1	1	1	1	1	11	11.6	11.8
0	0	0	0	0	0	0	0	0	0	0	0	10.5	10.9	10.8
0	0	0	0	0	0	0	0	0	0	0	0	10.4	11	11.4
1	1	1	1	0	0	0	0	0	0	0	0	6.6	7.1	7.3
1	0	0	0	0	0	0	0	0	0	0	0	10	10.6	10.6
0	0	0	0	0	0	0	0	0	0	0	0	6.3	6.8	7.1
0	0	0	0	0	0	0	0	0	0	0	0	9.5	9.8	8.9
1	0	0	0	0	0	0	0	0	0	0	0	9.3	10.2	9.8
0	0	0	0	1	1	1	1	1	1	1	1	11.4	12.4	12
0	0	0	0	0	0	0	0	0	0	0	0	9.3	9.7	9.7
0	0	0	0	0	0	0	0	0	0	0	0	11.6	11.9	12.4
1	1	1	0	0	0	0	0	0	0	0	0	12.2	12.5	13
1	1	0	0	0	0	0	0	0	0	0	0	7.7	8	8
0	0	0	0	0	0	0	0	0	0	0	0	7.9	8.4	8.6
0	0	0	0	0	0	0	0	0	0	0	0	10.2	10.8	10.5
0	0	0	0	0	0	0	0	0	0	0	0	6.4	7.1	7.5
0	0	0	0	0	0	0	0	0	0	0	0	8.9	9.2	9.6
0	0	0	0	1	1	1	1	1	1	0	0	10.7	11.2	11.3
1	1	1	1	1	1	1	1	0	0	0	0	6.8	7.4	7.2
1	1	0	0	0	0	0	0	0	0	0	0	9.2	10	9.8
0	0	0	0	1	1	1	1	1	1	0	0	11.2	11.7	12.4
1	0	0	0	0	0	0	0	0	0	0	0	7.5	8.2	8.1
0	0	0	0	0	0	0	0	0	0	0	0	9.4	9.7	10.2
1	1	1	1	0	0	0	0	0	0	0	0	8.2	8.6	8.6
0	0	0	0	0	0	0	0	0	0	0	0	10.5	10.9	11.1
1	1	1	1	0	0	0	0	0	0	0	0	6.7	7.3	7.6
1	1	0	0	1	1	1	1	1	1	0	0	8.2	8.5	8.7
0	0	0	0	0	0	0	0	0	0	0	0	8.7	9.2	9
1	1	1	1	0	0	0	0	0	0	0	0	6.8	6.5	6.2

MASTER CHART FOR PATIENTS REGISTERED IN GROUP B

SL	OPD NO	AGE	Gender	RELGN	MAR .STA	OCCUP	DIET	PRAKRUTI	AGNI	ECO. STA	Aamlodgar								Pitabhata								Haritabhata							
											BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	
1	589	28	FEMALE	MUSLIM	M	LAB	NV	PK	EXCE	LOWER	2	2	2	2	2	1	1	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
2	612	33	MALE	HINDU	M	LAB	NV	VP	POOR	LOWER	2	2	2	1	1	1	0	0	3	3	3	2	2	2	1	1	0	0	0	0	0	0	0	0
3	1050	40	FEMALE	MUSLIM	M	HW	NV	PK	MOD	MID	2	2	2	2	1	1	1	1	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
4	1220	32	MALE	BOUDHA	M	SER	NV	PV	POOR	MID	3	3	3	2	2	1	1	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
5	1273	40	MALE	HINDU	M	LAB	NV	PV	EXCE	LOWER	0	0	0	0	0	0	0	0	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
6	1457	27	MALE	JAIN	U	EDU	VG	PV	GOOD	UPPER	0	0	0	0	0	0	0	0	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
7	1469	28	FEMALE	BOUDHA	M	HW	NV	KP	POOR	MID	3	3	3	3	2	2	2	2	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
8	1882	25	MALE	HINDU	U	SER	VG	VP	EXCE	MID	0	0	0	0	0	0	0	0	3	3	3	2	2	1	1	1	0	0	0	0	0	0	0	0
9	2025	24	MALE	HINDU	U	EDU	NV	PK	MOD	MID	3	3	3	3	2	2	1	1	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
10	2104	25	MALE	HINDU	U	LAB	NV	VP	MOD	LOWER	3	3	3	3	2	2	2	2	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
11	2134	24	FEMALE	HINDU	M	SER	NV	KP	GOOD	MID	3	3	3	3	3	2	2	2	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
12	2238	38	FEMALE	HINDU	M	SER	NV	PK	GOOD	UPPER	1	1	1	1	0	0	0	0	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0
13	2278	35	FEMALE	HINDU	M	LAB	NV	VP	POOR	LOWER	3	3	3	3	2	2	2	2	4	4	4	4	3	3	3	3	0	0	0	0	0	0	0	0
14	2272	18	FEMALE	HINDU	U	EDU	VG	VP	POOR	MID	2	1	1	1	0	0	0	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
15	2697	39	MALE	HINDU	M	BUS	VG	PV	EXCE	MID	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0	2	2	2	1	1	1	1	1
16	3109	35	FEMALE	HINDU	M	HW	NV	VP	POOR	MID	2	2	2	2	1	1	1	1	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
17	3154	23	FEMALE	HINDU	M	HW	VG	KP	MOD	MID	3	3	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0
18	3196	31	MALE	MUSLIM	M	LAB	NV	VP	MOD	MID	2	2	2	2	2	1	1	1	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
19	3261	32	MALE	HINDU	M	BUS	NV	PV	EXCE	MID	3	3	3	3	2	2	2	2	2	2	2	2	1	1	1	2	0	0	0	0	0	0	0	0
20	3384	24	FEMALE	HINDU	M	HW	NV	PK	GOOD	MID	3	3	3	3	2	2	1	1	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
21	3458	24	FEMALE	HINDU	M	HW	VG	PK	MOD	LOWER	2	2	2	1	1	0	0	0	3	3	3	2	2	2	2	1	0	0	0	0	0	0	0	0
22	3505	40	FEMALE	HINDU	M	SER	VG	VP	EXCE	MID	1	1	1	1	0	0	0	0	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0
23	3546	34	MALE	HINDU	M	LAB	NV	PV	MOD	LOWER	3	3	3	2	2	1	1	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
24	3600	34	MALE	BOUDHA	M	BUS	NV	PV	MOD	MID	3	3	3	2	2	1	1	1	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0
25	4112	38	FEMALE	HINDU	M	HW	VG	PK	MOD	MID	3	3	3	3	2	2	2	2	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
26	4461	22	FEMALE	HINDU	U	EDU	VG	VP	POOR	MID	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0
27	4697	28	FEMALE	HINDU	M	HW	NV	PV	MOD	LOWER	0	0	0	0	0	0	0	0	3	3	3	2	2	1	1	1	0	0	0	0	0	0	0	0
28	4772	40	MALE	JAIN	M	BUS	VG	PK	POOR	UPPER	1	1	1	1	0	0	0	0	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0
29	4964	19	MALE	HINDU	U	EDU	NV	VP	POOR	LOWER	3	3	3	2	2	1	1	1	2	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0
30	5065	23	FEMALE	MUSLIM	M	HW	NV	PV	MOD	MID	3	3	3	3	2	2	2	2	3	3	3	3	3	2	2	2	0	0	0	0	0	0	0	0
31		22	FEMALE	HINDU	U	EDU	VG	PK	POOR	LOWER	1	1	1	1	1	0	0	0	4	4	4	4	3	3	3	2	0	0	0	0	0	0	0	0
32	5779	18	MALE	HINDU	U	EDU	NV	KP	GOOD	MID	2	2	2	2	1	1	0	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
33	5369	20	FEMALE	HINDU	U	EDU	NV	PV	MOD	MID	3	3	3	2	2	1	1	1	4	4	4	3	3	3	2	2	0	0	0	0	0	0	0	0
34	5485	40	FEMALE	JAIN	M	HW	VG	PK	POOR	UPPER	0	0	0	0	0	0	0	0	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
35	I.G6	35	FEMALE	BOUDHA	M	LAB	NV	VP	POOR	LOWER	2	2	2	2	1	1	0	0	3	3	3	3	2	2	1	1	0	0	0	0	0	0	0	0
36	I.G4	39	FEMALE	HINDU	M	LAB	VG	KP	POOR	LOWER	3	3	3	2	2	2	2	2	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	
37	I.G23	36	FEMALE	MUSLIM	M	LAB	NV	PV	MOD	LOWER	1	1	1	1	0	0	0	0	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
38	I.J.45	39	FEMALE	MUSLIM	M	LAB	NV	PK	POOR	LOWER	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0
39	I.G52	32	FEMALE	HINDU	M	LAB	NV	PV	GOOD	LOWER	1	1	1	1	1	0	0	0	3	3	3	3	3	2	2	2	0	0	0	0	0	0	0	0
40	I.G.70	24	FEMALE	HINDU	M	LAB	VG	PK	POOR	MID	0	0	0	0	0	0	0	0	4	4	4	4	4	3	3	3	0	0	0	0	0	0	0	0
41	I.G86	35	FEMALE	HINDU	M	LAB	NV	PV	MOD	LOWER	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0
42	I.G94	29	FEMALE	HINDU	M	LAB	VG	PK	POOR	LOWER	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
43	I.G100	37	FEMALE	HINDU	M	LAB	NV	VP	MOD	MID	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0
44	I.G108	32	FEMALE	HINDU	M	LAB	NV	PV	MOD	LOWER	2	2	2	2	1	1	0	0	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
45	I.G110	30	FEMALE	HINDU	M	LAB	NV	PV	POOR	LOWER	0	0	0	0	0	0	0	0	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
46	I.G116	40	FEMALE	HINDU	M	LAB	VG	PK	MOD	MID	2	2	2	2	1	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
47	I.G118	34	FEMALE	HINDU	M	LAB	VG	VP	POOR	LOWER	1	1	1	1	0	0	0	1	4	4	4	4	4	3	3	3	0	0	0	0	0	0	0	0
48	I.G129	33	FEMALE	MUSLIM	M	LAB	NV	PK	POOR	LOWER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0
49	I.G137	36	FEMALE	HINDU	M	LAB	VG	VP	MOD	LOWER	2	2	2	2	2	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
50	I.G159	40	FEMALE	HINDU	M	LAB	NV	PK	POOR	LOWER	2	2	2	2	1	1	0	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
51	I.G161	20	FEMALE	HINDU	M	LAB	VG	VP	MOD	MID	1	1	1	1	1	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
52	I.G200	26	FEMALE	HINDU	M	LAB	NV	PK	POOR	LOWER	0	0	0	0	0	0	0	0	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
53	I.G208	31	MALE	HINDU	M	LAB	NV	PK	MOD	LOWER	3	3	3	3	2	2	2	2	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
54	I.G216	34	FEMALE	HINDU	M	LAB	VG	KP	GOOD	LOWER	2	2	2	2	1	1	1	1	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
55	I.G224	23	FEMALE	HINDU	U	LAB	NV	PV	POOR	LOWER	1	1	1	1	1	0	0	0	3	3	3	3	3	2	2	2	2	2	2	2	1	1	1	1
56	5777	30	FEMALE	HINDU	M	HW	VG	PV	GOOD	MID	0	0	0	0	0	0	0	0	2	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2
57	5931	40	MALE	HINDU	M	BUS	NV	KP	MOD	UPPER	1	1	1	1	0	0	0	0	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0
58	6018	21	MALE	HINDU	U	EDU	NV	PV	POOR	UPPER	2	2	2	2	1	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
59	6291	19	FEMALE	HINDU	U	EDU	VG	PK	MOD	UPPER	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	2	2	2	2	1	1	1	
60	6557	38	MALE	HINDU	M	BUS	VG	PV	GOOD	MID	2	2	2	2	1	1	0	0	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0
61	6634	40	FEMALE	HINDU	M	HW	VG	PK	MOD	MID	2	2	2	2	2	1	1	1	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
62	6644	31	MALE	HINDU	U	SER	NV	KP	MOD	UPPER	1	1	1	1	1	0	0	0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
63	6800	31	MALE	MUSLIM	M	BUS	NV	PV	POOR	MID	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	2	2	2	2	2	1	1	
64	6805	38	FEMALE	JAIN	M	HW	VG	PK	POOR	UPPER	2	2	2	2	2	2	2	2	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2
65	6834	39	FEMALE	MUSLIM	M	SER	NV	KP	MOD	UPPER	3	3	3	3	3	2	2	2	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
66	6882	40	MALE	HINDU	M	BUS	NV	PV	POOR	MID	2	2	2	2	1	1	1	1	3	3	3	3	2	2	2	2	0	0	0	0	0	0	0	0
67	6965	39	FEMALE	MUSLIM	M	HW	VG	PK	GOOD	MID	3	3	3	3	2	2	2	2	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2
68	7018	40	MALE	MUSLIM	M	BUS	NV	KP	MOD	MID	1	1	1	1	1	0	0	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0
69	7235	40	FEMALE	HINDU	M	HW	VG	PV	POOR	LOWER	2	2	2	2	2	1	1	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0
70	7111	28	MALE	HINDU	U	BUS	NV	PK	POOR	LOWER	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0

	Jwara								Daah								Trishna								Murcha								
W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF
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Sweda							Shitakamata								Annabhinandana								Katukasyata										
W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2
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Ushananupashayta					Vidaha								Daurgandhya								Daurbalya								Tama				
W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4
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2	2	1	1	1	3	3	3	3	2	2	2	2	2	2	2	2	1	1	0	0	2	2	2	2	1	1	1	0	0	0	0	0	0
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2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	3	3	2	2	2	2	1	1	1	1	1
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0	0	0	0	0	2	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	3	3	3	3	2	2	2	2	0	0	0	0	0
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2	1	1	0	0	3	3	2	2	2	1	1	1	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	0	0	0	0	0
0	0	0	0	0	2	2	2	1	1	1	0	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	0	0	0	0	0	0	0
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1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	2	2	1	1	1	1	1	1	0

			Bhinnavarcha							Hb		
W5	W6	W12	W1	W2	W3	W4	W5	W6	W12	BT	W7	W12
0	0	0	1	1	1	1	1	1	1	8	8.7	8.8
0	0	0	0	0	0	0	0	0	0	9.4	10	11.2
0	0	0	4	3	3	2	2	1	0	7.8	8.6	8.5
0	0	0	0	0	0	0	0	0	0	11.5	12.3	12.4
1	1	1	2	2	2	1	1	0	1	7.4	8.8	8.5
0	0	0	3	3	3	2	2	2	2	10.8	12	12.2
0	0	0	0	0	0	0	0	0	0	11.3	12	12.4
0	0	0	3	3	2	2	2	1	1	12.2	12.8	13
1	0	1	0	0	0	0	0	0	0	11.3	12	12.4
0	0	0	3	3	3	2	2	2	2	9.4	9.5	10.7
0	0	0	4	3	3	2	2	1	1	8.5	9.3	9.6
0	0	0	2	1	1	1	0	0	0	11.5	12	12.5
2	1	1	2	2	2	2	2	2	2	6	7.9	8.3
0	0	0	1	1	0	0	0	0	0	11	11.6	12.3
0	0	0	2	2	1	1	1	0	0	9.2	10.7	10.5
0	0	0	2	2	2	1	1	0	0	8.1	9.4	9.3
0	0	0	2	2	1	1	0	0	0	7.8	8.4	9
0	0	0	0	0	0	0	0	0	0	9.3	9.8	10.2
0	0	0	1	1	1	0	0	0	0	10.3	11	11.5
1	1	1	3	3	3	2	2	1	1	8.7	9.4	9.8
0	0	0	1	1	1	1	0	0	0	7.8	8.6	8.9
0	0	0	2	2	1	1	0	0	0	9.2	10	10.3
0	0	0	3	3	2	2	1	1	1	10.8	11.6	11.5
0	0	0	3	3	2	2	1	0	0	11.4	12.3	12.5
0	0	0	3	3	3	2	2	1	1	10.2	11.5	11.9
0	0	0	2	1	1	1	0	0	0	11.3	11.9	12.4
0	0	0	2	2	1	1	0	0	0	8.4	9.5	9.7
0	0	0	2	2	1	1	1	0	0	13.2	13.5	13.7
0	0	0	1	1	1	0	0	0	0	11.9	12.7	12.8
0	0	0	0	0	0	0	0	0	0	10.5	11.6	11.7
0	0	0	2	2	2	1	1	1	1	7.7	8.4	9.2
0	0	0	2	2	1	1	0	0	0	12.1	13	12.4
0	0	0	1	1	1	1	0	0	0	9.7	10.4	10.4
1	1	1	3	3	3	2	2	1	1	8.1	9.4	9.5
1	1	1	1	1	1	1	0	0	0	9.2	10.5	10.7
0	0	0	1	1	1	0	0	0	0	10.8	11.5	11.8
0	0	0	0	0	0	0	0	0	0	9.5	10.3	10.6
0	0	0	2	2	2	2	2	1	1	10.5	11.2	11.4
0	0	0	0	0	0	0	0	0	0	9.4	10.6	10.2
0	0	0	2	2	2	2	2	2	2	10.6	10.3	10.3
0	0	0	0	0	0	0	0	0	0	10.4	10.8	10.3
0	0	0	2	2	2	1	1	1	1	11	11.6	11.8
0	0	0	1	1	1	1	1	0	0	10.2	10.8	10.5
1	1	1	2	2	2	2	1	1	1	9.8	10.6	10.5
0	0	0	3	3	3	2	2	2	2	10.2	10.8	11.1
0	0	0	2	2	2	2	2	2	2	10.5	11.6	11.3
2	2	3	0	0	0	0	0	0	0	7.6	8.4	8
0	0	0	1	1	1	1	1	1	1	11	11.7	11.2
1	1	1	1	1	1	1	0	0	0	10	10.8	10.5
0	0	0	1	1	1	0	0	0	0	10.8	11.6	11.9
0	0	0	0	0	0	0	0	0	0	11.5	12.2	12.6
0	0	0	2	2	2	2	1	1	1	9.7	10.6	10.8
0	0	0	0	0	0	0	0	0	0	8.6	8.6	8.4
0	0	0	2	2	2	1	1	1	2	7.8	8.9	8.6
1	1	1	0	0	0	0	0	0	0	8.7	9.5	9.5
2	2	1	0	0	0	0	0	0	0	6.6	7.5	8.1
0	0	0	0	0	0	0	0	0	0	12.8	13.5	13.5
0	0	0	1	1	1	0	0	0	0	13.2	13.9	13.5
0	0	0	2	2	2	2	1	1	1	7.3	8.2	8.5
0	0	0	1	1	1	0	0	0	0	11.8	12.9	13.4
0	0	0	0	0	0	0	0	0	0	11	11.5	11.7
0	0	0	0	0	0	0	0	0	0	13.2	13.5	13.4
0	0	0	2	2	2	2	2	2	2	12.2	13.6	13.8
2	2	2	2	2	2	2	1	1	1	6.1	7.3	7.5
2	2	1	1	1	1	0	0	0	0	8.2	8.7	8.9
1	1	1	0	0	0	0	0	0	0	8.3	9.5	9.4
1	1	1	2	2	2	2	2	1	1	6.9	7.5	7.8
0	0	0	0	0	0	0	0	0	0	11.8	12.5	12.9
0	0	0	0	0	0	0	0	0	0	8.4	9.2	9.5
0	0	0	1	1	1	0	0	0	0	11.3	12.8	12.5

MASTER CHART FOR PATIENTS REGISTERED IN GROUP C

SL	OPD NO	AGE	Gender	RELGN	Mar STA	OCCUP	DIET	PRAKRUTI	AGNI	Eco STA	Aamlodgar								Pitabhata								Haritabhata						
											BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6
1	586	32	MALE	MUSLIM	M	LAB	NV	VP	POOR	MID	2	2	2	2	2	2	2	1	3	3	3	3	2	2	2	1	0	0	0	0	0	0	0
2	672	21	FEMALE	HINDU	M	HW	VG	PK	MOD	UPPER	0	0	0	0	0	0	0	0	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
3	806	40	MALE	HINDU	M	SER	NV	KP	GOOD	UPPER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
4	1637	26	MALE	HINDU	U	SER	VG	VP	POOR	MID	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
5	1650	33	MALE	MUSLIM	M	BUS	NV	PV	POOR	MID	1	1	1	1	1	1	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
6	1770	32	FEMALE	HINDU	M	HW	VG	PK	EXC	UPPER	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1
7	2056	34	FEMALE	HINDU	M	HW	VG	PV	POOR	MID	1	1	1	1	1	1	0	0	3	3	3	3	3	2	2	2	0	0	0	0	0	0	0
8	2141	33	MALE	HINDU	M	BUS	VG	PK	GOOD	MID	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
9	2233	26	FEMALE	MUSLIM	M	LAB	NV	PV	MOD	LOW	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0
10	2260	28	FEMALE	HINDU	M	HW	NV	PV	MOD	MID	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
11	2345	30	FEMALE	HINDU	M	HW	NV	PK	POOR	MID	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
12	2417	36	FEMALE	HINDU	M	SER	VG	PV	MOD	UPPER	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
13	2420	37	FEMALE	HINDU	M	HW	NV	VP	POOR	MID	1	1	1	1	1	1	1	1	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
14	2462	38	FEMALE	HINDU	M	HW	NV	PK	MOD	LOW	0	0	0	0	0	0	0	0	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
15	2519	38	MALE	HINDU	M	LAB	NV	PV	POOR	LOW	1	1	1	1	1	1	0	0	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2
16	2542	38	MALE	HINDU	M	LAB	NV	PV	POOR	LOW	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
17	3331	24	FEMALE	HINDU	M	HW	NV	PK	MOD	LOW	3	3	3	3	3	3	2	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
18	3541	21	MALE	HINDU	U	EDU	NV	PV	GOOD	LOW	1	1	1	1	1	1	1	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
19	3543	24	FEMALE	HINDU	U	EDU	NV	PV	MOD	MID	3	3	3	3	3	3	2	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
20	3607	22	FEMALE	HINDU	M	HW	NV	KP	POOR	LOW	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
21	3610	39	FEMALE	HINDU	M	HW	VG	VP	EXC	MID	3	3	3	3	3	3	2	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
22	4131	22	FEMALE	HINDU	M	HW	NV	KP	POOR	MID	1	1	1	1	1	0	0	0	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
23	4132	21	MALE	BOUDHA	U	EDU	NV	VP	MOD	MID	2	2	2	2	2	2	1	1	1	1	1	1	1	1	0	0	2	2	2	2	2	2	1
24	4193	38	MALE	HINDU	M	LAB	NV	PV	POOR	LOW	2	2	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
25	4195	40	FEMALE	HINDU	M	BUS	VG	PK	MOD	UPPER	2	2	2	2	2	2	1	1	3	3	3	3	3	3	2	1	0	0	0	0	0	0	0
26	4515	38	MALE	HINDU	M	SER	VG	PK	MOD	UPPER	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0
27	4643	30	MALE	HINDU	U	BUS	NV	PV	GOOD	UPPER	2	2	2	2	2	2	1	1	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
28	4953	24	FEMALE	HINDU	M	HW	NV	PK	POOR	MID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
29	5234	34	MALE	HINDU	M	BUS	NV	KP	MOD	MID	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3
30	5260	34	MALE	HINDU	M	LAB	NV	PV	POOR	LOW	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
31	5343	37	MALE	HINDU	M	LAB	VG	PK	MOD	LOW	3	3	3	3	3	3	2	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
32	5599	36	MALE	HINDU	M	BUS	NV	KP	GOOD	MID	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
33	I.G4	25	FEMALE	BOUDHA	M	LAB	NV	PV	MOD	LOW	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
34	I.G10	39	FEMALE	HINDU	M	LAB	NV	KP	POOR	LOW	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
35	I.G43	40	FEMALE	HINDU	M	LAB	NV	PK	MOD	LOW	1	1	1	1	1	1	0	0	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
36	I.G51	32	FEMALE	HINDU	M	LAB	NV	VP	EXC	LOW	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
37	I.G54	35	FEMALE	MUSLIM	M	LAB	NV	KP	MOD	LOW	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2
38	I.G74	37	MALE	HINDU	M	LAB	VG	VP	POOR	LOW	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
39	I.G79	30	FEMALE	HINDU	M	LAB	NV	KP	MOD	LOW	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0
40	I.G87	40	FEMALE	HINDU	M	LAB	VG	PV	POOR	LOW	3	3	3	3	3	3	2	3	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
41	I.G98	38	FEMALE	HINDU	M	LAB	NV	VP	MOD	LOW	0	0	0	0	0	0	0	0	3	3	3	3	3	2	2	2	0	0	0	0	0	0	0
42	I.G107	35	FEMALE	HINDU	M	LAB	VG	PK	POOR	LOW	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
43	I.G109	40	FEMALE	MUSLIM	M	LAB	NV	PV	MOD	LOW	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
44	I.G112	33	FEMALE	HINDU	M	LAB	NV	VP	POOR	LOW	0	0	0	0	0	0	0	0	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
45	I.G113	34	FEMALE	HINDU	M	LAB	NV	KP	GOOD	LOW	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
46	I.G119	35	FEMALE	HINDU	M	LAB	NV	VP	MOD	LOW	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
47	I.G125	40	FEMALE	HINDU	M	LAB	NV	KP	POOR	LOW	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
48	I.G131	33	FEMALE	HINDU	M	LAB	NV	VP	EXC	LOW	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
49	I.G153	40	FEMALE	HINDU	M	LAB	NV	PV	MOD	LOW	1	1	1	1	1	1	1	1	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
50	I.G155	20	FEMALE	HINDU	U	LAB	VG	PV	MOD	LOW	2	2	2	2	2	2	1	1	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
51	I.G186	32	FEMALE	HINDU	M	LAB	NV	KP	POOR	LOW	0	0	0	0	0	0	0	0	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
52	I.G214	36	FEMALE	HINDU	M	LAB	VG	VP	MOD	LOW	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
53	5688	33	FEMALE	HINDU	M	HW	VG	PV	POOR	MID	2	2	2	2	2	2	1	1	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
54	6069	40	FEMALE	HINDU	M	HW	VG	PK	MOD	MID	3	3	3	3	3	2	2	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
55	6148	23	FEMALE	HINDU	U	STU	NV	KP	MOD	MID	0	0	0	0	0	0	0	0	3	3	3	3	3	3	2	2	2	2	2	2	2	2	1
56	6338	23	FEMALE	HINDU	U	STU	VG	PV	POOR	MID	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
57	6623	34	MALE	HINDU	M	BUS	NV	PV	MOD	UPPER	0	0	0	0	0	0	0	0	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
58	6654	20	MALE	HINDU	U	STU	NV	VP	MOD	UPPER	2	2	2	2	2	2	1	1	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
59	6784	40	FEMALE	HINDU	M	HW	NV	PV	POOR	MID	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	0	2	2	2	2	2	2	1
60	7282	25	FEMALE	HINDU	M	HW	VG	PK	MOD	MID	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0
61	6915	30	FEMALE	HINDU	M	SER	VG	PK	POOR	UPPER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
62	6988	33	FEMALE	HINDU	M	HW	VG	VP	MOD	MID	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
63	7194	40	MALE	MUSLIM	M	BUS	NV	PV	POOR	UPPER	3	3	3	3	3	3	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
64	7379	18	MALE	HINDU	U	EDU	NV	VP	EXC	UPPER	1	1	1	1	1	1	1	1	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
65	7442	39	MALE	HINDU	M	BUS	VG	PV	MOD	UPPER	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
66	7555	33	FEMALE	HINDU	M	HW	NV	PK	POOR	LOW	2	2	2	2	2	2	1	1	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0
67	7611	35	FEMALE	HINDU	M	HW	NV	VP	MOD	MID	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0
68	7644	23	FEMALE	HINDU	U	EDU	VG	PV	POOR	UPPER	2	2	2	2	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
69	7664	19	MALE	HINDU	U	EDU	NV	PV	MOD	LOW	2	2	2	2	2	2	1	1	3	3	3	3	3	3	2	2	2	2	2	2	2	2	1
70	7714	33	MALE	HINDU	M	SER	VG	PK	MOD	MID	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0

	Jwara								Daah								Trishna								Murcha								
W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF
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0	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0
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0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	3	3	3	3	3	3	2	2	0	0	0	0	0	0	0	0	3
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0	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	2
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0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	1	0
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Sweda							Shitakamata								Annabhinandana								Katukasyata										
W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2
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Ushananupashayta					Vidaha								Daurgandhya								Daurbalya								Tama				
W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BEF	W1	W2	W3	W4
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			Bhinnavarch								Hb		
W5	W6	W12	BEF	W1	W2	W3	W4	W5	W6	W12	BT	W7	W12
0	0	0	0	0	0	0	0	0	0	0	8.6	9.5	9.8
1	1	1	1	1	1	1	1	1	0	0	7.6	8.8	8.9
0	0	0	0	0	0	0	0	0	0	0	9.8	10.7	11.2
0	0	0	2	2	2	2	2	2	1	1	8.7	10.2	10.4
0	0	0	1	1	1	1	1	1	1	1	8.4	9.7	9.6
1	0	0	0	0	0	0	0	0	0	0	6.9	7.5	7.8
2	2	2	0	0	0	0	0	0	0	0	6.5	7.8	8
0	0	0	2	2	2	2	2	1	1	1	10.2	10.7	10.6
0	0	0	2	2	2	2	2	1	1	1	6.8	7.6	7.8
0	0	0	2	2	2	2	2	2	2	2	11.3	12.5	12.8
1	1	1	0	0	0	0	0	0	0	0	7.8	7.9	8.9
0	0	0	2	2	2	2	2	1	1	1	10.6	10.9	11.6
0	0	0	1	1	1	1	1	0	0	0	9.4	10.1	11.2
2	1	1	0	0	0	0	0	0	0	0	6.6	7.2	8.4
2	2	2	1	1	1	1	1	1	1	1	8.9	10.2	10.8
1	1	1	0	0	0	0	0	0	0	0	7.4	8.6	9.2
0	0	0	0	0	0	0	0	0	0	0	7.8	8.4	8.8
0	0	0	0	0	0	0	0	0	0	0	10.7	11.6	11.8
0	0	0	1	1	1	1	1	1	1	1	8.3	9.6	10.1
0	0	0	2	2	2	2	2	2	1	1	9.4	10.3	10.7
0	0	0	1	1	1	1	1	1	0	0	10.2	10.9	11.4
0	0	0	2	2	2	2	2	2	1	1	7.8	8.2	8.8
0	0	0	0	0	0	0	0	0	0	0	11.2	11.7	12
0	0	0	0	0	0	0	0	0	0	0	11.2	11.8	12.3
1	1	1	0	0	0	0	0	0	0	0	7.7	8.6	8.9
0	0	0	2	2	2	2	2	2	1	1	6.6	7.8	7.9
0	0	0	1	1	1	1	1	1	1	1	10.2	10.7	10.9
2	1	1	0	0	0	0	0	0	0	0	9.4	10.2	10.5
3	2	2	0	0	0	0	0	0	0	0	6.2	7.3	7.6
0	0	0	0	0	0	0	0	0	0	0	8.6	9.7	10.3
1	0	0	1	1	1	1	1	1	1	1	11.3	11.8	12.4
1	0	0	0	0	0	0	0	0	0	0	10.5	11.7	11.9
0	0	0	0	0	0	0	0	0	0	0	11.5	11.7	12.1
0	0	0	2	2	2	2	1	1	1	0	10.2	10.8	11.3
1	1	1	0	0	0	0	0	0	0	0	8.6	8.9	9.3
2	1	1	0	0	0	0	0	0	0	0	11.5	12.7	13.1
2	1	1	0	0	0	0	0	0	0	0	10	10.7	11.3
1	1	1	0	0	0	0	0	0	0	0	11	11.8	12.2
2	2	1	0	0	0	0	0	0	0	0	8.7	9.1	9
0	0	0	2	2	2	2	2	1	1	0	11.2	11.9	12.3
2	1	1	0	0	0	0	0	0	0	0	8.4	9.1	9.8
1	1	1	0	0	0	0	0	0	0	0	9.4	10.3	10.7
0	0	0	0	0	0	0	0	0	0	0	12.5	12.8	13.3
2	1	1	0	0	0	0	0	0	0	0	9.4	10.2	10.5
0	0	0	2	2	2	2	2	2	1	1	9	9.9	10.2
2	2	2	2	2	2	2	2	2	2	2	8.8	9.7	10.3
2	2	2	1	1	1	1	1	0	0	0	11.5	12.3	12.3
	0	0	2	2	2	2	2	2	1	1	10.6	11.2	11.5
2	2	2	0	0	0	0	0	0	0	0	8.6	9.2	9.8
0	0	0	2	2	2	2	1	1	1	0	9.2	10.7	10.9
1	1	1	0	0	0	0	0	0	0	0	8.6	9.8	10.2
0	0	0	2	2	2	2	2	2	2	2	9.4	10.2	10.4
2	1	1	1	1	1	1	1	1	0	0	7.7	8.3	8.8
0	0	0	0	0	0	0	0	0	0	0	10.3	11.2	11.5
2	1	1	1	1	1	1	1	1	1	1	6.8	7.9	8.4
2	1	1	0	0	0	0	0	0	0	0	7.5	8.4	8.7
2	2	1	2	2	2	2	2	1	1	1	6	7.5	7.8
1	0	0	0	0	0	0	0	0	0	0	9.4	10.5	11.1
0	0	0	1	1	1	1	1	1	0	0	7.9	8.6	9.2
2	1	1	0	0	0	0	0	0	0	0	10.6	11.6	11.8
1	0	0	1	1	1	1	1	1	0	0	8.3	9.6	9.5
2	1	1	1	1	1	1	1	1	0	0	6.8	7.9	7.5
0	0	0	0	0	0	0	0	0	0	0	11.2	12.5	12.7
1	0	0	0	0	0	0	0	0	0	0	7.5	8.2	8.6
0	0	0	2	2	2	2	2	2	1	1	9.4	10.4	11.2
2	1	1	0	0	0	0	0	0	0	0	8.2	9.3	9.6
0	0	0	0	0	0	0	0	0	0	0	8.8	10	10.5
1	0	0	0	0	0	0	0	0	0	0	11.4	12.7	12.5
2	1	1	0	0	0	0	0	0	0	0	6.1	7.3	7.8
0	0	0	2	2	2	2	2	2	2	2	8.5	8.8	8.3