Observational Study Of Hetus of Pandu According to Charak Samhita

A Dissertation submitted to

Tilak Maharashtra Vidyapeeth, Pune

For the Degree of Master of Philosophy (M. Phil.)

In Samhita Siddhant - Ayurveda

Under the Board Of faculty of Ayurveda Studies

Submitted By

Vd. Anita Bangar

Under the Guidance of

Vd. Vidya Hirlekar

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Declaration (FORM 'A')

I hereby declare that the dissertation entitled "Observational Study of '*Hetus of Pandu*' according to Charak Samhita" completed and written by me has not previously formed the basis for the award of any Degree or other similar title upon me of this or any other Vidyapeeth or examining body.

Research Student: Anita Ankurshrao Bangar

Place : Pune

Date :

CERTIFICATE

This is to certify that the dissertation entitled "Observational Study of '*Hetus of Pandu*' according to Charak Samhita" which is being submitted herewith for the award of the Master of Philosophy (M.Phill) in Ayurveda of Tilak Maharashtra Vidyapeeth, Pune is the result of original research work completed by Shri / Smt. Anita Ankushrao Bangar under my supervision and guidance. To the best of my knowledge and belief the work incorporated in this dissertation has not formed the basis for the award of any Degree or similar title of this or any other University or examining body upon him / her. Sd/-

Research Guide:

Place: Pune

Date:

ACKNOWLEDGEMENT

On this auspicious occasion of submission of my dissertation, I offer my Pranama to Bhagwan Dhanwantari.

I am able to complete this research work by the blessing of Dr. Deepak Jayantrao Tilak, prof. Dr. S.P. Sardeshamukh and prof. Abhijeet Joshi and greatful for their valuable guidance. I am thankful to my guide Dr. Vidya Hirlekar for being very cooperative and supportive throughout the thesis work. I will always remain obliged for the maternal affection and masterly guidance given by her.

At this moment , I pay my obeisance to my parents Mr Ankushrao bangar and Mrs keshar bangar and my husband Mr Prakash Gole as their blessing ,pain ,love and affection they offered me during my ups and downs of life. Driven me to achieve this goal of success in my life.

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Vd ANITA ANKUSHRAO BANGAR

Table of Contents

Abbrevations

Ch.S.	Charaka Samhita
Ch.Su.	Charaka Sootra Sthana
Ch.Ni.	Charaka Nidan Sthana
Ch.Chi.	Charaka Chikitsa Sthana
Sr. No.	Serial Number
M	Male
F	Female
Veg	Vegetarian Diet
Mix	Mixed Diet
VK	Vata- Kapha Prakruti
KP	Kapha –Pitta Prakruti
PV	Pitta- Vata Prakruti
VP	Vata- Pitta Prakruti
PK	Pitta- Kapha Prakruti
KV	Kapha-Vata Prakruti
K	Kapha Prakruti
V	Vata Prakruti
P	Pitta Prakruti
Def.	Definition
च. सू.	चरक सूत्रस्थान
च. नि.	चरक निदान स्थान
च. वि.	चरक विमान स्थान
च. चि.	चरक चिकित्सा स्थान
च. क.	चरक कल्प स्थान
च. सि.	चरक सिध्दि स्थान
सू नि	सुश्रुत निदानस्थान
वा. नि.	वाग्भट निदान
मा.नि.	माधव निदान
भा. प्र.	भावप्रकाश
भै. र.	भैषज्यरत्नावली

Introduction

AYURVEDA – The ancient life science is not merely about the diseases and their treatments but it is the base for the physical, mental, social as well as spiritual well-being and ultimately wholesome healthy life of human being.

सर्वम अन्यत परित्यजेत शरीरं अनुपालयेत ॥ (च. नि. ६/६)

Shareera or healthy body is achannel for achieving all the other goals of life i.e. PRANESHANA, DHANESHANA and PARLOKESHANA. Thus shareera Anupalan has been given the first priority in all the ancient sciences of India.

For achieving this,the Ayurvedic text mention Ahar , Nidra and Brahmacharya as the tripod of life. As ahar has been mentioned first , it is of foremost importance.

देहो हि आहारसंभवः ॥ (च. सू. २८/४१)

As the food we consume, such is our body.Hence food plays an important role in survival as well as health.

The food consumed is converted into Ahar Rasa. The function of Rasa is preenan of the body.It further creates Rakta Dhatu; which in turn is responsible for the vitality, hence is called as "PRANA ".Rakta dhatu is responsible for Varnaprasadan, Mamsapushti and balance of Dhatus.

देहस्य रूधिरं मूलं रूधिरेणैव धार्यते ॥

तस्मात यत्नेन संर ं रक्तं जीव इति स्थिति : ॥

(सू .सू.)

तत विशुध्दं हि रूधिरं बलवर्णसुखायुषा ॥

युनक्ति प्राणिनां प्राण : शॊणितं हि अनुवर्तते ॥

(च. सू. २४/४)

Hence appropriate diet is necessary for healthy life. Whereas various improper food habits such as eaqting junk food,canned foos or packed food it leads to metabolic disorder and hence to various diseases including Anaemia.

Anaemia is the most prevalent nutritional deficiency disorder in the world. Globally it affects 24.8% of the population majorly affected group includes children, pregnant women and women of reproductive aga group. The condition is even worse in India. The prevalence is 74% among the pregnant women globally; however it is 87% in India. Every second women in India is anaemic. 56% of the women have some form of anaemia. Four out of every five children (6-35 month of age) suffer from anaemia.One in every 5 maternal death is directly due to anaemia (20%)

With such a large disease burden affecting health, education, economy and productivity of the entire nation; anaemia poses a great challenge in front of the entire health care system. The health system of India has been trying to fight anaemia for more than 25 years without much success. Thus it has become a dire necessary to find an easy, approachable solution to this morbidity.

Here is point in time where we have to look back and take refuge in the ancient science of Ayurved. Anaemia as the some clinical manifestations as a condition well

explained in the classical texts called “Pandu”. The causality of pandu is elaborately stated in Ayurveda.

The faulty eating habits such as Viruddhashan, Adhyashana, Ajeernaqshana, Vidagdhashana and Vishamashan etc. lead to the vitiation of Pitta Dosha. This vitiated pitta causes formation of vikrut Ahar Rasa which is the Adyadhatu i.e. first of all the other Dhatus. This Vikrut Ahar Rasa give rise to Vikrut Rasa Dhatu and its Mala Kapha (Vikruta); which in turn leads to Vikrut Rakta and its Mala Pitta (Vikruta) and so on .

Charakacharya considers pandu as Raspradoshaj Vyadhi. On the other hand , Sushrutacharya gives importance to the Rakta and consider it as good as the fourth Dosha. Thus consider pandu as Raktapradoshaj Vyadhi.

The treatment principles mentioned in the textstalk about destroying the causality or the root of disease. Hence the treatment modalities mentioned in Ayurveda may be better for treating pandu.The treatment could be more cost effective and may also prevent the complications .Many drugs and formulations from differents have been studid till now.

RESEARCH METHODOLOGY

AIM

Observational study of hetus of PANDU according to charak sanhita.

OBJECTIVE

Primary objective:

1 To observe and document the hetus of pandu roga according to charak sanhita

Secondary objective

2 To observe and document the comparision of different hetus of pandu roga according to charak sanhita

Methodology

The following research Methodology was followed:

- Hetus of Pandu according to charak are taken and detail observational study of hetu is done for this dissertation.
- Review of Ayurvedic texts as well as modern literature was done to collect the information about Pandu and Anaemia and its causes according to Ayurveda.
- Hetus of Pandu are taken from charak chikitsasthan and enlisted them and prepare a questionary for convenience of patient.
- Total 100 pts were selected who are diagnosed as a Pandu as per the selesction criteria from the OPD
- And IPD of hospital attached to our college.

- All 100 pts given questionary which is filled by patients and observation recorded .The finding were illustrated using various tables and graph.Observation and result were discussed.
- Conclusions were drawn on the basis of statistical analysis of the observation and results were obtained from the study.

REVIEW OF LITERATURE

Disease Review - Ayurvedic Aspect

Disease Review – Modern Aspect

Previous work Done

HISTORICAL REVIEW OF LITERATUR

History of pandu in Ayurvedic kala can be divided as follows;

Vedic kala [6000BC to 4000BC]

Pauranic Kala [4000BC to 1000 BC]

Samhita Kala [200 BC to 400 AD]

Sangraha Kala

Adhunik Kala

Vedic Kala [4000- 5000 B.C.]

In Vedic era especially in Rigveda and Atharvaveda, we found terms “Hariman “ and “Harita “ are mentioned Hariman is interpreted by sayana as pallor and yellowishness of body because of disease which are correlative with pandu roga.

उद्यन्नथ मित्रमह आरोहन्नुत्तरां दिवं ।।

हृद्रोगं मम सुर्य हरिमाणां च नाशय;।।

उत्तयन अध मित्र मह ; ।

आरोहन उतदतरा दिवं ह्तरोगं ।

मम सुर्य हरिमाणां च नाशय: ।। ११ ।।

ऋग्वेद १/१/५०/११

अनु सुर्यमुदर्यतां ह्दयोतो हरिमा च ते ।

गोरोहितस्य वर्णन तेन त्वा परिदध्मसि ।।१।।

अर्थववेद १/२२/४/१–४

According to new research initially it is Harita denoting pallor of skin (Panduta) developing further into Hariman (kamala). In post vedic text same description about Pandu and Kamala is observed . Todays Halimaka type of Kamala is a somewhat modification of old vedic term Harima.

Puranic Kala

पाण्डुरोगा वदान्तु हलीमक: ।।

गरुड्पुराण

1 GARUDA PURANA:

In Garud purana it is mentioned that Loha churna along with Takra used in the treatment of Pandu Roga .

2 MAHABHARATA:

In Mahabharat it is described that "PANDU" the father of pancha pandavas and a famous king was suffering from Pandu Rog a.

Samhita Kala (1000- 500 A.D.)

Samhita kala was golden era, in Ayurveda.

1 CHARAKA SAMHITA [200 AC]

Charaka Samhita Chikitsa Sthana 16th chapter we find description of Pandu Roga .

Sutra Sthan Adhyay 19 Ashtodariya mentioned 5 types of Pandu.

Other chapter also described Pandu, Sutra Sthan Adhyay 23 describes that pandu is Santrpanotta vyadhi.

Sutra Sthan Adhyay 28 vividhaashitapita mentioned that Pandu is RASPRADOSHAJ vyadhi.

Charak has described 'Innumerable' (Aparisankhyeya) diseases in Ayurved (Cha . Su. 18/42).

2. SUSHRUTA SAMHITA [2 re Shatak]:

Sushruta Samhita Uttaratantra 44th chapter we find the description of Pandu Roga.

3. ASHATANG HRIDAYAM

Adhyay 13th describes Nidan of pandu and 16th chapter describe Chikitsa of pandu roga.

4. HARITA SAMHITA :

Triteeya sthan we find the description of pandu roga. In this Samhita Papakarma is specific Hetu of pandu roga.

5. KASHYAPA SAMHITA :

Kashyapa sutra sthan Vedanaadhyay pandu has been described.

Sangraha Kala: (100A.D.-800 A.D)

1 MADHAV NIDAN:

After Krimi Nidan Adhyay we find the description of pandu roga. Because he saya that The Purishaj krimi is nidanarthkari for pandu.

2 YOGRATNAKAR AND VANGASEN :

In yogratnakar and vangasen have dealt about pandu rog

Chakrapani, Dalhana, Bhavmishra, Indu, Hemadri, Arunadatta also described the pandu roga.

Adhunika Kala : (1700 AD onwards)

The allopathic medicinal world also describes “ANEMIA “a brief account of history has been presented below.

“DE MARBOVERGINS” (the disease of virgins): The world ANEMIA was firstly mentioned in modern system of medicine.

1 The word Anemia is drived from Greek language the meaning of which is “Lack of blood.”

2 1824 : The word Anemia is first appeared in English medical use in 1824 but it was not used until 1849 that it begins to have some specific medical meaning . Thomas

Addison described general anemia for which he could find no cause and called it ‘ Idiopathic Anemia ‘ .

3 1929: An explanation of the disease was provided by brilliant work of Castle.

4. 1934 : G.R. Minot, W.P. Murphy

DISEASE REVIEW: AYURVEDIC ASPECT

Vyutpatti and Nirukti :

Etymology of Pandu

"PANDU" is the word consist of the root dhatu "PADI GATOU"

In that PADI means parinaman or transformation. From what we signify the transformation of various dhatu from ahara rasa.

The word Pandu has been derived from "PADI NASHNE DHATU" By adding "KU" Pratyaya in it, the meaning of it always taken in sense of "NASHNE" I.e.the loss.

In Ayurveda Name of disease has certain criterion. In some disease, they are named after the pre-dominant Dosha and Dushya.Viz Vata-Rakta,Rakta-Pitta. On the basis of anatomical structure e.g. Shiroroga, Karnroga.On the basis of similes e.g. Kroshtukhashirshaka,Shlipada . On the basis of colouration ofbody viz, Pandu , Kamala.

Nirukti:

A Disease named on the basisof Varna is PANDU ROGA. There are many definations in Ayurvedic literature. One of the nirukti quted by Vijayarakshita is,

पाण्डुत्वेन लक्षितो रोगा पाण्डु रोगा ।।

[मधुकोष]

define that a person who acquires Which pandu varnatvam is apandu roga.

पाण्डुहारिद्रहरितान पाण्डुत्वं तेषु चाधिकम ।।

यतो त ; पाण्डु; इति उक्त; स रोग; ।।

(अ. ह्रः नि. १३/३)

Excessive colour of pandutvam, haridra, haritan is seen in pandu roga.

सर्वषु चैतेष्विह पाण्डुभावो यत; अधिक; एत; खलु पाण्डुरोग; ।। (सु.उ.४४/४)

Excessive pandu varnam is seen in pandu roga.

In SHABDHARNAV Pandu has been compared with KETAKI DHOLI or KETAKI PUSHPA colou, similar to the colour of ketaki pushpa pollen grains.

पाण्डुस्तु पीतभागार्थ; केतकी धुलिसन्निभ ; ।।

श्ब्दार्णव

In SHABDHARNAV pandu has been compared with KETAKI DHOLI or KETAKI PUSHPA colour .Similar to the colour of ketaki pushpa pollen grains

पाण्डुस्तु पीतसवलीतशुक्ल ।। (अमरकोष)

In Amarkosha Pandu means pita,Rakta or Mishrita Shukiavarna

शुक्ल मिश्रितवर्ण; पाण्डुराह । (शब्दकल्पद्रुम;)

In Shabdakalpna Druma – Pandu is the combination of Shweta and peeta colours.

पाण्डुस्तु फलाह; पु; पटोल; ।। (राजनिघाण्टु to Raj Nighantu ,the word pandu is compared with colours of “PATOLPHALA “

पाण्डुहरिद्रहरितान वर्णान बहुविधांस्त्वचि ।। (च. चि. १६/११)

Nidan Panchak :

Nidana:

The word “Nidan” is used in Ayurvedic classics in a broad sense.Word “ Nidan “is derived from the Sanskrit Dhatu “Nil” which means to determine (Ni – Nischaya Deeyate Jnamam).

This word either refers to aetiopathogenesis of the diseasesin general or the etiology of the illness in particular.

सेति कर्तव्यक्तो रोगो उत्पादक हेतुर्ण निदानं ।। (मा.नि.मधुकोषटिका १/५)

Means the factor, which plays an essential role in causing a disease (vividha ahita ahara vihara etc.) by vitiating doshas and dhatusis known as Nidana.

दोष दुष्य संमूच्छना जनितो व्याधी: ।। (विजयरक्षित)

Vitiating doshas and dhatus causes the vyadhi.

The causative factor of pandu roga can divided into following types :

1 Aharaja nidana

2 Viharaj nidana

3 Mansika nidana [i]

4 Nidanaarthakara roga

1 AHARAJ NIDANA:

Santarpan and Apatarpan both can cause of Pandu as mentioned by Charak as:

रोगास्तस्योपजायन्ते संतर्पणानिमित्तजा: ।

प्रमेहपिड्का कोठ कण्डूं पाण्डवामयज्वरा: ।।

(च.सु.२३/५)

Food or diet plays the crucial role in the normal development and maintenance of the different Dhatus of body .Panduroga may be caused due to indulgence of food containing more Amla

Kshara, Lavana, Ushna, Ruksha ,more intake of carbohydrates, only milk and clay leads to Anemia.

Acharya Charaka has described following etiological factor regarding Ahara.

क्षाराम्ललवणात्युष्ण विरुध्दासात्म्यभोजनात ।

निष्पावामाषपिण्याकैतिलनिषेवणात ।।

विदग्धेदन्ने दिवास्वप्नात व्यायामान्मैथुनात्तथा ।

प्रतिकर्म ऋर्तुवैषम्याद्वेगानां च विधारणात ।।

कामचिन्ताभयक्रोधशोकोपहतचेतस: ।।

(च. चि. १६/७–८)

Execessive intake of Kshara as the kshar comes under the

" न अतिउपयुज्यित द्रव्य "(च.सु. १/१५)

Also,tikashana, kleda janana ushana

Which vitiated the pitta and kapha produced pandu.

पृथ्वी अग्नि भूयि ष्ट्त्वाद अम्लः।

च. सू. २६/४०

Amla rasa contains Teja and Pruthawi Mahabhutaadhikya

Atimala rasa sevan and ultimately gives pandu vyadhi.

पितं अभिवर्धयति– रक्तृ दूषयति –मासं विदहति– कायं शिथिलकरोति

(च.सु२६/२)

Lavana Rasa contain Teja and Aap mahabhutadhikya lso atimatra lavan sevan vitiated kapha and pitta ,also ati lavan rasa sevan it gives pandu

पितं कोपयति–रक्तृ वर्धयति

(च.सु२६/३)

Ati ushna anna increases ushna guna of Rakta dhatu and elevates pitta ,as pitta is having Asharaashrayi Sambandha with rakta it produces vyadhi.

Virrudha Anna :-

पाण्डवामय……विरुध्दमन्नं प्रवदन्ति हेतुम ।।

(च. सु.)

Charaka sutra sthan gives direct refrance that virrudha Aana produced pandu.

Excessive intake of Nispava ,Mashais Ushna virya,pinyaka,Tiltail as Tilas of Ushana guna and pittakruta produces pandu.

Excessive intake of Madhya having Ushana and Tikshna guna which causes Rakata and pitta Dushti.

Mridbhakshan:-

म्रुतिका सर्वदोषप्रकोपणी, नानाविधत्वात ।।

(च. चि सटिक १६)

Madhura rasa mrutika vitiated kapha,Ushara rasa mrutika vitiated Pitta and Kashay rasa mrutika vitiated the Vata. In this way Mrudbhakshan causes pandu.

2 VIHARAJ NIDAN :

दिवास्वप्नात व्यायामान्मैथुनात्तथा ।

प्रतिकर्मरुतुवैषम्याव्देगानां च विधारणात ।।

(च. चि १६/७–८)

According to Acharya Charak-

Divaswap : त्रिदोषप्रकोपक: ।।

(च.चक्रपाणी.टीका)

all dosha dushata due to Divaswap and produces vyadhi.

Due to Atimaithun and Ativyayam Dhatukshaya is seen which later leads to pandu Vyadhi .

Pratikarma Rutu Vyashamyat: Vamandina rutuna karama vyashamaya disturbing dosha .

Vagana ch vidharana : Vega vidharana produces disease by vitiating dosha .

3.Mansika nidana

:कामचिन्ताभयक्रोधशोकोपहतचेतसः ॥

(च चि १६/७–८)

Kama chinta bhaya krdha shoka an uphata chetasa plays important role to produced Vyadhi.

4. Nidanaarthakara roga :

Some disease which produces the disease called 'NIDANARTHAKARAK'; which are given below :

1.Rakta gulma	2.Pleehodara
3.Asrugdhara	4. Arshas
5.Raktastava	6. Raktapitta
7.Raktapradara	8. Raktaarbuda
9.Rakta vahee dhamani vedha	10.Yakrut pleeha vedha

11.Krimiroga	12.Hridroga
13.Rajyakashma	14.Punaravartaka jwara
15 Katikatarunmarmavedha	16 Raspradoshaj Vikar
17 Plihodar	18 Pakwashyagata Pitta
19 Pittaj Kasa	20 Mansamarmabhighat

Nidana as mentioned in different classics

1 Aharaj Factor:

Sr No.	Description	Ch. Sa.	Su. Sa	Ma. Ni.	Hr. Sa	A. H.
1	Kshar sevana	+	-	-	+	-
2	Lavana rasa sevana	-	+	+	+	-
3	Katu ras sevana	-	-	-	-	+
4	Kashay ras sevana	-	-	-	+	-
5	Atitikshna	-	_+	+	_-	-
6	Atiushna	+	-	-	-	-
7	Virudh	+	-	-	-	-
8	Vidagdh	+	-	-	-	-
9	Asatmya	+	-	-	-	-
10	Nishpav	+	-	-	-	-
11	Maash	+	-	-	-	-
12	Pinayak	+	-	-	-	-
13	Til taila	+	-	-	-	-
14	Madya	+	-	-	-	-
15	Mritika	+	+	+	-	+

VIHARAJ NIDAN

Sr. No.	Description	Ch.Sa.	Su.Sa.	Ma.Ni	Hr.Sa	A.H.
1	Diwaswap	+	+	+	+	+
2	Avyayam	+	-	+	-	+
3	Maithuna	+	+	-	+	+
4	Panchkarma Vaishmya	+	-	-	+	-
5	Rituvaishmya	+	-	-	-	-
6	Vegvidharan	+	-	-	-	-
7	Nidranashanam	-	-	-	+	-
8	Shrama	-	-	-	+	-

Mansik Factor :

Sr. No.	Description	Ch.Sa.	Su.Sa.	Ma.Ni.	Hr.Sa.	A.H.
1	Kama	+	-	-	-	-
2	Chinta	+	-	-	+	-
3	Bhaya	+	-	-	-	-
4	Krodha	+	-	-	-	-
5	Shoka	+	-	-	-	-

Purvarupa:

स्थानसंश्रय कृत भावि व्याधि प्रबोधकम। दोष कुर्वन्ति यलिंग पूर्वरुप तदूच्यते ॥

(मा. नि. मधुकोषटिका)

Doshas which have attained sthan samshravastha show certain symptoms pertaining to future disease known as poorva roopa.Purvarupa also called Sthansanshray awastha.

The purvarupa of pandu is described in all sanhitas.The premonitory symptoms of pandu are very important, as the early diagnosis helps in better control of the disease.

According to charak the following symptoms have been mentioned as purvarupa:

हृदयस्पन्दनं रौक्ष्यं स्वेदाभावः श्रमस्तथा ॥

(च. चि १६/१)

…….तस्य लिंग भविष्यतः ।

Hridaya spandanadhikya

Roukshyam

Swedabhava

Shrama

Purvarupa of Pandu vyadhi in classical text

Sr.No.	Purvarupa	Ch.Sa.	Su.Sa.	A.H.	A.S.	MA.NI.	BH.PR.
1	Hridspandan	+	-	+	+	-	-

2	Rukshata	+	-	+	+	-	-
3	Swedabhava	+	-	+	+	-	-
4	Shrama	-	-	+	+	-	-
5	Twaksphutana	-	+	-	-	+	+
6	Sthivana	-	+	-	-	+	+
7	Gatrasada	-	+	+	+	+	+
8	Mritika bhaksana	-	+	-	-	+	+
9	Akshikutashotha	-	+	-	-	+	+
10	Pitavit	-	+	-	-	+	+
11	Pitamutrata	-	+	+	+	+	+
12	Avipak	-	+	-	-	+	+
13	Aruchi	-	-	+	+	-	-
14	Alpavanhita	-	-	+	+	-	-
15	Pipasa	-	-	-	-	-	-
16	Hrullasa	-	-	-	-	-	-

ROOPA:

तदेव व्यक्तत्वत्म रुपमित्याभिधियते ।

संस्थानं व्यंजनम लिंग लक्षणं चिन्हं आकृति ॥ (वा.नि. १/७)

Roopa helps to diagnosis a specific disease. It also diagnosed specific stage ,specific type etc of the disease. Poorva roopa which has attained vyaktavastha is known as roopa. Samanya

Roopa of panduroga are as follows.

सम्भूते स्मिन भवेत सर्व : कर्णक्ष्वेडी हतानल : ।

दुर्बलः सदनो न्नद्विट श्रमभ्रमनिपीडितः ॥

गात्रशूलज्वर श्वासगौरवारुची मान्नरः ।

म्रुदितैरिव गात्रेश्च पीडितोन्मथितैरिव ॥

शूनाक्षिकुटो हरितः क्षीणलोमा हतप्रभः

कोपनः शिशिरव्देषीनिद्रालुःष्ठीवनो पवाक॥

पिण्डिकोव्देष्ट्करुपाद रुक्सदनानि च ।

भवन्त्या रोहणायासैर्विशेषाश्चास्य वक्ष्यते ॥

(च.चि १६/१३–१६)

Panduta, Dourbalya, Karna Kshweda, Gatra peeda, Alpakaktata,Akshikootshotha,Shteevan , Hrudrav,Bhrama, Gourava, Kasa, Aruchi,

Shwasa Annadwesha, Harira varna, Hata prabhatwa, Alpavak, Ojagun kshya, pikowesshtana .

Samanya lakshna present in classical text :

Sr. No.	Signs and Symptoms	Ch. Sa.	Su. Sa.	A.H.	Ma.Ni.
1	Karna shweda	+	-	+	-
2	Dourbalya	+	-	+	-
3	Sadana	+	-	+	-
4	Bhrama	+	-	+	-
5	Shrama	+	-	+	-
6	Annadwesha	+	-	+	-
7	Gatrashoola	+	-	+	-
8	Jwara	+	-	+	-
9	Shwasa	+	-	+	-
10	Aruchi	+	-	+	-
11	Gatrasad	+	-	-	-
12	Hriddrawata	-	-	+	-
13	Shunakshikuta	+	-	+	-
14	Haritvarnata	+	-	-	-
15	Stheevana	+	-	+	-
16	Alpavak	+	-	+	-
17	Kati ruk	+	-	-	-
18	Uru ruk	+	-	-	-
19	Ojaguna kshay	+	-	+	-
20	Nissarata	+	-	+	-
21	Shithilendriya	+	-	+	-
22	Dhatushaithilya	-	-	+	-
23	Pindikodweshtana	+	-	-	-

SAMPRAPTI:

Process of evolvement ofdisease is called Samprapti, which includes the sequences of process or event from Nidana Sevana to the characteristic development of disease.

As per Acharya Vagbhatta, SAMPRAPTI means -

यथा दुष्टेन दोषेन यथा चानुर्विसर्पता ।

निवृतिरामयासौ संप्राप्ति: जाति: आगति: ।।

(वा. नि.)

Samprapti of the disease pandu can be studied under two headings -

1. Samanya samprapti.
2. Vishesha samprapti

1. : **Samanya samprapti**

The general pathogenesis in which the vitiate the Dathus and Srotas is called Samprapti. This is common to all types of pandu.

2. **Vishesha samprapti** : The specific pathogenesis in which the disease manifested according to the Samanya samprapti is called as Vishesha Samprapti. The way of samprapti.

Samanya Samprapti :

समुदीर्ण यदा पित्तं हृदये समवस्थितम। वायुना बलिना क्षिप्तं सम्प्राप्य धम्ननीर्दश ।।

प्रपन्नं केवलं देहं त्वड.मांसान्तरमाश्रितम । प्रदूष्य कफवातासृकत्वड.ंमांसानि करोति तत ।।

पाण्डू हारिद्रहरितान वर्णान बहुविधांस्त्वचि ।। स पाण्डू रोग इत्युक्त : ।।(च. चि १६/९/१)

दोषा: पित्तप्रधानस्तु यस्य कुप्यन्ति धातुषु। शैथियं तस्यं धातूनां गौरवं चोपजायते ।।

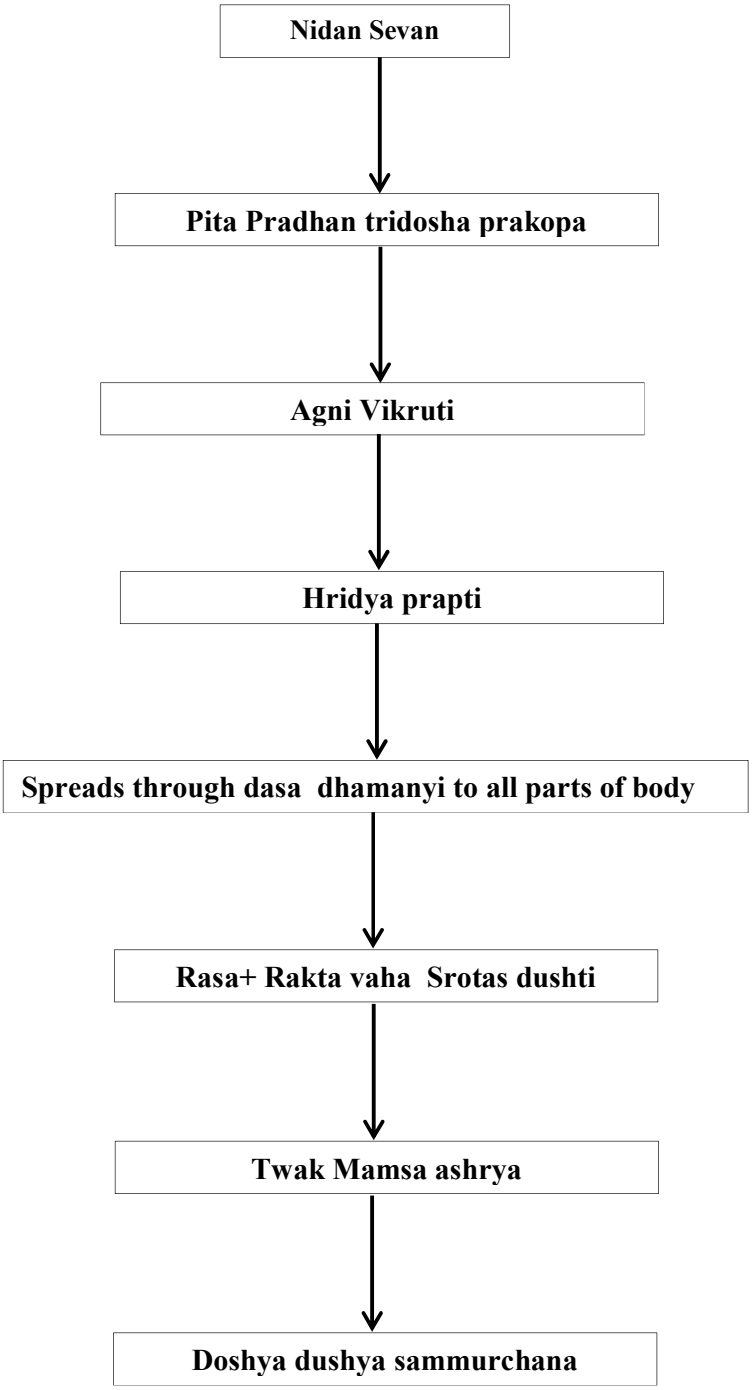
ततो वर्णबलस्नेहा य चान्ये प्योजसो गुणा: । व्रजन्ति क्षयमत्यर्थ दोषदुष्यप्रदुषणात ।।

सो अल्परक्तोअल्पमेदस्को नि:सार: शिथिलेन्द्रिय: वैवण्य् भजते।।

(च चि १६/४)

Due to the nidan sevana Kshara, Amla, Lavana rasadhikya etc ,there will be pittapradhan tridosh Prakopa and thus there Is dushti of pitta in the form of Dravy atha vrudhi, gunata And karmata kshaya. This vitiated doshas is carried to hridaya,vyana vayu throws this through the dasha dhamani to the sarva sharira , and get sthan samsraya between twak and mamsa resulting in discolouration of the skin such as Pandu,haridra,haritha vaivarnyaof twacha which result in Pandu Roga .Because of this vitiated Dosha,s the Dhatu also get vitiatedand hence it result in dhatu shaithilya gouravata which further result in ,Varna, Bala,Sneha and Oja kshya.Due to this there is Alparaktata, Alpamedasakata, Nissarata and Shithilendrata . The discoulououration develops on the skin.

Samanya Samprapti Flow Chart



Alpa Rakta Alpa Medasak Oja kshaya + Mamsa twak dushya

Pandu

VISHESH SAMPRAPTI

A Vataj Pandu Samprapti

Though pitta is pradhana dosha in pandu roga ,vata dosha also plays an important role in manifestation of pandu roga . Hetu sevana causing Vata and pitta dushti causes Vataja Pandu Vyadhi.Pitta dushti is seen with vatanubhandh. Mainly

Vyana vayu has arelation with the samprapti of pandu roga. Vitiated vata is responsible

For kampa,angasad, gatrashul,raukshya, twak parushya,kati urupada ruka etc . Vata and Pitta predominance is seen in this type of Pandu roga.

b) Pitaj Pandu Sampramti:

Hetu like Pittakara Aaahara and Vihara cause Pitta dushti and is one of the main causes of Pittaja Pandu. Pitta is responsible for the normal colour of the bodybut when it vitiates the rakta, as it happenes in pandu roga the loss of complexion or Panduta occurs Pita varna Harita varna is seen in Pandu.

c) Kaphaj Pandu Samprapti

Kaphaj seems to play a vital role in the development of panduta. According to charak, any person in whome there is a depletation of vata, develops the panduta due to the combined action of Pitta and Kapha. It has also been stated that santarpan which bring about an increase in Kapha which in term may cause the disease by generating Ama and causing mandagni. (ch. Su. 23/5)

Further it leads to srotorodha which leads to dhatu kshay and hence result in pandu.In Kaphaj pandu both kapha and pitta predominance is seen. Vitation of Kapha is responsible for Gaurava, Nidraluta,Alasya, Panduta etc.

d) Sannipataja Pandu roga samprapti:

In person who indulges in all varities of food ,all the three doshas Vata, Pitta and Kapha get simultaneously provoked and causes Tridoshaja Pandu. Alparaktata and remarkable Kshya of Bala, Varna and Sneha is seen . Dhatu shaithilya and dhatu gaurava are mainly seen in this .This type of sannipataka Pandu is extremely incurable.

e) Mrudbhakshanjanya Pandu Samprapti :

मृत्तिकादनश्शीलस्य कुप्यत्यन्यतमो मलः ।

कषाया मारुतं पित्तमुषरा मधुरा कफम ।।

कोपयेन्मृद्रसादिश्च रोक्ष्याद भुक्तृ विरुक्षेत।

पुरयत्यविपक्वैव स्रोतांसि निरुणद्धि च।।

इन्द्रियाणां बलं हत्वा तेजो वीयोर्जसी तथा।

पाण्डुरोगं करोत्याशु बलवर्णाग्निनाशानम ॥

(च. चि १६/२७–२९)

Habitual intelligence in eating mrud aggravates one of the tridoshas .If the mruda is of kashay rasa, then it aggravated vayu .If it is ushara , then pitta gets aggravated,if it is madhur kapha. Because of its ruksha guna the mrudbhakshan causes rukshata in the rasa then the undigested mruda produces avarodha of srotas and causes indriya bal hani ,agnimandya and thus producing pandu.

Vyadhi ghatakas – Doshas – Pitta pradhana tridosha

Dooshya- Rasa,Rakta,Medha

Agni – Agni dushti (mandagni)

Ama – Aamaj vyadhi

Srotas – Rasa vah srotas

Raktavah srotas

Medovah srotas

Dosha- Prakopa :

a. **PITA DOSHA-**

Pitta is prime dosha involved for the manifestation of disease pandu . Normal physiological properties of pita doshas gives a batter idea for its role in pandu rog : like the sun which gives energy and controls the universe , similarly in our body pitta is responsible for the energy and governance of metabolic and other activities like Ushma ,Kshudha ,Trushna including governing of the higher mental fanction like Shaurya Bhaya , Krodha ,Harsha, etc. pitta is responsible for the normal colour of body but when it vitiates Rakta ,as it happens in Pandu roga .The loss of complexion or panduta occurs.

The following pita bhedas give importance in Pandu Roga;

a) PACHAKA PITTA:

The main karma of pachaka pitta is to digest the ahara and sara kitta vibhajana. This bheda of pitta dosh vitiated by nidana sevana and cause agnimandya and leads formation of improper adyadhatu , ama and dhatushaithilya.

b) RANJAKA PITTA:

Sthan of Ranjaka Pitta is yakrut and pliha and is responsible for the rasa ranjana . Sushruta says that amashaya is the ranjaka pitta sthan and when there is a vitiation of ranjaka pitta ,there is imoriper conversion of rasa into rakta.Sarangdhara says that hridaya is sthan of ranjak pitta.

C) SADHAKA PITTA :

Mental hetus like kama ,chinta, shok, krodha, bhaya due to this Vata and Hridaygat sadhaka pitta dushti takes place as written by Charaka in Viman sthan

D) BHRAJAKA PITTA :

The sthan of Bhrajak pitta is twak, it gives colour to the skin .Vitiation of the bhrajak pitta produces alternation of the normal colour and brings about panduta of twak.

E) ALOCHAKA PITTA:

It is present in the eyes and is responsible for rooplochana In Pandu due to the indriyashaithilatya proper drushati does not occour.

B KAPHA :

In the pathogenesis of Pandu roga kapha play an important role. Avalambaka kapha is responsible for uru palana, in case of pandu, due to the kapha vriddhi the sthan is vitiated and that leads to into hriddrava, arohana aayasa. Bhodaka kapha is responsible for ruchi grahanam, which is destoyed in pandu. Shleshaka kapha, which is responsible for sandhi samsleshana, gets vitiated and leads to parvashoola.

Kapha situated in the twrk produces shwetaavabhasata.

C. VATA:

The role of vata is very important in the manifestation of the disease because the vitiated dosha enters the hridaya and it is carried from the hridaya to the sarva shareera through the dasha dhamanis by vyan vayu an d gets displaced between twak and mamsa.

2- Dosha –dushya Samurchana and Sthanasanchaya:

a) Rasa dhatu : Acharya Charaka mentions pandu as rasa pradoshaja vikara and Chakrapani comments that the aggravated pitta dosha does the

kshapana of rakta poshaka rasa and its anutpadana due to the impairment of the agni resulting in dhatushaithilya.

b) Rakta Dhatu :

Raktalapta is mentioned by Charaka as pradhana lakshana and pitta being the pradhana dosha there will be the involvement of the rakta dhatus as the RAKTA and pitta have ashrayashrayi bhava.

3. Roga Abhivyakti :

After Dosha- dushya samurchana Rasa, Rakta and Vridha Pitta dosha from yakrut comes to Hridaya with the help of Vyan vyan for circulation in the body through Dasa dhamani . In Pandu Roga due to Rasa-Rakta dhatu kshaya Hridaya has to work more leading to Vyana vyana vridhi thereby palpitation or Hriddava results.

Sthana Sanshraya:

In the last stage of Samprapti Dosha – Dushya samurchana occures at Twacha-Mamsaantarashray.

a. **Mamsa Dhatu :** When Pitta dosha is vitiated the symptoms of its involvement are Mamsa – shathilyata ; due to Vasa dosha Gatratoda, Gatra roukshy, Shrama and pindikodveshtana occurs. The vitiated pitta Pradhan dosha

   Takes ashraya between Twak and Mamsa and causes the Vaivarnya like pandu, Harita Varna.

b. **Meda Dhatu:** Due the vitiation of Pitta dosha in meda dhatu Vighatan, Shoshan and Vichedana of meda takes plece in Pandu. Alpa medhata is due to the improper uttarothara dhatu formation.

c. **Oja**:

Oja Guna kshaya is the feature mentioned in the context of Pandu and this occures because of Dhatushaithilya and formation of Nissar dhatus and due to this its function gets hampered .

d) **Twacha :** The vitiation of Bhranjak pitta which is situated in twacha leads to vaivarnyata of twacha .

AGNI:

There is a vitiation of jatharagni ,bhootagni and dhatwagni. The nidana sevana will cause increase in the Drava guna of pitta resulting in jatharagni mandhya.This jatharagni governs the state of functioning of all the agnis . This leads to production of sama ahara rasa and impaired conversion to subsequent

dhatus .So poshana of dhatus and updhatus does not occur properly. This leads to dhatukshay and which leads to ojokshay.

AMA :

Ama is one of the constituent of producing disease. Agnimandya being one of the key factor for the Pandu and the role of ama can not be ruled out.

SROTAS:

In Pandu is rasa rakta and medovaha srotas which are affected.

a) Rasavaha srotas: According to Charak Samhita,pandu is Rasa pradoshaj vikara.Due to the mithyaaharvihar and agnimandyadigestion is not proced properly and ultimately Ahara rasa is not formed proper manner, so rasa dhatu is firstly affected and spreads all over the body through dashdhamanis and causes different srotodushti lakshana.

b)

रसवह स्रोतस दुष्टी हेतु–

गुरुशितमतिस्निग्धम अतिमात्रम समश्नतम ।

रसवाहिनि दुश्यन्ति चिन्त्यानामचति चिन्तनात ।।

(च.वि. ५/२१)

As mentioned by charak Guru , Sheeta, Snigdha, are causes of dushti of Rasavaha srotas.

रसवह स्रोतस दुष्टी लक्षणे:

अश्रध्दा चारुचिच्शास्यवैरस्यमरसंड्यता।

ह्रुलासो गौरवं तंद्रा सांगमर्दो ज्वरस्तमः ।।

पाण्डुत्वमं स्रोतसां रोधं क्लैब्य सादः कृशांगता ।

नाशो ग्नेरयथाकालं वलयं पलितानि च ।।

रसप्रदोषजा रोगा…….।।

(च.सु २८/९–१०)

The lakshanas are as follows –

Hriddrava, Hridayspandan, Shrama, Aruchi, Agninasha,Jwara ,Angasada,Pandutwa, Tama, Trushna.

Raktavaha srotas:

रक्तवह स्रोतस दुष्टी हेतु–

विदाहि अन्नपानानि स्निग्धोष्णानि द्रवाणीच ।

रक्तवाहिनि दुश्यन्ति भजतां चतपानलौ ।।

(च वि ५/२२)

According to Charak Vidahi ,Snigdha and Drava Ahar are the etiological factor for vitiation of Raktavah Srotas.

रक्तवह स्रोतस दुष्टी लक्षणे–

कुष्टविसर्पपिड्का रक्तपित्तमसृग्दरः ।

गुदमेढ्रास्यपाकश्च प्लीहा गुल्मो थ विद्रधिः ।।

निलिका कामला व्यंगापिप्लवस्तिल्कालका☺

ददुश्वर्मदलं श्वित्रं पामा कोठास्रमण्ड्लम।।

रक्तप्रदोषजा रोगाः……।।

(च.सु.११/१२)

Charak has mentioned symptoms of raktavah srotas dushti :

Kushta, Visarpa ,Raktapitta, Asrugdara, Gudpaka, Mukhapaka, Charmadala, Shwitra, Gulma, Nilika, Kamala, Kotha and Asramanadala.

Pitta dosha and rakta dhatu are responsible for varnaprasadana i.e. agniguna bhuyishta.The improper formation of Rasadhatu leads to improper formation of Raktadhatu. These produces Rakta kshay by vitiating Raktavah srotas aaaaand it leads to vaivarnyata and it leads to Panduta.

मेदोवह स्रोतस दुष्टि हेतुः

अव्यायामदिव स्वप्नान्मेद्यांनां चातिभक्षणात ।

मेदोवाहिनि द्श्यन्ति वारुन्याच्यति सेवनात ।।

(च. वि. ५/२४)

Charaka has mentioned hetu of Medovah srotas dushti as lack of exercise ,Diwaswap, Snigdha and oily food consumption in excess quantity causes dushti of Medovah Srotasas.

मेदोवह स्रोतस दुष्टि लक्षणे :

मेदप्रदोषजा विद्यात रोगान मेदः प्रदोषजम ।

निन्दितानि प्रमेहाणां पूर्वरुपाणि यानि च ।।

(च सू २८/१२)

The diseases of Mamsawaha srotodushti like Adhimamsa are symptoms of Medovaha srotodushti.The Purvrupa of Prameha vyadhi have also been

included in Medovahsrotas dushti .their is dhatushaithilayta in Prameha similarly seen in Pandu Vyadhi.

Udhabhav Sthana:

Pandu being an Amashaya samuttha vyadhi,after reaching to hridaya the Doshas spreads throughout the body

Sanchara Sthan :

After spreading from the Udbhav sthana it a depends on the route through the Doshas spread.

Ashraya:

In Pandu the Doshas take Aashraya between Twak and Mamsa thereby causing vitiation of different Dhatus and producing different Varna.

Avayava:

After the primary localization ,the Doshas spread out affecting the various areas of body.

Classification of pandu according to charak :

1. Vataj
2. Pittaj
3. Kaphaj
4. Sannipataj
5. Mritika Bhakshan

UPDRAVAS:

Any vyadhi or clinical feature appearing on the later stage of main disease due to improper management are called as updravas of disease. When updrawas occurred the disease becomes very difficult to treat. It denotes that the disease should be treated as early as possible before appearing updrawa.

The updravas of pandu haaave not been mentioned by Charak ;but but he has mentioned in the Asadhya lakshan of pandu and they are- Chardhi, Murcha ,Trishna and pale coouration of skin which changes to white colour.

SADHYASADHYATVA:

Charaka has described Asadhya Lakshna of Pandu Roga

The signs and symptoms and other conditions indicating the incurability of pandu roga are as follows

When the disease becomes chronic

When excessive dryness has appeared in the patient.

When the patient is afflicted with oedema owing to chronicity to his disease.

When the patient gets the yellow vision .

When the patient passes loose stool which is green in colour and which mixed with mucus.

When the patient is feels exceedingy white as besmeared.

When the patient feels exceeding prostrated.(Deen)

When the patient is exceeding afflicted with vomiting ,fainting and morbid thrust.

Patient of pandu roga with excessive Raktakshaya and whose skin coour has changed pandu varna to shwet varn is considered asadhya.

Pathya-Apathya:

This includes dietic and environmental features which should be regulated according to the need of the body.

Acharya Charaka has described the definition of pathya-Apathya Means which is not harmful to the mind and body,called Pathya.

DISEASE REVIEW MODERN ASPECT

ETYMOOGY:

The word " ANAEMIA " originated from Greek Word "Anaimia ".

GREEK	GREEK
An	haima
Without	BLOOD

GREEK

Anaemia

MODERN LATIN

Anaemia

Early 19 th century

The first form of described anaemia was in 1872 by Anton Biermer who used term "Aplastic Anaemia" disease.

Definition:

Anaemia is blood disorder with many types and it is characterized by quantitative deficiency of heamoglobin, often accompanied by reduced number of red blood cells.

WHO described Anaemia is a condition in which the number of red blood cells or their oxygen carring capacity is insufficient to meet physiological need,which vary by age,sex, a ltitude,smoking and pregnancy status.Iron deficiency is thought to be the most commom cause of anaemia globally,athough other condition, such as vitamin B12 and vitamin A ,folate deficiencies, parasitic infectios ,chronic inflammation and inhrtitated disorder can all causes anaemia.

WHO'S Haemoglobin Thresholds used to define ANAEMIA :[1gm/dl:0.620mnol/L

An etriologic classification is based on the various condition that can result from any of the physiologic changes and helps determine direction for planning careA morphologic classification provides an ordery method for ruling out certain diagnoses when establishing a causefor a particular anaemia.

Depending upon the pathophysiologic mechanism anaemia are classified into three groups-

(1) Anaemia due to blood loss.

(2) Anaemia due to increased cell destruction.

(3) Anaemia due to increased red cell destruction.

(Haemolytic Anaemia)

(1) Anaemia due to blood loss-

This is further of two types-

a) Acute post haemorrhagic Anaemia.

b) Anaemia of chronic blood cells.

(2) Anaemia due to imprired red cell production –

A disturbance due to imprired red cell production from various causes may produce Anaemia. These are as under:

(a)Cytoplasmic maturation defects

- Deficient haem synthesis : Iron Deficiency Anaemia

- Deficient globin Synthesis : Thalassemia syndromes

(b) Nuclear maturation defects

- Vitamin B12 and/ or folic and deficiency

- Megaloblastic Anaemia

(c) Haematopoietic stem cell, proliferation and differentiation abnormalities e.g.

- Aplastic Anaemia

-Pure red cell aplasia

d) Bone marrow failure due to systemic diseases (Anaemia of chronic disorders) e.g.

- Anaemia of inflammation / infections disseminated malignancy.

- Anaemia in renal disease.

- Anaemia due to endocrine and nutrional deficiency (Hyupo metabolic states)

e) Bone marrow infiltration e.g.

- Leukaemia's

- Lymphomas

-Multiple Myeloma

f) Congenital Anaemia e.g.

- Siderpblasic Anaemia

- Congenitial dyserythropoietic

(3) Anaemia due to increased red cell destruction-

(Haemolytic Anaemia)

Divided into 2 groups.

- Intra corpuscular defect (Intrinsin red cell dbnormalities)

  It may be either hereditary or acquire Extra corpuscular defect (Acquired haemolytic Anaemia)

1. Morphologic-

   This is a classification based on cell size and colour. It is not entirely satisfactory as anaemia due to chronic bleeding may be normocytic at one point, microcytic later and microcytic hypochromic even later.

   In fact the most often used classification system is a combination of the pathophysiologic and morphologic. Such morphologic changes in the red blood cell are described in this manner:

   - Cell size :

     Terms that refer to cellular size end with “cytic’’.

     Normocytes (Normal)

     Microcytes (Smaller then normal)

     Macrocytes (Larger then normal)

     Anisocytes (Various sizes)

   - Cell shape:

     Poikilocytes (Irregulay- shaped cell)

     Spherocytes (Globular cells)

     Drepanocytes (Sickel cells)

   - Cell colour:

Generally refers to the staining characteristic which reflects the haemoglobin concentration. Terms that describe haemoglobin content end with “chrmic.’’

1. Normochrmic (Sufficient or normal amounts of haemoglobin)
2. Hyper chromic (Containing an unusually high concentration of haemoglobin in its cytoplasm)
3. Hypochromic (Containing an abnormally low concentration of haemoglobin)

Causes include:

- Acute blood loss
- Impaired production
- Increased destruction
- Fluid overlod
- Anaemia of chronic disease
- Aplastic anaemia (bone marrow failure)
- Haemolytic anaemia

DIFERNTIAL DIAGNOSIS

- Haemorrhagic anaemia
- Aplasic anaemia
- Haemolytic anaemia
- Iron deficiency anaemia
- Low LDL Cholesterol (hypobetalipoproteinemia)
- Megaloblastic anaemia
- Nutritional Deficiency Anaemia
- Anaemia of chronic Disease
- Myelophthisic anaemia
- Pernicious anaemia
- Sickle cell anaemia
- Spur cell anaemia
- Thalassemia alpha
- Thalassemia beta

VARIOUS TYPES OF ANAEMIA :

Iron deficiency anaemia :

Iron deficiency anaemia is most common from of Anaemia , is defined as a condition in which there are no mobilizable iron stores and in which sings of a compromised supply of iron to tissues, including the erythron, are noted. Iron deficiency anaemia occurs when the body does not have enough iron

Ieading to the decreased production of red blood cells.

Causes :

- Chronic blood loss – because of excessive menstruation, peptic ulcer gastrointestinal blood loss, haemorrhoids, worm infestruation, Chronic kidney disease
- Decreased absorption of iron
- Increased use of ir3on –in pregnancy
- Non steroidal anti-inflammatory drugs
- Other causes- Inflammatory bowel disease, oesophagitis, schistosomiasis.

Signs and Symptoms

General fatigue,weakness,tiredness

Fast heartbeat, Shortness of breath

Angular stomatitis,Glossitis

Pale skin

Tingling or a crawling feeling in the legs

Soreness in the tounge

Central nervous system shows impaired cognitive function and reduced working capacity.

Consumption of Pica is seen in patient with moderate to severe deficiency

Koilonychias: Spooning of the fingernails.

Anaemia due to chronic disease:

Is a form of anaemia due to chronic immune activation ,chronic infection and pregnancy.In these conditions all produce massive elevation of interkukin-6, which stimulates hepcidin production and release from liver,which in turn reduces the iron carrier protein ferroportin so that access of iron to the circulation is reduced . other mechanisms may also play a role ,such as reduced erythropoiesis.

Aplastic anaemia

Aplastic anaemia is pancytopenia with bone marrow hypocellularity . Acquired aplastic anaemia is distinguished from iatrogenic marrow aplasia ,marrow hypocellularity after intensive cytotoxic chemotherapy for cancer. Aplastic anaemia can also be constitutional: The genetic diseases Fanconis anaemia and dyskeratosis congenital, although frequently associated with typical physical anamaliesand the development of pancytopenia early in the life.can also present as marrow failurein normal appearing adults.

Acquired aplastic anaemia is often stereotypical in its manifestations, with the abrupt onset of low blood counts in an incriminated medical drug may precede the onset .

It is a blood disorder in which the body's bone marrow doesn't make enough new blood cell It may result in a number of health problem including arrhythmias an enlarged heart,heart failure.

Causes:

- Exposure to ionizing radiation from radioactive materials.
- Exposure to toxins such as benzene
- Use of certain drug such as chloramphenicol, carbamazepine , fellbamete, phenytoin , quinine, phenylbutazone.
- Infectious diseases such as viarl hepatitis, Epstein- Barr virus, cytomegalovirus and HIV.
- Autoimmune disorders such as lupus and rheumatoid arthritis.

Signs and symptom :

Iassititude, weakness, shortness of breath, and a pounding sensation in the ears, malaise

Anaemia related to Renal disease:

A normocytic, normochromic anaemia is observed as early as stage 3 CKD and is almost universal by stage 4. The primary cause in patients with CKD is insufficient production of

erythropoietin (EPO) by the diseased kidneys. Additional factors include iron deficiency, acute and chronic inflammation with impaired iron utilization (“anaemia of chronic disease’’), severe hyperparathyroidism with consequent bone marrow fibrosis, and shortened red cell survival in the uremic environment. In addition, comorbid conditions such as hemoglobinopathy can worsen the anaemia.

The anaemia of CKD is associated with a number of adverse pathophysiologic consequences, including decreased tissue oxygen delivery and utilization, incrdiac output, ventricular dilation ,and ventricular hypertrophy. Clinical manifestation include fatigue and diminished exercise tolerance, angina, heart failure, decreased cognition and mental acuity, and impaired host defense against infection. In addition, anaemia may play a role in growth retardation in children with CKD. While many studies in CKD patients have found that anaemia and resistance to exogenous EPO are associated with a poor prognosis, the relative contribution to poor outcome of the low hematocrit itself, versus inflammation as a cause of the anaemia, remains unclear.

Warm autommune haemoytic anaemia

Anaemia is caused by autoimmune attact against red blood cells, primarily by IgG.

Causes :

- Idiopathic

- Secondary to anothr disease, such as systemic Iupus erythematosus, rheumatoid arthritis or malignancy

Congenital hypoplastic anaemia :

Is also called Constitutional aplastic anaemia which is primarily due to a congenital disorder.

Spur Cell Anaemia :

Is a form of hemolytic anaemia that results secondary to severe impaired liver function or cirrhosis. Chronic liver disease impairs the liver's ability to esterify cholesterol, causing free cholesterol to bind to red cell membrane, that increasing it's surface area.

This condition also creates rough or thorny projections on the erythrocyte named acanthocytes.

Haemolytic anaemia :

Anaemia due to abnormal breakdown of red blood cells, either in the blood vessels(intravascular hemolysis) or elsewhere in human body (extravascular).

There are many types of haemolytic anaemia's some of which are inherited and others that are acquired.

Inherited haemolytic anaemia's including:

- Sickle cell anaemia
- Thalassemia
- Hereditary elliptocytosis.
- Glucose-6-phosphate dehydrogenase (G6PD) deficiency.
- Pyruvate kinase deficiency.

Acqired hawmolytic anaemia including :

- Immune haemolytic anaemia
- Autoimmune haemolytic anaemia.
- Alloimmune haemolytic anaemia.
- Drug- induced haemolytic anaemia.
- Mechanical haemolytic anaemia.
- Paroxysmal nocturnal haemoglobinuria.

Certain infections and substances can also damage red blood cells and lead to haemolytic anaemia.

Causes:

Intrinsic causes:

- Defects of red blood cell membrane production
- Defects in haemoglobin production (as thalassemia,

Sickle cell disease, congenital dyserythropoietic anaemia)

- Defective red cell metabolism

Extrinsic causes:

- Any of the causes of Hypersplenism such as portal hypertension
- Lead poisoning

- Paroxysmal nocturnal haemoglobinuria

  Signs and Symptoms:

- Jaundice.
- Pain in the upper abdomen.
- Leg ulcers and pain.
- A severe reaction to a blood transfusion.

pernicious anaemia:

Also known as Biemer's anaemia , Addison's Is one of many types of the larger family of megaloblastic anaemia.

One way pernicious anaemia can develop is by loss of gastric parietal cells, which are responsible part , for the secretion of intrinsic factor, a protein essential for subsequent absorption of vitamin B12 in the ileum.

Causes

- A common cause of pernicious anaemia is a lack of intrinsic factor as the body can't absorb enough vitamin B12.
- Sometimes people develop pernicious anaemia because they don't get enough vit B12 in their diets.

Signs and Symptoms

- Nerve damage
- Neurological problems such as confusion, dementia, depression and memory loss.
- An enlarged liver.

- A smooth beefy tongue

Thalassemia:

The thalassemia syndroms are inherited disorder of –or –globin biosynthesis.The reduced supply of globin diminishes production of heamoglobin tetramers,causing hypochromia and microcytosis.Unbalanced occumulation of an subunits occurs because the synthesis of the unaffected globin proceeds at a normal rate. Unbalanced chain occumulations dominates the clinical phenotypes.Clinical severity varies widely depending on the degrre to which the synthesis of the affected globin is impaired, altered synthesis of other globin chains, and coinheritance of other abnormal globin allzeles.

Thaiassemia are inherited blood disorders which cause the body to make fewer healthy red blood cells and less heamoglobin (an iron- rich protein in red blood cells)

The two major types of thalassemia are – 1 . Alpha thalassemi

Beta thalassemia

The most severe form of alpha thalassemia is known as alpha thalassemia major or hydrops fetalis ,while the severe form of beta thalassemia is known as thalassemia major or Cooley's anaemia.

Causes

Heamoglobin in red blood cells as two kinds of protein chains : alpha globin and betaglobin .If your body don't make enough of these protein chains , red blood cells don't form properly and cannot carry enough oxygen .

- **Signs and Symptoms**

- People who have alpha or beta thalassemia can have mild anaemia,

  Which can make you feel tired.

People with beta thalassemiaintermediate have mild to moderate anaemia.

Pale and listless appearance

Poor appetite

Dark coloured urine

Jaundice

Spleenomegaly,Hepatomegaly, Cardiomegaly

Bone deformities

Iron overload

Sickle cell anaemia:

The sickle cell syndromes are caused by a mutation in the –globin gene that changes the sixth amino acid from glutamic acid to valine. HbS (22) polymerizes reversibly when deoxygenated to form a gelatinous network of fibrous polymers that stiffen the RBC membrane, increase viscosity and cause dehydration due to potassium leakage and calcium influx. These changes also produce the sickle

shape. Sickled cells loss the pliability needed to traverse small capillaries. They possess altered ‘ ‘ sticky’’ membranes that are abnormally adnormally adherent to the endothelium of microvascular vasoocclusions and premature RBC destruction (hemolytic anaemia). Hemolysis occurs because the spleen destroys the abnormalm RBC.

Signs and Symptoms :

The rigid adherent cells clog small capillaries and venules, causing tissue ischemia, acute pain, and gradual end-organ damage. This venoocclusive componenet usually dominates the clinical course. Prominent manifestations include episodes of ischemic pain (i.e., painful crises) and ischemic malfunction or frank infarction in the spleen, central nervous system, bones, liver, kidneys, and lungs.

Clinical feature of Anaemia

The symptoms of anaemia vary according to the type of anaemia ,

The underline cause, the severity and underline health problem,or cancer.

Specific syndrome of those problem may be noticed first.

Spmtoms common to many types of annaemia include the following:

Easy fatigue and loss 0f energy

Unusually rapid heart beat, particularly with exercise

Difficulty concentrating

Dizziness

Pale skin

Leg cramps

Insomnia

DIAGNOSIS

Diet, family medical history, medication you take,alcohol Intake and ethenic background etc details questions should asked patient to find the cause of anaemia.

Physical Examinations

Listing the heart sound for a irregular or rapid

Check paleness of skin,gum, nailbed and palms

Palpate the abdomen to feel the size of liver and spleen

Checking the signs of bleeding including a rectal and pelvis

BLOOD TEST

Blood examination

Estimation of heamoglobin

Total RBC count

Total WBC count

Differential count

Packed cell volume(Heamatocrit)

Blood picture

Electrophoretic pattern of heamoglobin

Erythrocyte sedimentation rate

Total platelate count

Plasma transferrin

Total iron binding capacity

Serum ferritin

Serum vit. B12 levels

Serum folic acid estimation

Plasma LDH (Lactate dehydrogenase)

Glucose profile

Serum protein

Erythrocyte protoporphyrin

Red blood cell distribution width(RDW)

Transferrin binding receptors

Test of Oral Iron Absorption

Red cell cytogram

Blood test will not only confirm the diagnosis of anaemia but also help to point out the underline condition.

Blood test might include:

Complete blood count: which determines the number, size, volume,and heamoglobin content of red blood cells

Blood iron and serum ferritin level

Levels of vitamin B12 and folate,vitamins necessary for red blood cell production

Thyroid function test: Hypothyroidism often result in a decrease in RBC mass and normocytic anaemia.

Urine examination

Urine examined for Albumin, urobilurubin, microheamaturia, sugar and other

Faeces must be examined for occult blood and malena

Bone marrow biopsy

Endoscopy: Gastrodudodenoscopy/ Sigmoidoscopy/proctoscopy

ECG

Most of the signs overlap with congestive cardiatfailure and valvular heart diseases .

DIET AND ANAEMIA

Consumption of food rich in iron is essential to prevention of iron deficiency anaemia.

Iron rich foods include red meat ; green ,leafy vegetable; dried beans;dried apricots, prunes,raisins,and other dried fruits ;almonds; seaweeds;parsley;

Whole grains and yams

In extreme cases of anaemia ,researchers recommend consumption of beef liver, lean meat , oysters,lamb or chicken or iron drops may be introduced.

Certain foods have been found to interfere with iron absorption in the gastrointestinal tract,and these foods should be avoided.They include tea,coffe,wheat bran, rhubarb,chocolate,soft drinks,red wine,ice cream and candy bars. With the exception of milk and eggs,animal sources of iron provide iron with better bioavailability than vegetable sources.

PREVIOUS WORK DONE

Sl No	Title	Name of Scholar	Institute and Year
1	A study of kaseesa bhasma in Pandu chikitsa	Dr Karanjkar H.M.	PUNE UNIVERCITY, 1987
2	A study of drug Raktawardhak Kalpa in pandu roga	Dr Patwardhan M.D.	PUNE UNIVERCITY, 1993
3	To study the efficacy of Raktabasti in pandu	Dr Tagade U.V.	PUNE UNIVERCITY, 2001
4	Interpritation of types of pandu w.s.r.to peripheral blood Smear	Dr Mhatre R.P.	PUNE UNIVERCITY, 2002
5	The study of pandu vyadhi in Relation with raktadushti	Dr Patil S.P.	PUNE UNIVERCITY, 2002
6	To study mridabhakshanjanya Pandu and role ofvyoshadivati In it	Dr Nimgaonkar V.M.	PUNE UNIVERCITY, 2003
7	To study pandu vyadhi special reference To stool examination	Dr Patil V. B.	PUNE UNIVERCITY, 2005

8	Efficacy of haritaki churna with guda with Management of pandu	Dr Tayade V.E.	PUNE UNIVERCITY, 2006
9	Pandu vyadhi mai lohasav ki upyogita	Dr Ramteke M.	NAGPUR UNIVERCITY, 1990
10	Anaemia its management in Ayurveda	Dr Pande P.N.	BANARAS HINDU UNIVERCITY 1967
11	Clinical evaluation of Vidangadi Loha Forte in the treatment of pandu (Anaemia)	Dr Chaturved V.s.	BANARAS HINDU UNIVERCITY 1989
12	A study on Pandu Roga W.S.R. to anaemia and its management with Shodhana and Yograj Rasayana	Dr Jain Sangeeta	JAMNAGAR GUJRAT UNIVERCITY 2000
13	Assessment of efficacy of vasadi kwath in mamagement of pandu	Dr Shweta Tiwari	MUHS NASHIK UNIVERCITY 2009
14	Assessment of Goudarishta in management of pittaj pandu	Dr Anand Pethe	MUHS NASHIK UNIVERCITY 2011
15	Assessment of efficacyof Triphala kwath with Goghrita and Sita in vataj pandu	Dr Sarika Dange	MUHS NASHIK UNIVERCITY 2013
16	Comparative study of Gudambu Yoga in Kaphaj Pandu	Dr Sushrut Sardeshamukh	MUHS NASHIK UNIVERCITY 2013
17	Evaluate the efficacy of	Dr Aditi	MUHS NASHIK

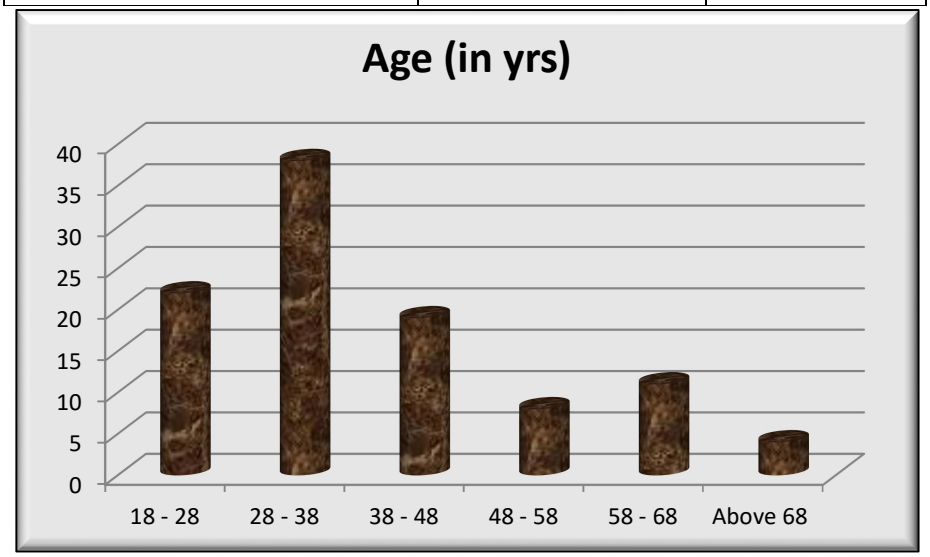
	Sanghrita Guda Haritaki in Pandu Vvydhi	Medhekar	UNIVERCITY 2013
18	Comparative study of Vidangadi Loha Vati (DWITIYA) in management of kaphaj pandu	Dr Rahul Nale	MUHS NASHIK UNIVERCITY 2014
19	Assessment of Gomutra Gairik Vati in the management of kaphaj pandu	Dr Asavari Satav	MUHS NASHIK UNIVERCITY 2015

Analysis and Interpretation

Table1: Frequency distribution of patients according to Age

The frequency distribution of patients according to Age is given below along with it's bar graph.

Age (in yrs)	Frequency	Percent
18 – 28	22	21.6
28 – 38	38	37.3
38 – 48	19	18.6
48 – 58	8	7.8
58 – 68	11	10.8
Above 68	4	3.9
Total	102	100



Summary:

There are 21.6% patients from age group ’18 – 28’; 37.3% patients from age group ’28 – 38’; 18.6% patients from age group ’38 – 48’; 7.8% patients from age group ’48 – 58’; 10.8% patients from age group; 3.9% patients from age group ‘Above 68’.

Table2: Frequency distribution of patients according to Sex

The frequency distribution of patients according to Sex is given below along with it’s bar graph.

Sex	Frequency	Percent
Female	98	96.1
Male	4	3.9
Total	102	100.0

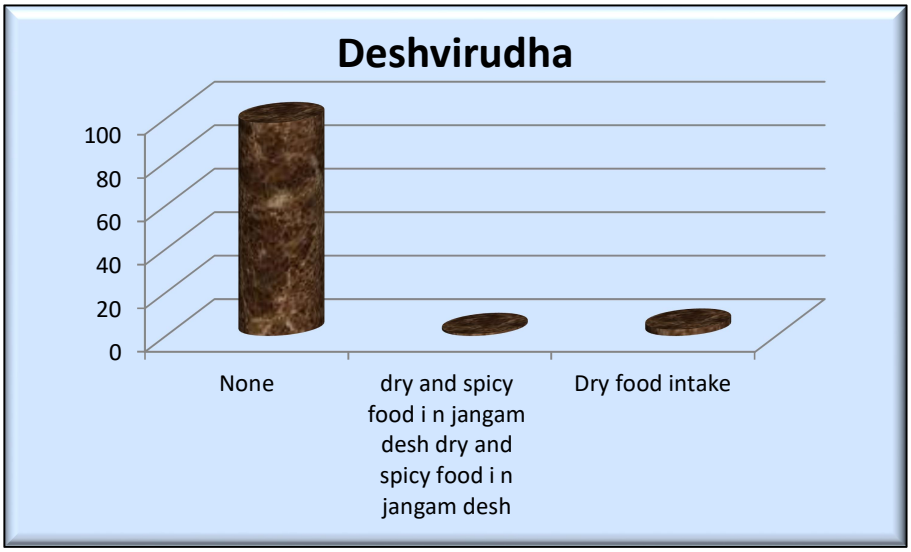
Summary:

There are 96.1% female patients; 3.9% male patients.

Table3: Frequency distribution of patients according to Deshvirudha

The frequency distribution of patients according to Deshvirudha is given below along with it's bar graph.

Deshvirudha	Frequency	Percent
None	98	96.1
dry and spicy food i n jangam desh dry and spicy food i n jangam desh	1	1.0
Dry food intake	3	3.0
Total	102	100.0



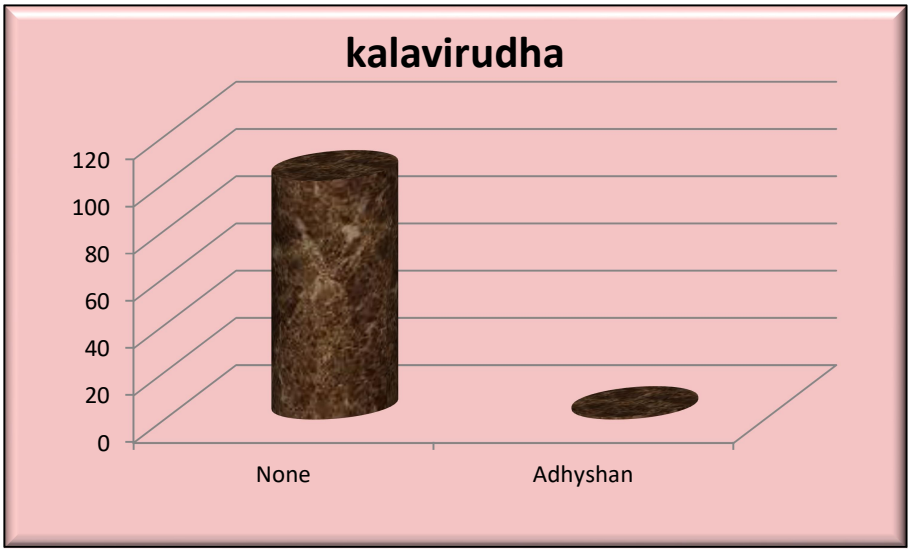
Summary:

There are 96.1% patients with hetu absent; 3.9% with hetu present.

Table4: Frequency distribution of patients according to kalavirudha

The frequency distribution of patients according to kalavirudha is given below along with it's bar graph.

kalavirudha	Frequency	Percent
None	101	99.0
Adhyshan	1	1.0
Total	102	100.0



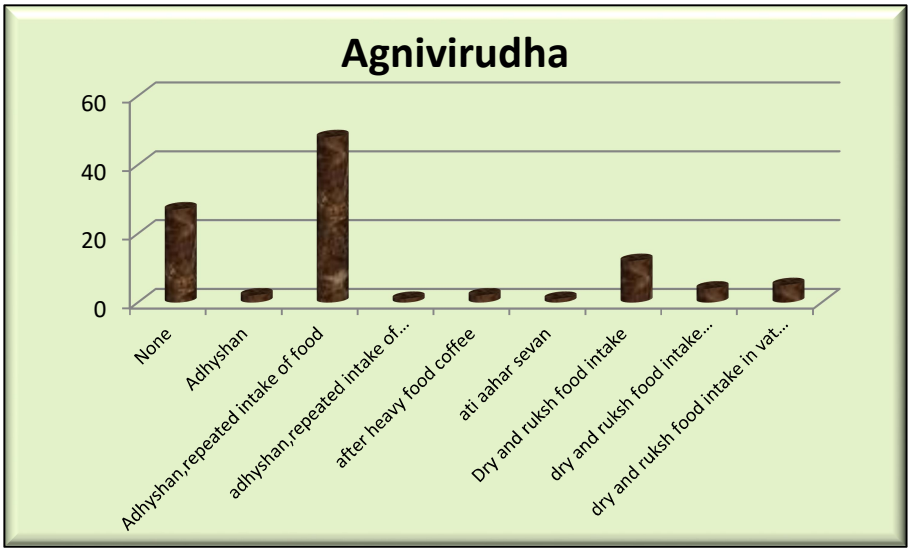
Summary:

There are 99% patients with hetu absent; 1% with hetu present.

Table5: Frequency distribution of patients according to Agnivirudha

The frequency distribution of patients according to Agnivirudha is given below along with it's bar graph.

Agnivirudha	Frequency	Percent
None	27	26.5
Adhyshan	2	2.0
Adhyshan,repeated intake of food	48	47.1
adhyshan,repeated intake of food after food daily icecream	1	1.0
after heavy food coffee	2	2.0
ati aahar sevan	1	1.0
Dry and ruksh food intake	12	11.8
dry and ruksh food intake adhyshan,repeated intake of food	4	3.9
d ruksh food intake in vat prakruti	5	4.9
Total	102	100.0

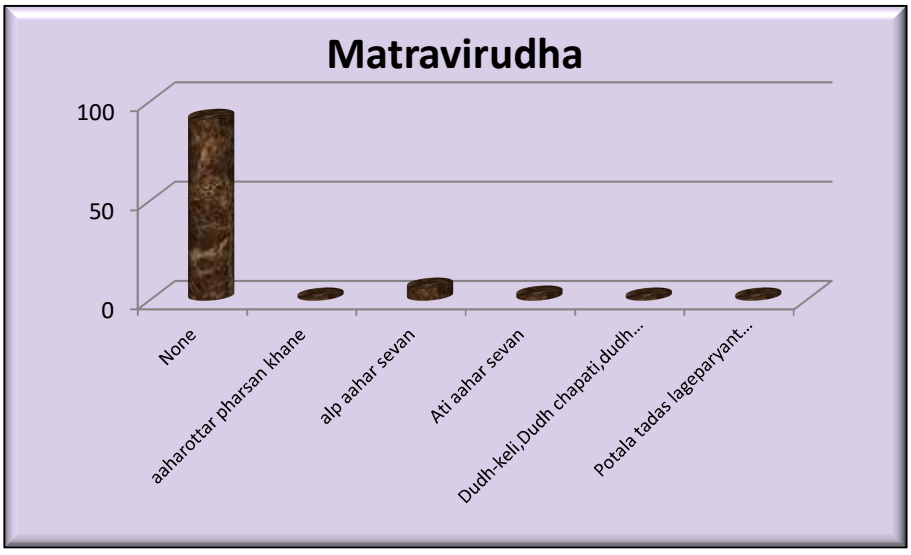


Summary:There are 26.5% patients with hetu absent; 73.5% with hetu present.

Table6: Frequency distribution of patients according to Matravirudha

The frequency distribution of patients according to Matravirudha is given below along with it's bar graph.

Matravirudha	Frequency	Percent
None	91	89.3
aaharottar pharsan khane	1	1.0
alp aahar sevan	6	5.8
Ati aahar sevan	2	2.0
Dudh-keli,Dudh chapati,dudh bhat ekatra khane	1	1.0
Potala tadas lageparyant jevane,atiahar	1	1.0
Total	102	100.0



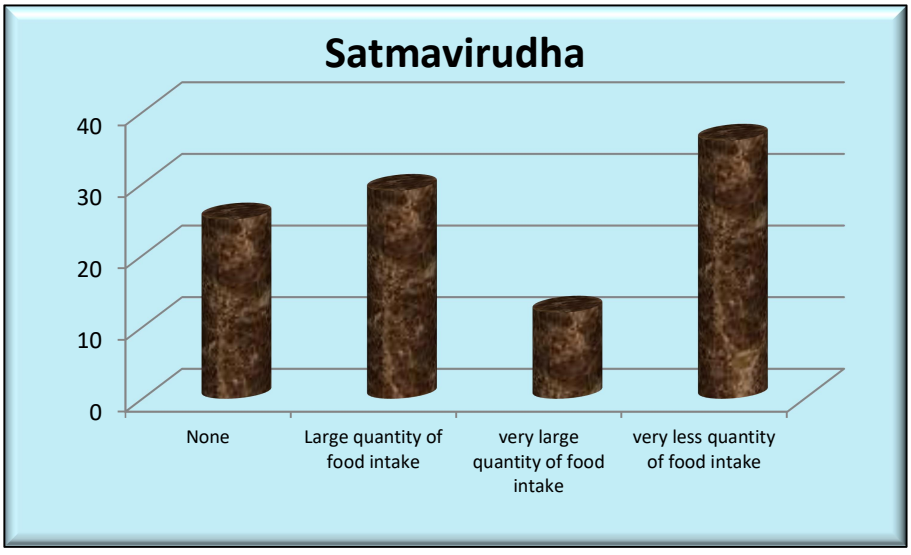
Summary:

There are 89.3% patients with hetu absent; 10.7% with hetu present.

Table7: Frequency distribution of patients according to Satmavirudha

The frequency distribution of patients according to Satmavirudha is given below along with it's bar graph.

Satmavirudha	Frequency	Percent
None	25	24.5
Large quantity of food intake	29	28.4
very large quantity of food intake	12	11.8
very less quantity of food intake	36	35.3
Total	102	100.0



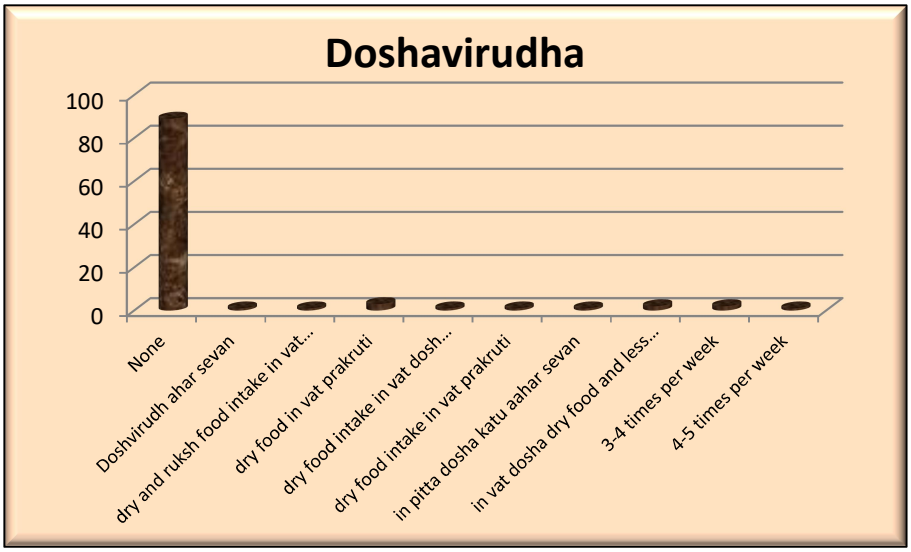
Summary:

There are 24.5% patients with hetu absent; 75.5% with hetu present.

Table8: Frequency distribution of patients according to Doshavirudha

The frequency distribution of patients according to Doshavirudha is given below along with it's bar graph.

Doshavirudha	Frequency	Percent
None	89	87.3
Doshvirudh ahar sevan	1	1.0
dry and ruksh food intake in vat prakruti	1	1.0
dry food in vat prakruti	3	2.9
dry food intake in vat dosh dushti	1	1.0
dry food intake in vat prakruti	1	1.0
in pitta dosha katu aahar sevan	1	1.0
in vat dosha dry food and less snigdh food intake	2	2.0
3-4 times per week	2	2.0
4-5 times per week	1	1.0
Total	102	100.0



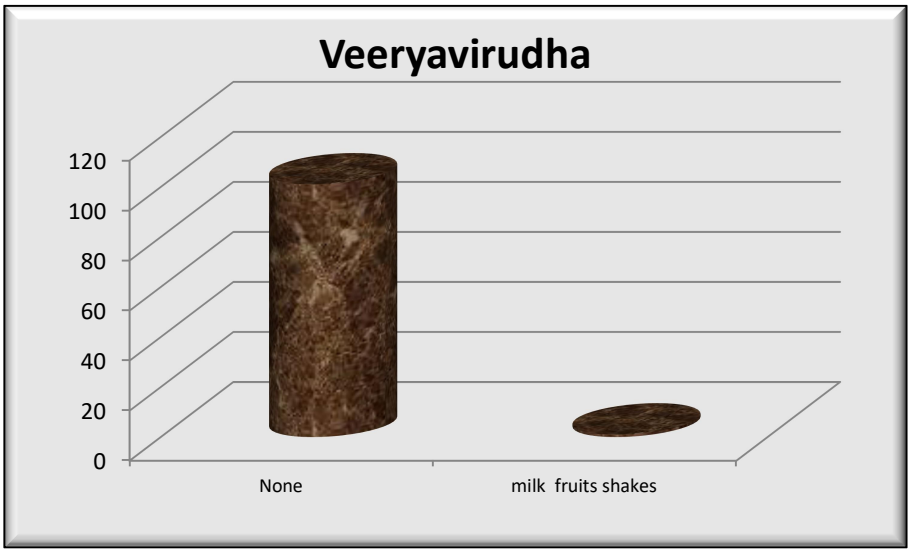
Summary:

There are 87.3% patients with hetu absent; 12.7% with hetu present.

Table9: Frequency distribution of patients according to Veeryavirudha

The frequency distribution of patients according to Veeryavirudha is given below along with it's bar graph.

Veeryavirudha	Frequency	Percent
None	101	99.0
milk fruits shakes	1	1.0
Total	102	100.0



Summary:

There are 99% patients with hetu absent; 1% with hetu present.

Table10: Frequency distribution of patients according to Avasthavirudha

The frequency distribution of patients according to Avasthavirudha is given below along with it's bar graph.

Avasthavirudha	Frequency	Percent
None	101	99.0
paryushit aahae sevan	1	1.0
Total	102	100.0

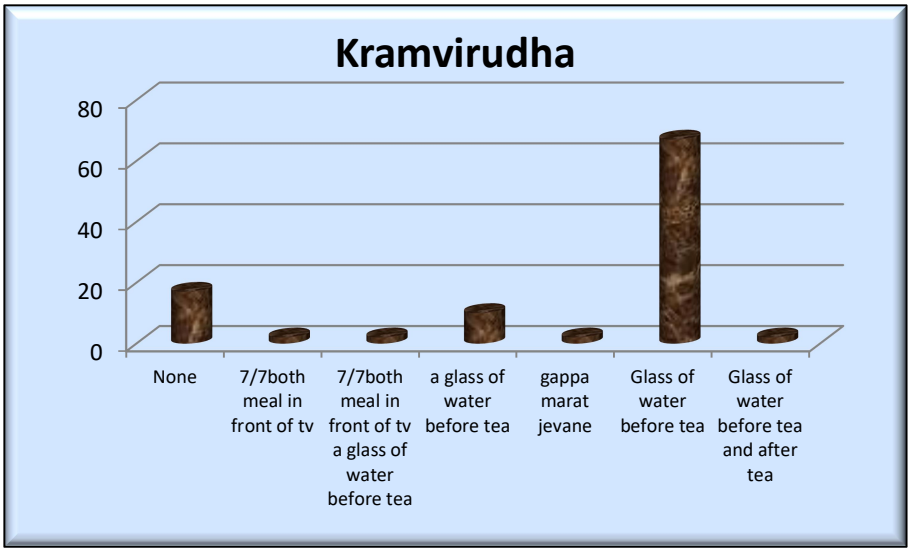
Summary:

There are 99% patients with hetu absent; 1% with hetu present.

Table11: Frequency distribution of patients according to Kramvirudha

The frequency distribution of patients according to Kramvirudha is given below along with it's bar graph.

Kramvirudha	Frequency	Percent
None	17	16.7
7/7both meal in front of tv	2	2.0
7/7both meal in front of tv a glass of water before tea	2	2.0
a glass of water before tea	10	9.8
gappa marat jevane	2	2.0
Glass of water before tea	67	65.7
Glass of water before tea and after tea	2	2.0
Total	102	100.0

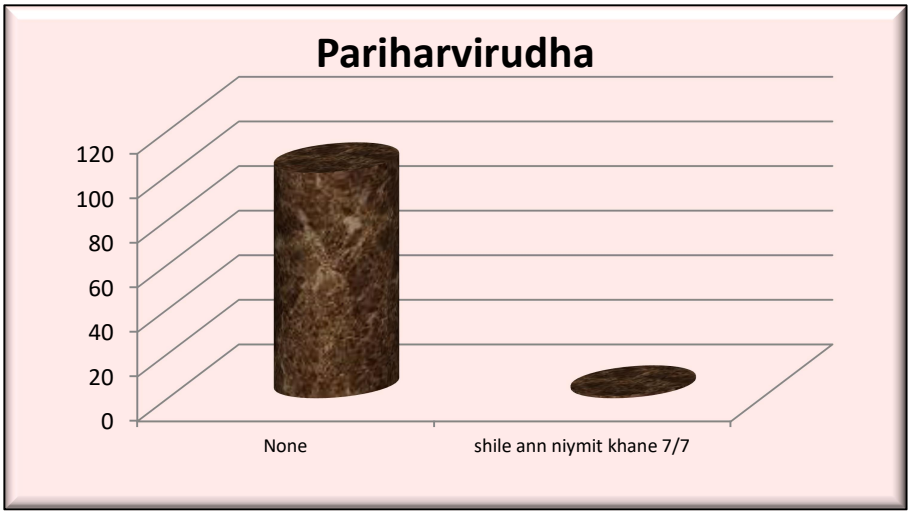


Summary:There are 16.7% patients with hetu absent; 83.3% with hetu present.

Tble12: Frequency distribution of patients according to Pariharvirudha

The frequency distribution of patients according to Pariharvirudha is given below along with it's bar graph.

Pariharvirudha	Frequency	Percent
None	101	99.0
shile ann niymit khane 7/7	1	1.0
Total	102	100.0



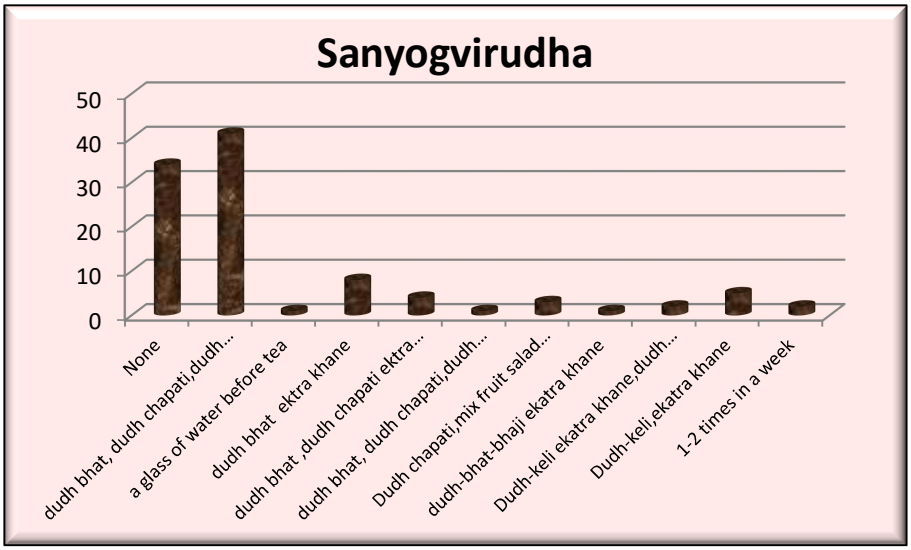
Summary:

There are 99% patients with hetu absent; 1% with hetu present.

Table13: Frequency distribution of patients according to Sanyogvirudha

The frequency distribution of patients according to Sanyogvirudha is given below along with it's bar graph.

Sanyogvirudha	Frequency	Percent
None	34	33.3
dudh bhat, dudh chapati,dudh keli ektra khane	41	40.2
a glass of water before tea	1	1.0
dudh bhat ektra khane	8	7.8
dudh bhat ,dudh chapati ektra khane	4	3.9
dudh bhat, dudh chapati,dudh keli ektra khane,milkshakes	1	1.0
Dudh chapati,mix fruit salad khane	3	2.9
dudh-bhat-bhaji ekatra khane	1	1.0
Dudh-keli ekatra khane,dudh chapati ekatra khane	2	2.0
Dudh-keli,ekatra khane	5	4.9
1-2 times in a week	2	2.0
Total	102	100.0



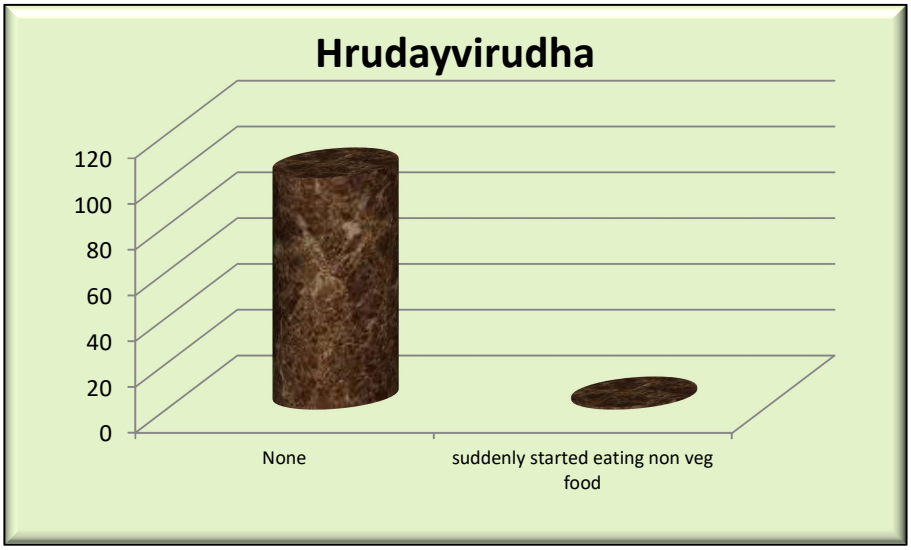
Summary:

There are 33.3% patients with hetu absent; 66.7% with hetu present.

Table14: Frequency distribution of patients according to Hrudayvirudha

The frequency distribution of patients according to Hrudayvirudha is given below along with it's bar graph.

Hrudayvirudha	Frequency	Percent
None	101	99.0
suddenly started eating non veg food	1	1.0
Total	102	100.0

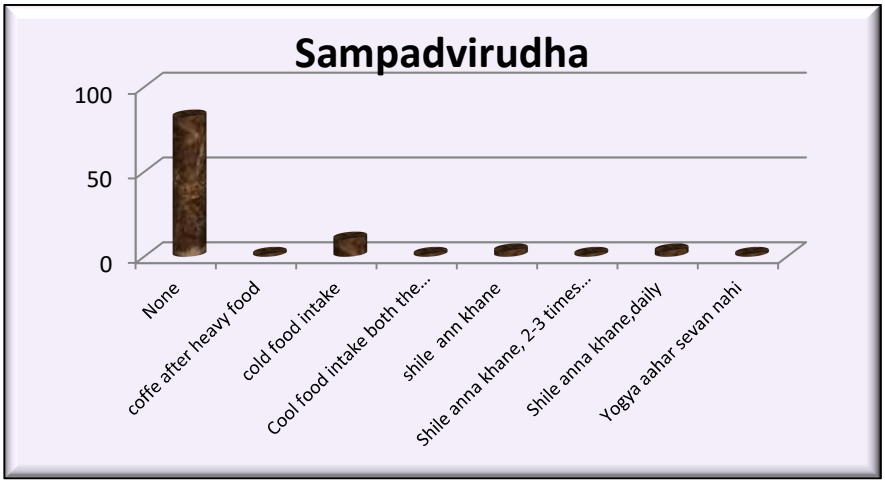


Summary:There are 99% patients with hetu absent; 1% with hetu present.

Table15: Frequency distribution of patients according to Sampadvirudha

The frequency distribution of patients according to Sampadvirudha is given below along with it's bar graph.

Sampadvirudha	Frequency	Percent
None	82	80.4
coffe after heavy food	1	1.0
cold food intake	10	9.8
Cool food intake both the times	1	1.0
shile ann khane	3	3.0
Shile anna khane, 2-3 times in a wk	1	1.0
Shile anna khane,daily	3	2.9
Yogya aahar sevan nahi	1	1.0
Total	102	100.0



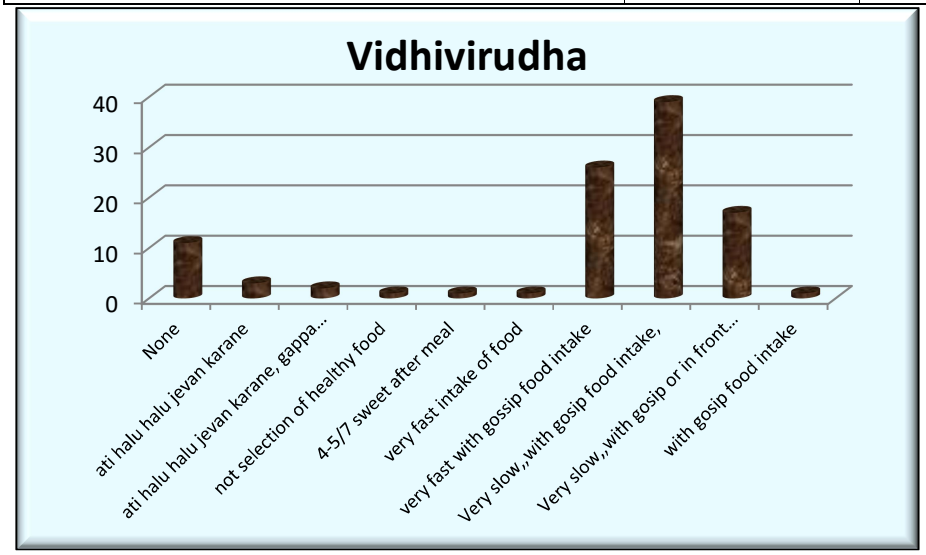
Summary:There are 80.4% patients with hetu absent; 19.6% with hetu present.

Table16: Frequency distribution of patients according to Vidhivirudha

The frequency distribution of patients according to Vidhivirudha is given below along with it's bar graph.

Vidhivirudha	Frequency	Percent
None	11	10.8
ati halu halu jevan karane	3	2.9
ati halu halu jevan karane, gappa marat jewane	2	2.0
not selection of healthy food	1	1.0
4-5/7 sweet after meal	1	1.0
very fast intake of food	1	1.0
very fast with gossip food intake	26	25.5
Very slow,,with gosip food intake,	39	38.2

Very slow,,with gosip or in front of tv food intake,	17	16.7
with gosip food intake	1	1.0
Total	102	100.0



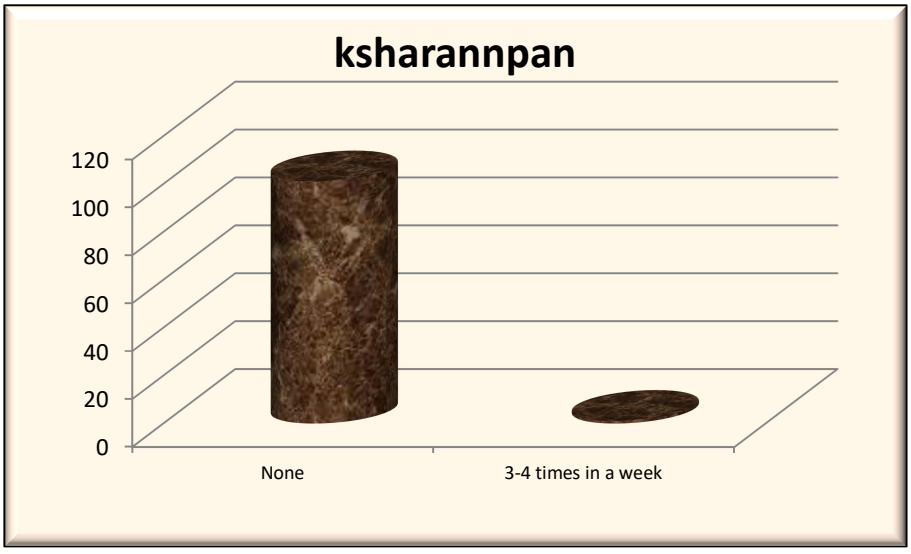
Summary:

There are 10.8% patients with hetu absent; 89.2% with hetu present.

Table17: Frequency distribution of patients according to ksharannpan

The frequency distribution of patients according to ksharannpan is given below along with it's bar graph.

ksharannpan	Frequency	Percent
None	101	99.0
3-4 times in a week	1	1.0
Total	102	100.0



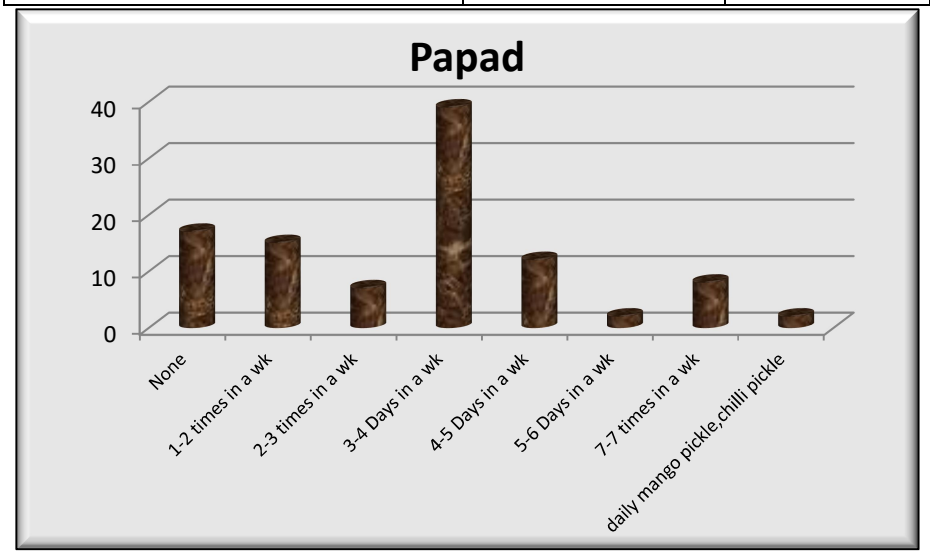
Summary:

There are 99% patients with hetu absent; 1% with hetu present.

Table18: Frequency distribution of patients according to Papad

The frequency distribution of patients according to Papad is given below along with it's bar graph.

Papad	Frequency	Percent
None	17	16.7
1-2 times in a wk	15	14.7
2-3 times in a wk	7	6.9
3-4 Days in a wk	39	38.2
4-5 Days in a wk	12	11.8
5-6 Days in a wk	2	2.0
7-7 times in a wk	8	7.8
daily mango pickle,chilli pickle	2	2.0
Total	102	100.0

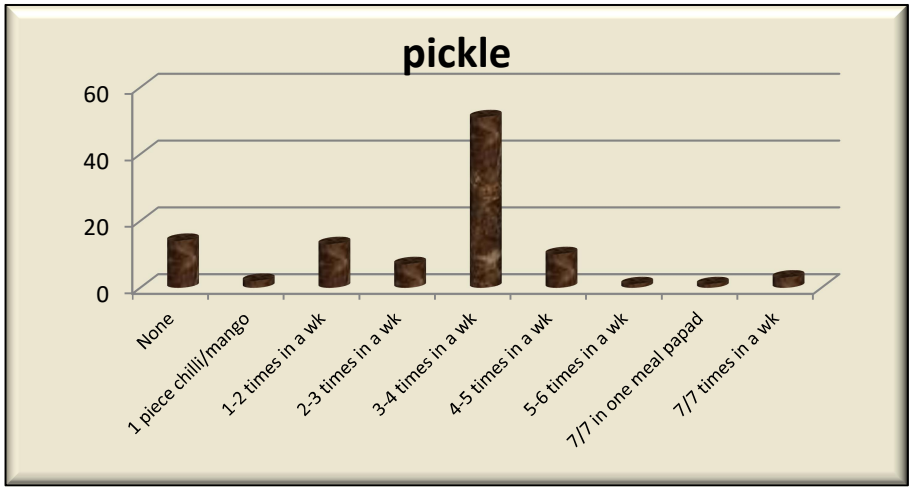


Summary:There are 16.7% patients with hetu absent; 83.3% with hetu present.

Table19: Frequency distribution of patients according to pickle

The frequency distribution of patients according to pickle is given below along with it's bar graph.

pickle	Frequency	Percent
None	14	13.7
1 piece chilli/mango	2	2.0
1-2 times in a wk	13	12.7
2-3 times in a wk	7	6.9
3-4 times in a wk	51	50.0
4-5 times in a wk	10	9.8
5-6 times in a wk	1	1.0
7/7 in one meal papad	1	1.0
7/7 times in a wk	3	2.9
Total	102	100.0

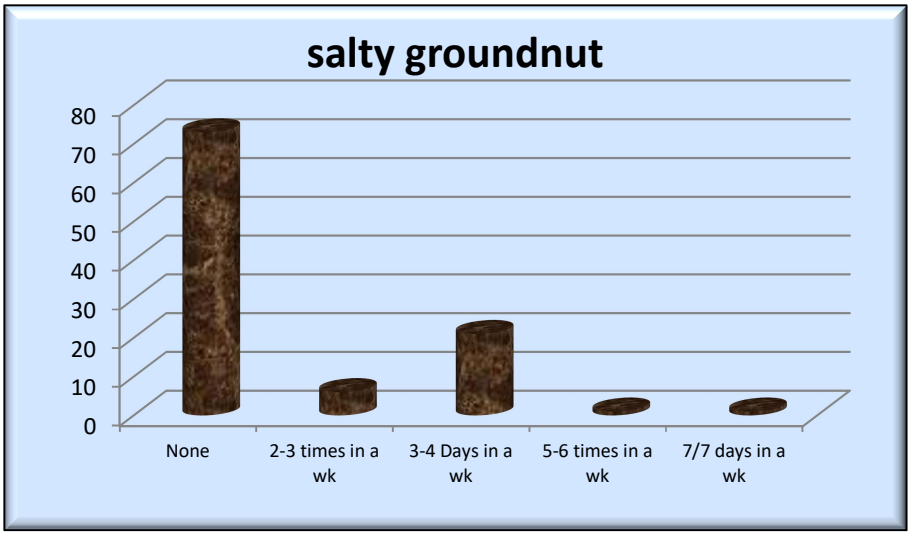


Summary:There are 13.7% patients with hetu absent; 86.3% with hetu present.

Table20: Frequency distribution of patients according to salty groundnut

The frequency distribution of patients according to salty groundnut is given below along with it's bar graph.

salty groundnut	Frequency	Percent
None	73	71.6
2-3 times in a wk	6	5.9
3-4 Days in a wk	21	20.6
5-6 times in a wk	1	1.0
7/7 days in a wk	1	1.0
Total	102	100.0



Summary:

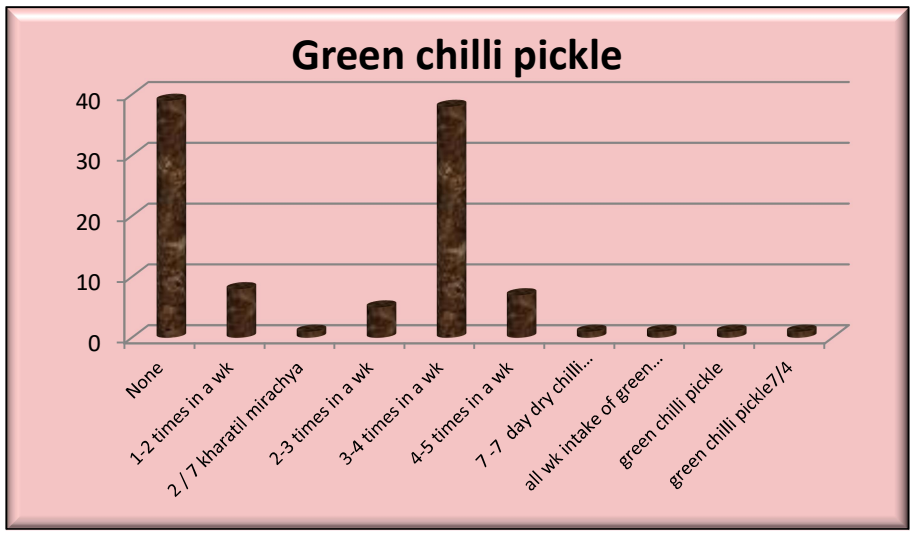
There are 71.6% patients with hetu absent; 28.4% with hetu present.

Table21: Frequency distribution of patients according to Green chilli pickle

The frequency distribution of patients according to Green chilli pickle is given below along with it's bar graph.

Green chilli pickle	Frequency	Percent
None	39	38.2
1-2 times in a wk	8	7.8
2 / 7 kharatil mirachya	1	1.0
2-3 times in a wk	5	4.9
3-4 times in a wk	38	37.3
4-5 times in a wk	7	6.9

7 -7 day dry chilli powder with roti	1	1.0
all wk intake of green chilli	1	1.0
green chilli pickle	1	1.0
green chilli pickle7/4	1	1.0
Total	102	100.0

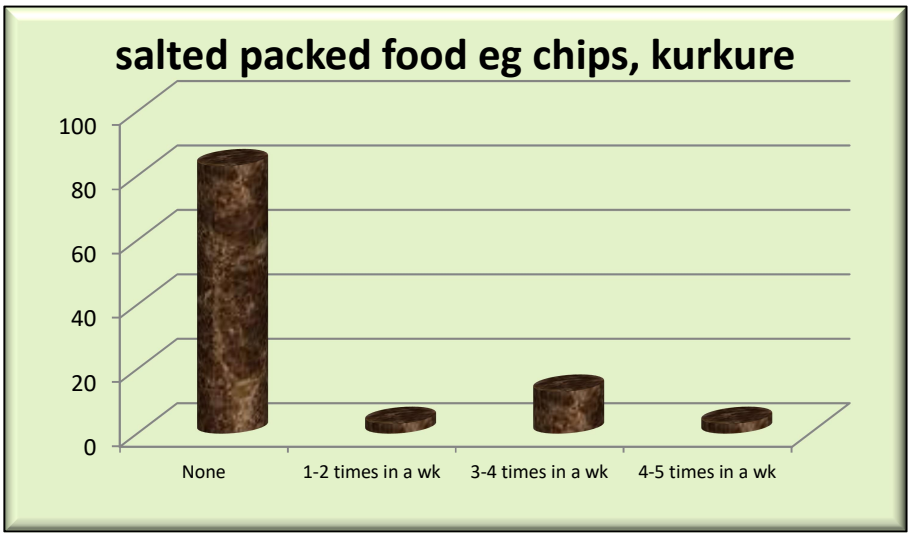


Summary:There are 38.2% patients with hetu absent; 61.8% with hetu present.

Table22: Frequency distribution of patients according to salted packed food eg chips, kurkure

The frequency distribution of patients according to salted packed food eg chips, kurkure is given below along with it's bar graph.

salted packed food eg chips, kurkure	Frequency	Percent
None	83	81.4
1-2 times in a wk	3	2.9
3-4 times in a wk	13	12.7
4-5 times in a wk	3	2.9
Total	102	100.0



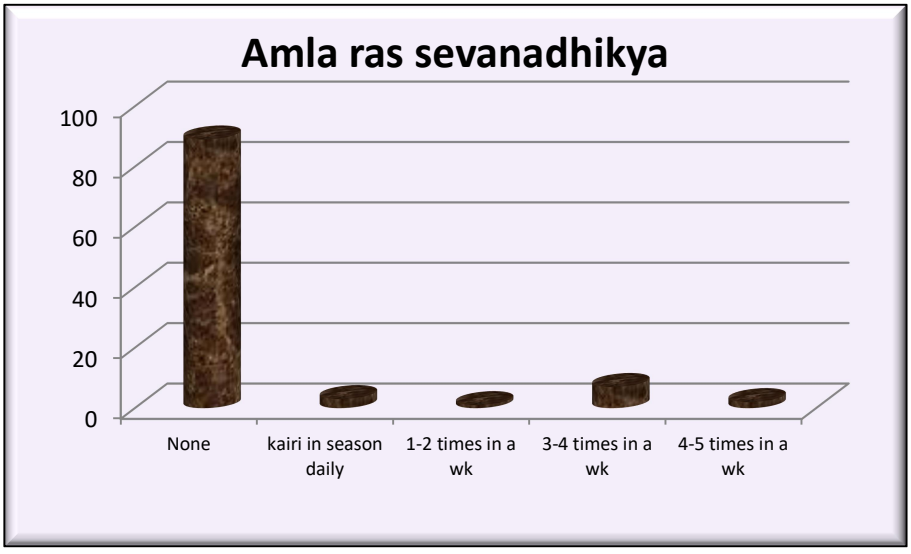
Summary:

There are 81.4% patients with hetu absent; 18.6% with hetu present.

Table23: Frequency distribution of patients according to Amla ras sevanadhikya

The frequency distribution of patients according to Amla ras sevanadhikya is given below along with it's bar graph.

Amla ras sevanadhikya	Frequency	Percent
None	89	87.3
kairi in season daily	3	2.0
1-2 times in a wk	1	1.0
3-4 times in a wk	7	2.9
4-5 times in a wk	2	2.0
Total	102	100.0



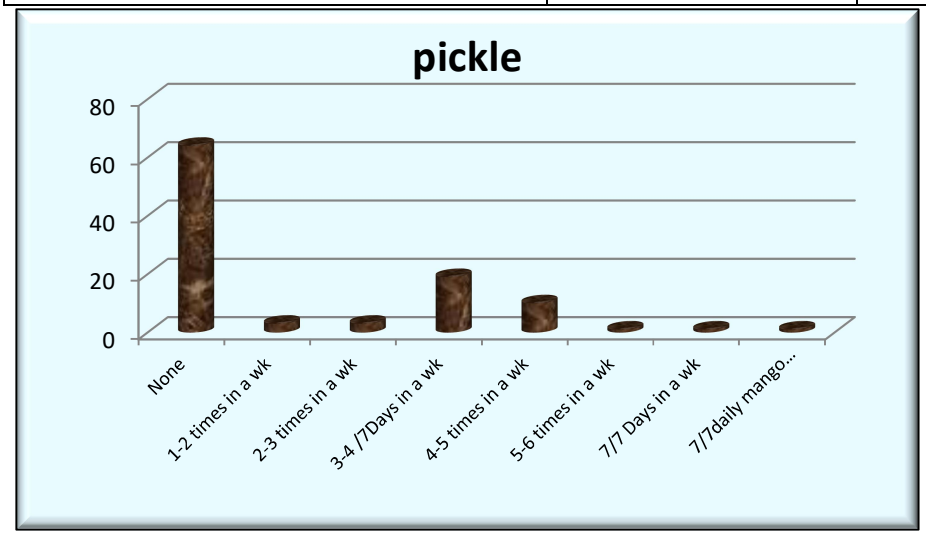
Summary:

There are 87.3% patients with hetu absent; 12.7% with hetu present.

Table24: Frequency distribution of patients according to pickle

The frequency distribution of patients according to pickle is given below along with it's bar graph.

pickle	Frequency	Percent
None	64	62.7
1-2 times in a wk	3	2.9
2-3 times in a wk	3	2.9
3-4 /7Days in a wk	19	18.6
4-5 times in a wk	10	9.8
5-6 times in a wk	1	1.0
7/7 Days in a wk	1	1.0
7/7daily mango pickle,chilli pickle	1	1.0
Total	102	100.0

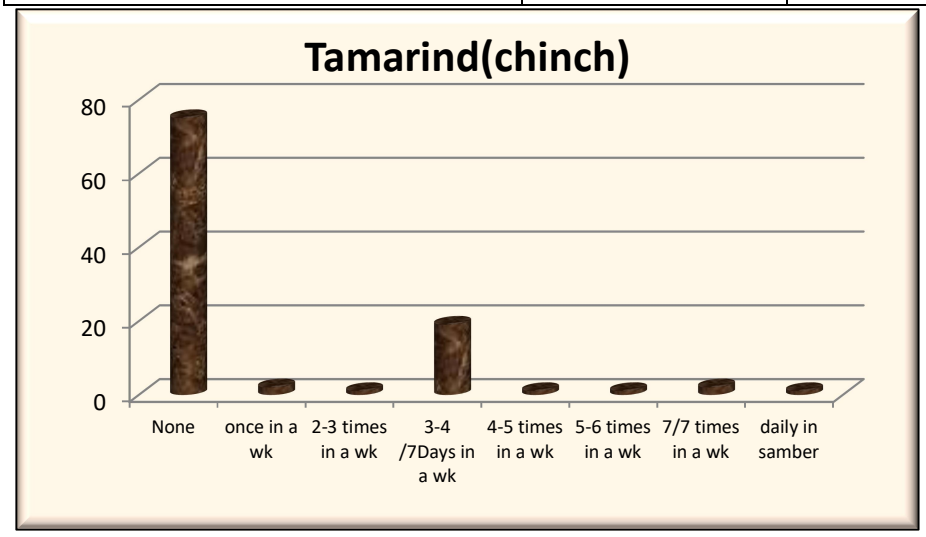


Summary:There are 62.7% patients with hetu absent; 37.3% with hetu present.

Table25: Frequency distribution of patients according to Tamarind (chinch)

The frequency distribution of patients according to Tamarind (chinch) is given below along with it's bar graph.

Tamarind(chinch)	Frequency	Percent
None	75	73.5
once in a wk	2	2.0
2-3 times in a wk	1	1.0
3-4 /7Days in a wk	19	18.6
4-5 times in a wk	1	1.0
5-6 times in a wk	1	1.0
7/7 times in a wk	2	2.0
daily in samber	1	1.0
Total	102	100.0

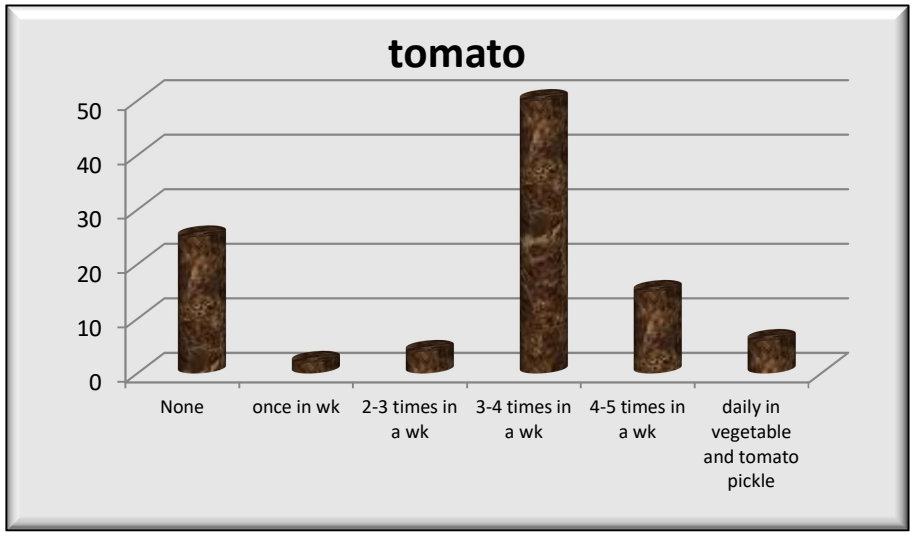


Summary:There are 73.5% patients with hetu absent; 26.5% with hetu present.

Table26: Frequency distribution of patients according to tomato

The frequency distribution of patients according to tomato is given below along with it's bar graph.

tomato	Frequency	Percent
None	25	24.5
once in wk	2	2.0
2-3 times in a wk	4	3.9
3-4 times in a wk	50	49.0
4-5 times in a wk	15	14.7
daily in vegetable and tomato pickle	6	5.9
Total	102	100.0

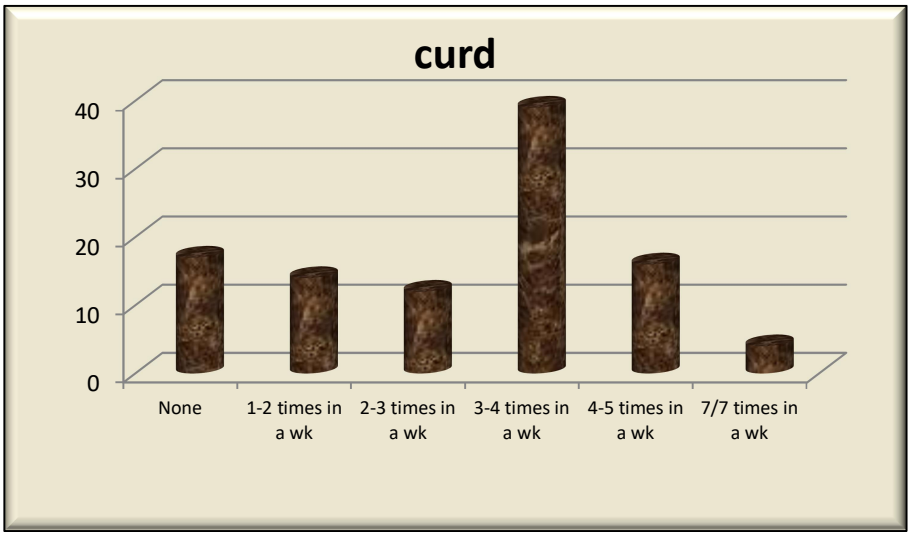


Summary:There are 24.5% patients with hetu absent; 75.5% with hetu present.

Table27: Frequency distribution of patients according to curd

The frequency distribution of patients according to curd is given below along with it's bar graph.

curd	Frequency	Percent
None	17	16.7
1-2 times in a wk	14	13.7
2-3 times in a wk	12	11.8
3-4 times in a wk	39	38.2
4-5 times in a wk	16	15.7
7/7 times in a wk	4	3.9
Total	102	100.0



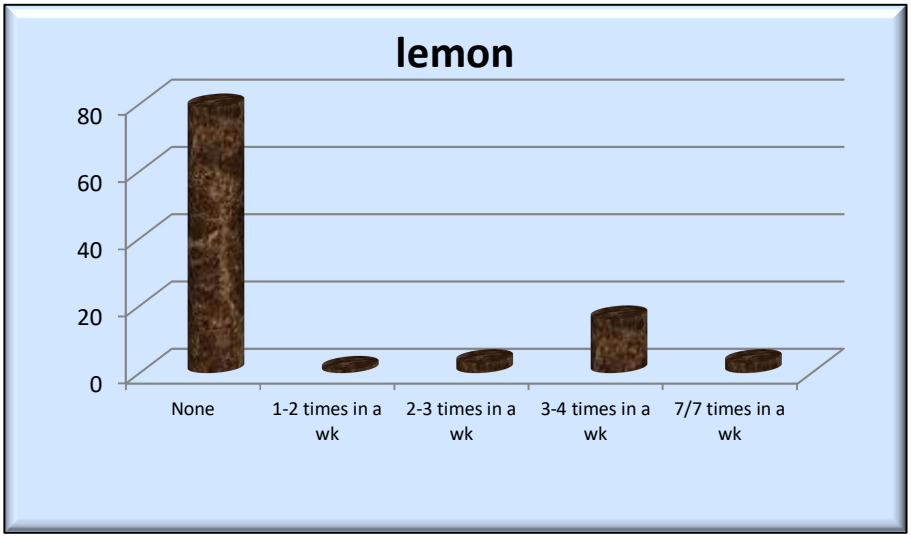
Summary:

There are 16.7% patients with hetu absent; 83.3% with hetu present.

Table28: Frequency distribution of patients according to lemon

The frequency distribution of patients according to lemon is given below along with it's bar graph.

lemon	Frequency	Percent
None	79	77.5
1-2 times in a wk	1	1.0
2-3 times in a wk	3	2.9
3-4 times in a wk	16	15.7
7/7 times in a wk	3	2.9
Total	102	100.0



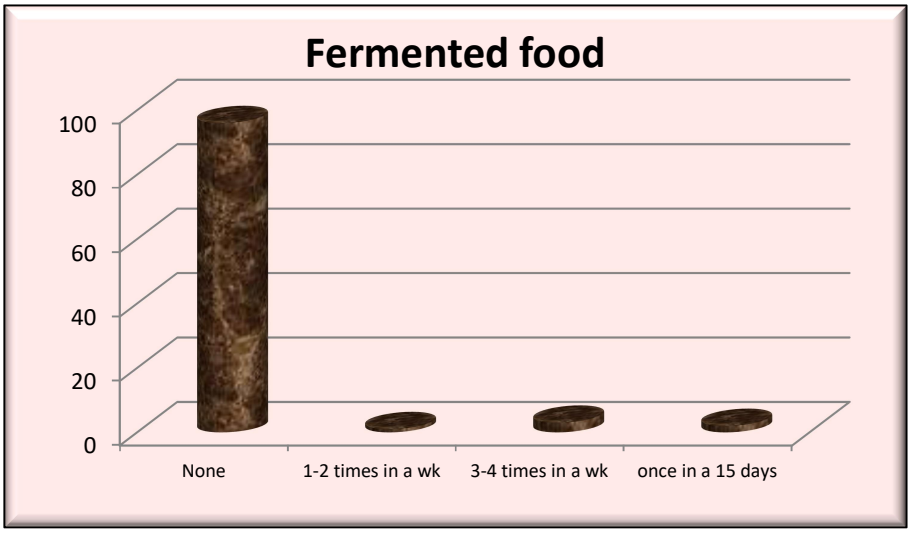
Summary:

There are 77.5% patients with hetu absent; 22.5% with hetu present.

Table29: Frequency distribution of patients according to Fermented food

The frequency distribution of patients according to Fermented food is given below along with it's bar graph.

Fermented food	Frequency	Percent
None	96	94.1
1-2 times in a wk	1	1.0
3-4 times in a wk	3	2.9
once in a 15 days	2	2.0
Total	102	100.0



Summary:

There are 94.1% patients with hetu absent; 5.9% with hetu present.

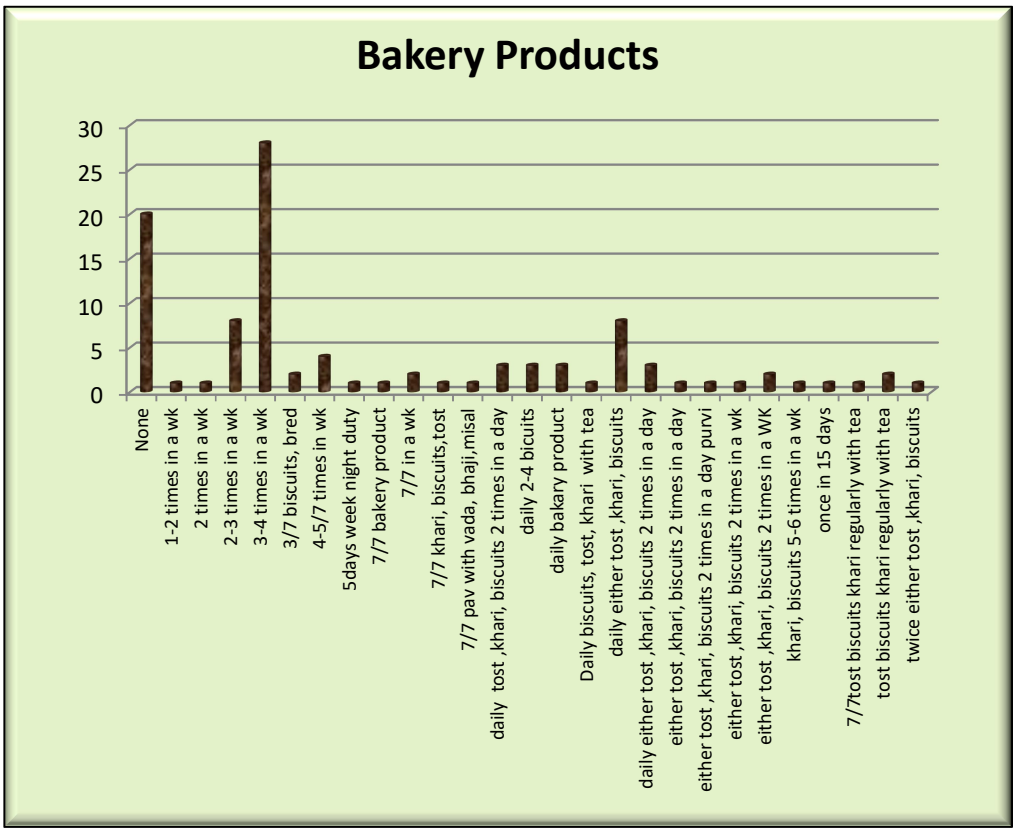
Table30: Frequency distribution of patients according to Bakery Products

The frequency distribution of patients according to Bakery Products is given below along with it's bar graph.

Bakery Products	Frequency	Percent
None	20	19.6
1-2 times in a wk	1	1.0
2 times in a wk	1	1.0
2-3 times in a wk	8	7.8
3-4 times in a wk	28	27.5
3/7 biscuits, bred	2	2.0
4-5/7 times in wk	4	3.9
5days week night duty	1	1.0
7/7 bakery product	1	1.0
7/7 in a wk	2	2.0
7/7 khari, biscuits,tost	1	1.0
7/7 pav with vada, bhaji,misal	1	1.0
daily tost ,khari, biscuits 2 times in a day	3	2.9
daily 2-4 bicuits	3	2.9

daily bakary product	3	2.9
Daily biscuits, tost, khari with tea	1	1.0
daily either tost ,khari, biscuits	8	7.8
daily either tost ,khari, biscuits 2 times in a day	3	2.9
either tost ,khari, biscuits 2 times in a day	1	1.0
either tost ,khari, biscuits 2 times in a day purvi	1	1.0
either tost ,khari, biscuits 2 times in a wk	1	1.0
either tost ,khari, biscuits 2 times in a WK	2	2.0
khari, biscuits 5-6 times in a wk	1	1.0
once in 15 days	1	1.0
7/7tost biscuits khari regularly with tea	1	1.0
tost biscuits khari regularly with tea	2	2.0
twice either tost ,khari, biscuits	1	1.0

Total	102	100.0



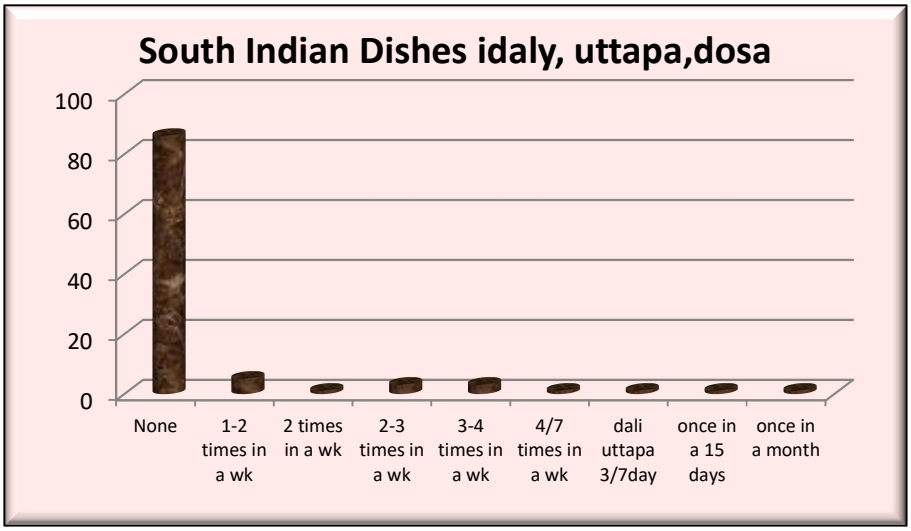
Summary:

There are 19.6% patients with hetu absent; 80.4% with hetu present.

Table31: Frequency distribution of patients according to South Indian Dishes idaly, uttapa,dosa

The frequency distribution of patients according to South Indian Dishes idaly, uttapa,dosa is given below along with it's bar graph.

South Indian Dishes idaly, uttapa,dosa	Frequency	Percent
None	86	84.3
1-2 times in a wk	5	4.9
2 times in a wk	1	1.0
2-3 times in a wk	3	2.9
3-4 times in a wk	3	2.9
4/7 times in a wk	1	1.0
dali uttapa 3/7day	1	1.0
once in a 15 days	1	1.0
once in a month	1	1.0
Total	102	100.0



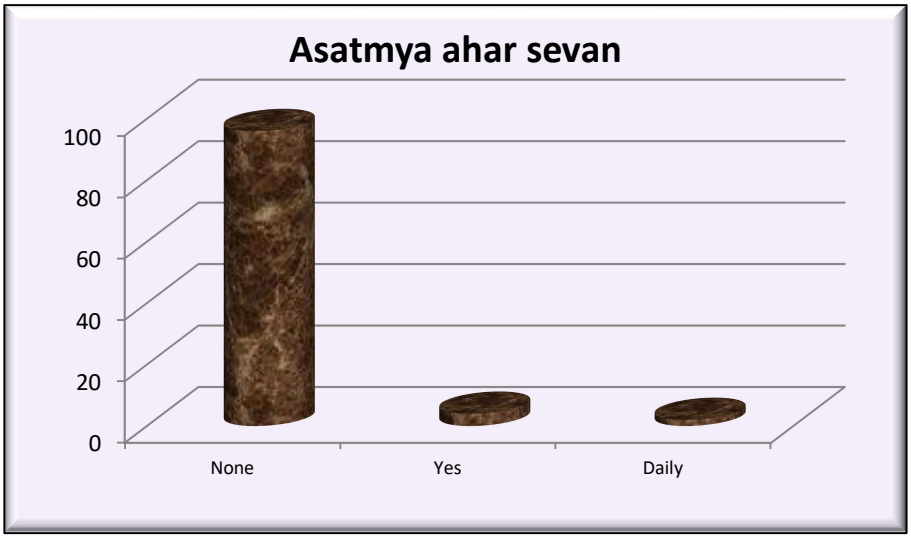
Summary:

There are 84.3% patients with hetu absent; 15.7% with hetu present.

Table32: Frequency distribution of patients according to Asatmya ahar sevan

The frequency distribution of patients according to Asatmya ahar sevan is given below along with it's bar graph.

Asatmya ahar sevan	Frequency	Percent
None	96	94.1
Yes	4	3.9
Daily	2	2.0
Total	102	100.0



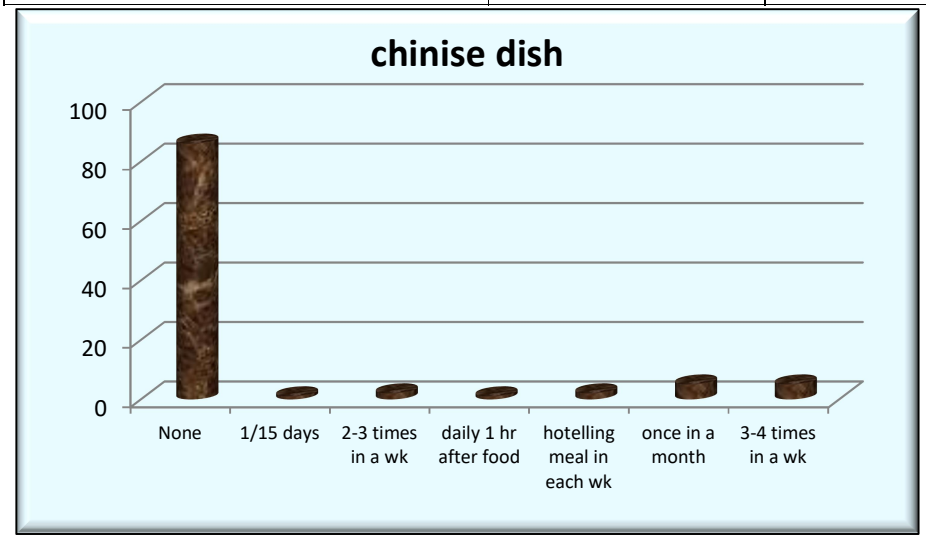
Summary:

There are 94.1% patients with hetu absent; 5.9% with hetu present.

Table33: Frequency distribution of patients according to chinise dish

The frequency distribution of patients according to chinise dish is given below along with it's bar graph.

chinise dish	Frequency	Percent
None	86	84.3
1/15 days	1	1.0
2-3 times in a wk	2	2.0
daily 1 hr after food	1	1.0
hotelling meal in each wk	2	2.0
once in a month	5	4.9
3-4 times in a wk	5	4.9
Total	102	100.0



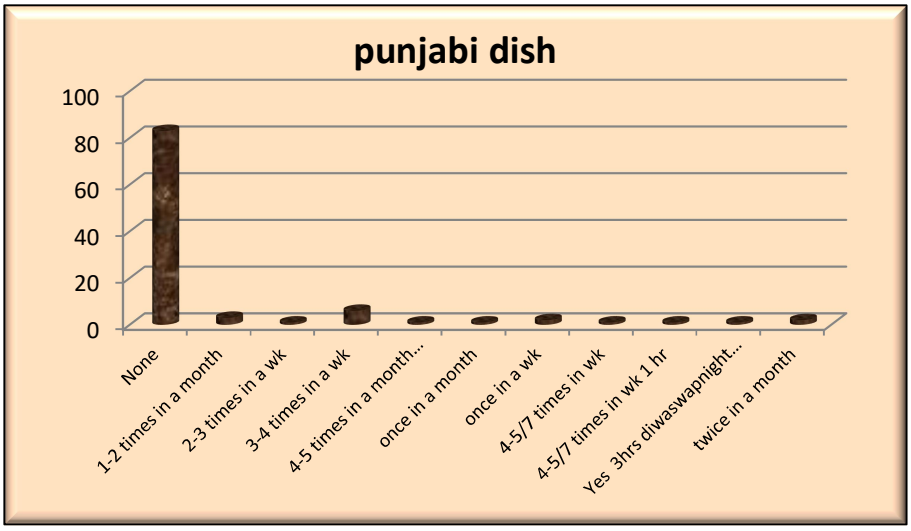
Summary:

There are 84.3% patients with hetu absent; 15.7% with hetu present.

Table34: Frequency distribution of patients according to punjabi dish

The frequency distribution of patients according to punjabi dish is given below along with it's bar graph.

punjabi dish	Frequency	Percent
None	83	81.4
1-2 times in a month	3	2.9
2-3 times in a wk	1	1.0
3-4 times in a wk	6	5.9
4-5 times in a month hotelling	1	1.0
once in a month	1	1.0
once in a wk	2	2.0
4-5/7 times in wk	1	1.0
4-5/7 times in wk 1 hr	1	1.0
Yes 3hrs diwaswapnight duty 15 days amonth	1	1.0
twice in a month	2	2.0
Total	102	100.0



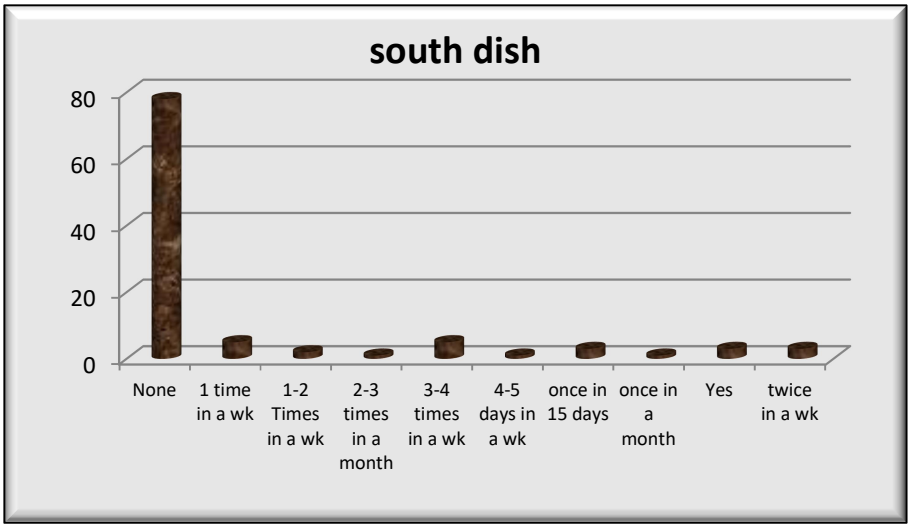
Summary:

There are 81.4% patients with hetu absent; 18.6% with hetu present.

Table35: Frequency distribution of patients according to south dish

The frequency distribution of patients according to south dish is given below along with it's bar graph.

south dish	Frequency	Percent
None	78	76.5
1 time in a wk	5	4.9
1-2 Times in a wk	2	2.0
2-3 times in a month	1	1.0
3-4 times in a wk	5	4.9
4-5 days in a wk	1	1.0
once in 15 days	3	2.9
once in a month	1	1.0
Yes	3	2.9
twice in a wk	3	2.9
Total	102	100.0



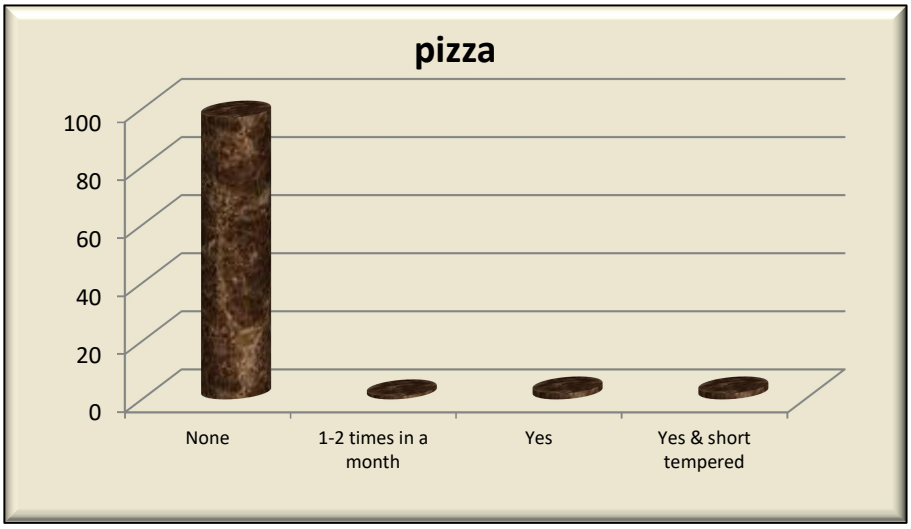
Summary:

There are 76.5% patients with hetu absent; 13.5% with hetu present.

Table36: Frequency distribution of patients according to pizza

The frequency distribution of patients according to pizza is given below along with it's bar graph.

pizza	Frequency	Percent
None	97	95.1
1-2 times in a month	1	1.0
Yes	2	2.0
Yes & short tempered	2	2.0
Total	102	100.0



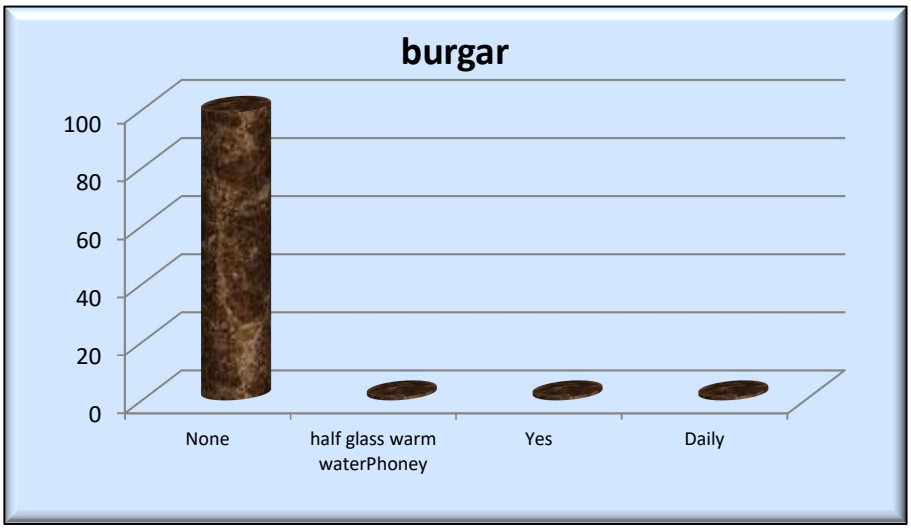
Summary:

There are 95.1% patients with hetu absent; 4.9% with hetu present.

Table37: Frequency distribution of patients according to burgar

The frequency distribution of patients according to burgar is given below along with it's bar graph.

burgar	Frequency	Percent
None	99	97.1
half glass warm water Phoney	1	1.0
Yes	1	1.0
Daily	1	1.0
Total	102	100.0



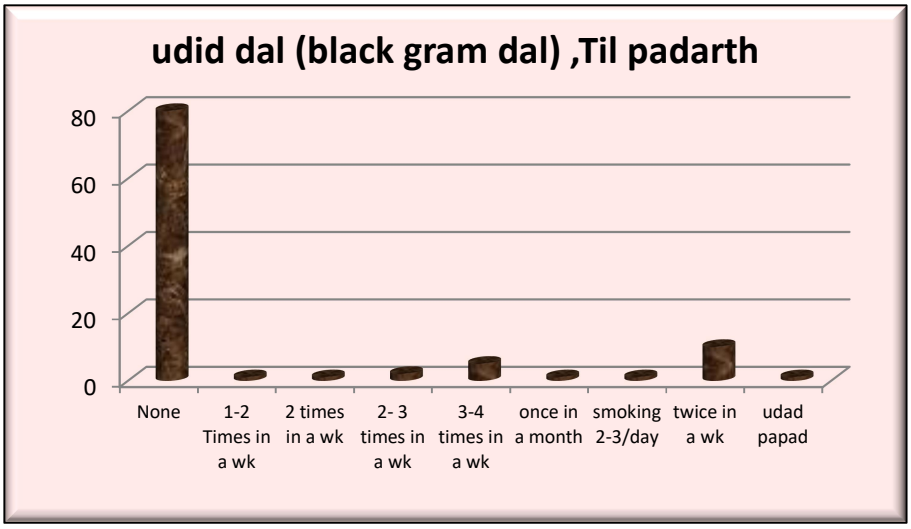
Summary:

There are 76.5% patients with hetu absent; 13.5% with hetu present.

Table38: Frequency distribution of patients according to udid dal (black gram dal) ,Til padarth

The frequency distribution of patients according to udid dal (black gram dal) ,Til padarth is given below along with it's bar graph.

udid dal (black gram dal) ,Til padarth	Frequency	Percent
None	80	78.4
1-2 Times in a wk	1	1.0
2 times in a wk	1	1.0
2- 3 times in a wk	2	2.0
3-4 times in a wk	5	4.9
once in a month	1	1.0
smoking 2-3/day	1	1.0
twice in a wk	10	9.8
udad papad	1	1.0
Total	102	100.0



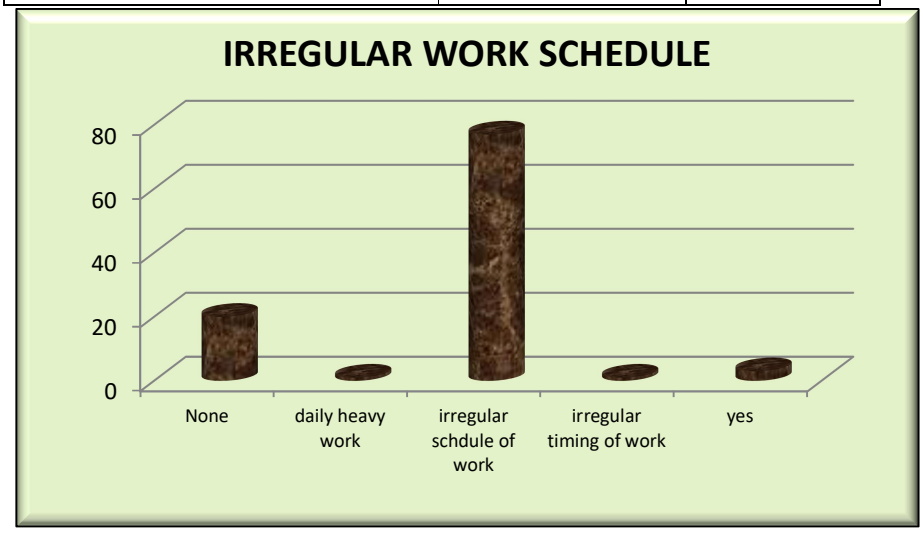
Summary:

There are 78.4% patients with hetu absent; 21.6% with hetu present.

Table39: Frequency distribution of patients according to IRREGULAR WORK SCHEDULE

The frequency distribution of patients according to IRREGULAR WORK SCHEDULE is given below along with it's bar graph.

IRREGULAR WORK SCHEDULE	Frequency	Percent
None	20	19.6
daily heavy work	1	1.0
irregular schdule of work	77	75.5
irregular timing of work	1	1.0
yes	3	2.9
Total	102	100.0



Summary: There are 19.6% patients with hetu absent; 80.4% with hetu present.

Table40: Frequency distribution of patients according to IRREGULAR FOOD TAKING SCHEDULE

The frequency distribution of patients according to IRREGULAR FOOD TAKIMG SCHEDULE is given below along with it's bar graph.

IRREGULAR FOOD TAKIMG SCHEDULE	Frequency	Percent
None	22	21.6
irregular timing of food	77	75.5
yes	3	2.9
Total	102	100.0

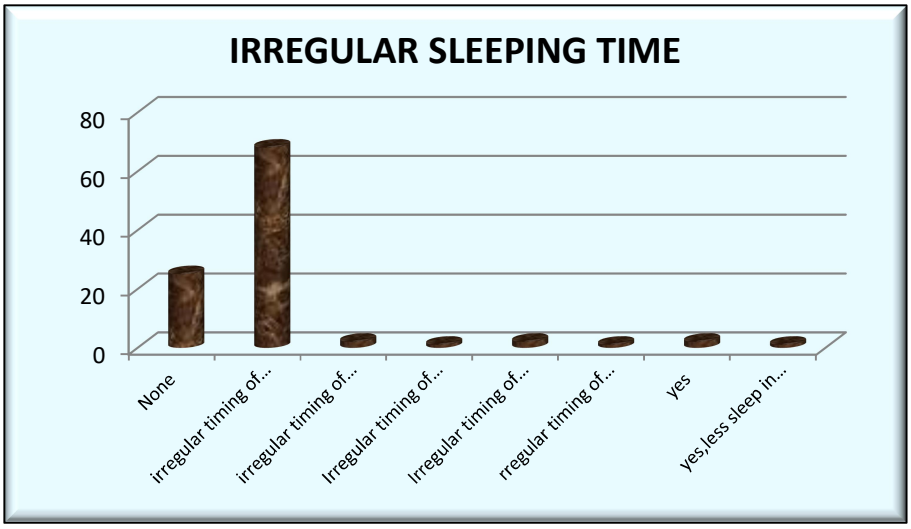
Summary:

There are 21.6% patients with hetu absent; 78.4% with hetu present.

Table41: Frequency distribution of patients according to IRREGULAR SLEEPING TIME

The frequency distribution of patients according to IRREGULAR SLEEPING TIME is given below along with it's bar graph.

IRREGULAR SLEEPING TIME	Frequency	Percent
None	25	24.5
irregular timing of sleep	68	66.7
irregular timing of food sleep	2	2.0
Irregular timing of sleep,due to mental stress husbands dea	1	1.0
Irregular timing of sleep,night duties in rotation	2	2.0
Irregular timing of food sleep	1	1.0
yes	2	2.0
yes,less sleep in exam time	1	1.0
Total	102	100.0



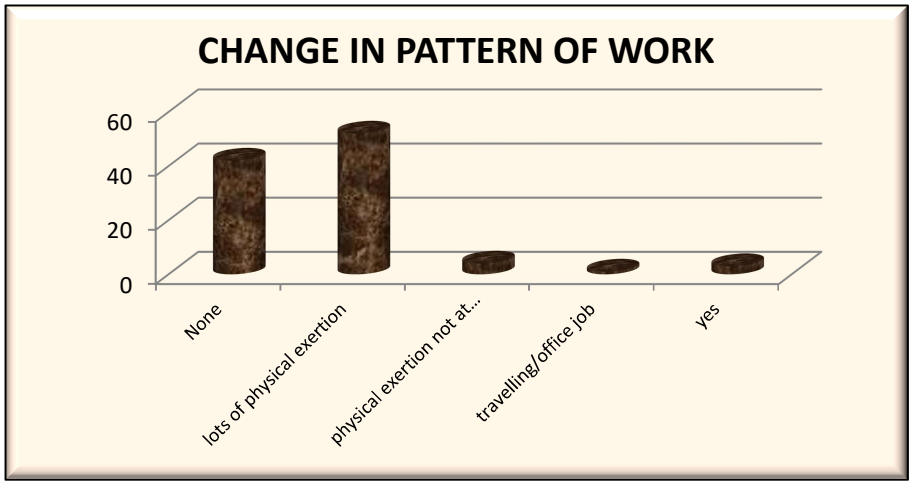
Summary:

There are 24.5% patients with hetu absent; 75.5% with hetu present.

Table42: Frequency distribution of patients according to CHANGE IN PATTERN OF WORK

The frequency distribution of patients according to CHANGE IN PATTERN OF WORK is given below along with it's bar graph.

CHANGE IN PATTERN OF WORK	Frequency	Percent
None	42	41.2
lots of physical exertion	52	51.0
physical exertion not at all, mental lot of due to health	4	3.9
travelling/office job	1	1.0
yes	3	2.9
Total	102	100.0



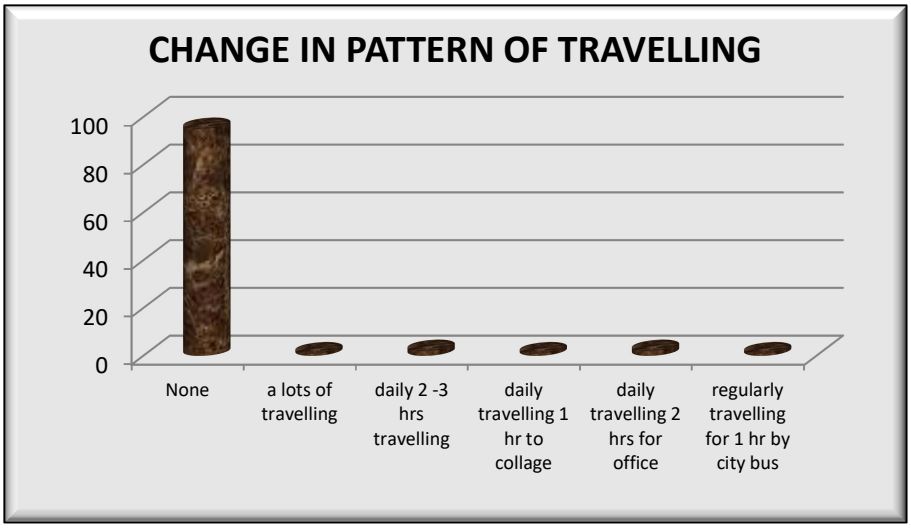
Summary:

There are 41.2% patients with hetu absent; 58.8% with hetu present.

Table43: Frequency distribution of patients according to CHANGE IN PATTERN OF TRAVELLING

The frequency distribution of patients according to CHANGE IN PATTERN OF TRAVELLING is given below along with it's bar graph.

CHANGE IN PATTERN OF TRAVELLING	Frequency	Percent
None	95	93.1
a lots of travelling	1	1.0
daily 2 -3 hrs travelling	2	2.0
daily travelling 1 hr to collage	1	1.0
daily travelling 2 hrs for office	2	2.0
regularly travelling for 1 hr by city bus	1	1.0
Total	102	100.0



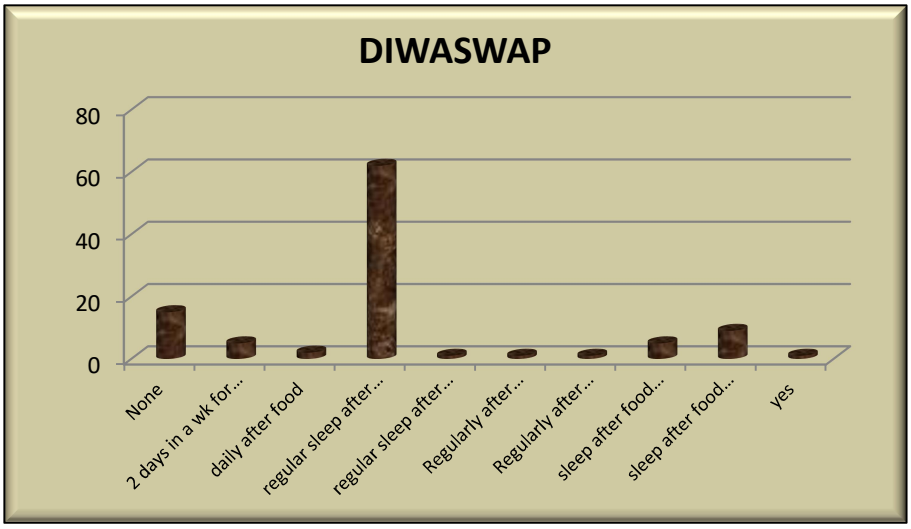
Summary:

There are 93.1% patients with hetu absent; 6.9% with hetu present.

Table44: Frequency distribution of patients according to DIWASWAP

The frequency distribution of patients according to DIWASWAP is given below along with it's bar graph.

DIWASWAP	Frequency	Percent
None	15	14.7
2 days in a wk for 1 and 1/2 hr per day	5	4.9
daily after food	2	2.0
regular sleep after food for 1 hr	62	60.8
regular sleep after food for 1-1/2 hr	1	1.0
Regularly after food 20 min sleep	1	1.0
Regularly after food 90 min sleep	1	1.0
sleep after food for 1 hr on weekend	5	4.9
sleep after food for 1 hr twice in a wk	9	8.8
yes	1	1.0
Total	102	100.0



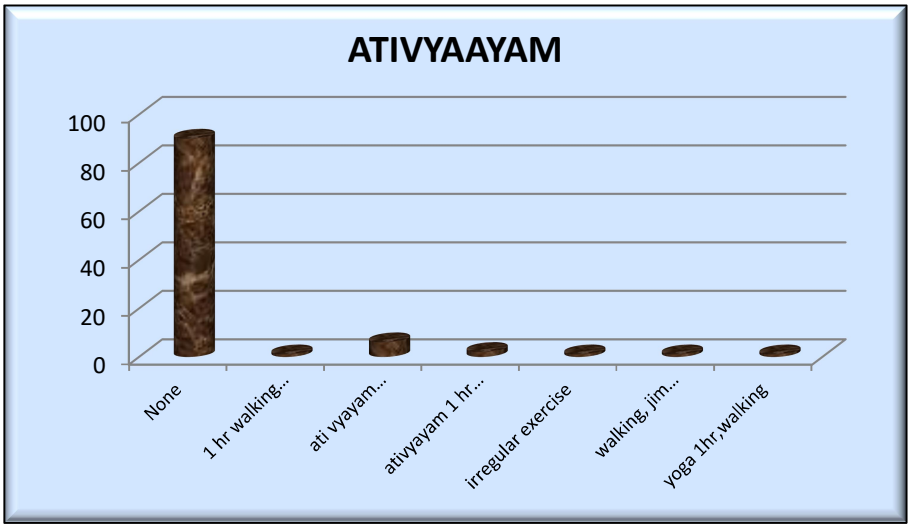
Summary:

There are 14.7% patients with hetu absent; 85.3% with hetu present.

Table45: Frequency distribution of patients according to ATIVYAAYAM

The frequency distribution of patients according to ATIVYAAYAM is given below along with it's bar graph.

ATIVYAAYAM	Frequency	Percent
None	90	88.2
1 hr walking compulsary	1	1.0
ati vyayam ,chalane, dhap lagane,tahan lagane	6	5.9
ativyayam 1 hr walking	2	2.0
irregular exercise	1	1.0
walking, jim regularly for 1 hr,feeling tired	1	1.0
yoga 1hr,walking	1	1.0
Total	102	100.0

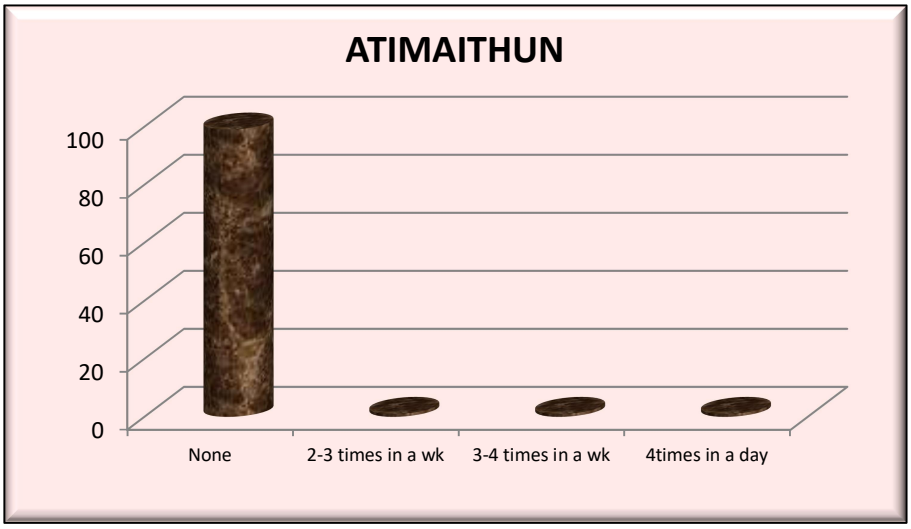


Summary:There are 88.2% patients with hetu absent; 11.8% with hetu present.

Table46: Frequency distribution of patients according to ATIMAITHUN

The frequency distribution of patients according to ATIMAITHUN is given below along with it's bar graph.

ATIMAITHUN	Frequency	Percent
None	99	97.1
2-3 times in a wk	1	1.0
3-4 times in a wk	1	1.0
4times in a day	1	1.0
Total	102	100.0



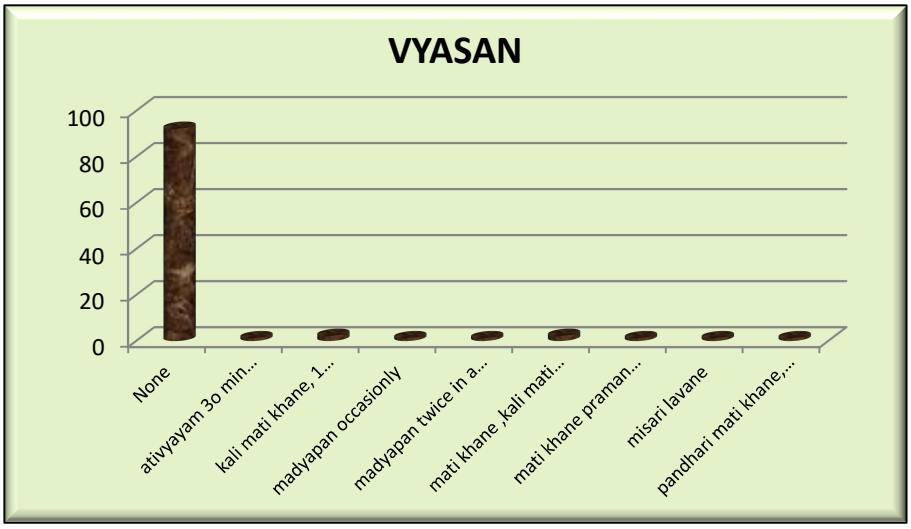
Summary:

There are 97.1% patients with hetu absent; 2.9% with hetu present.

Table47: Frequency distribution of patients according to VYASAN

The frequency distribution of patients according to VYASAN is given below along with it's bar graph.

VYASAN	Frequency	Percent
None	92	90.2
ativyayam 3o min walking,dhap lagane	1	1.0
kali mati khane, 1 packet in 1 wk since childhood	2	2.0
madyapan occasionly	1	1.0
madyapan twice in a wk small in quantity	1	1.0
mati khane ,kali mati khane	2	2.0
mati khane praman kami	1	1.0
misari lavane	1	1.0
pandhari mati khane, 1 packet in a wk	1	1.0
Total	102	100.0



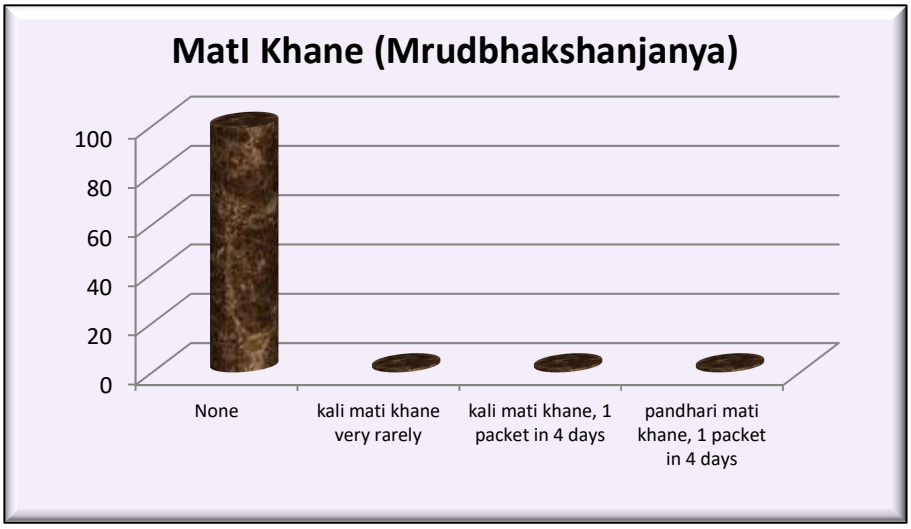
Summary:

There are 90.2% patients with hetu absent; 9.8% with hetu present.

Table48: Frequency distribution of patients according to MatI Khane (Mrudbhakshanjanya)

The frequency distribution of patients according to MatI Khane (Mrudbhakshanjanya) is given below along with it's bar graph.

MatI Khane (Mrudbhakshanjanya)	Frequency	Percent
None	99	97.1
kali mati khane very rarely	1	1.0
kali mati khane, 1 packet in 4 days	1	1.0
pandhari mati khane, 1 packet in 4 days	1	1.0
Total	102	100.0

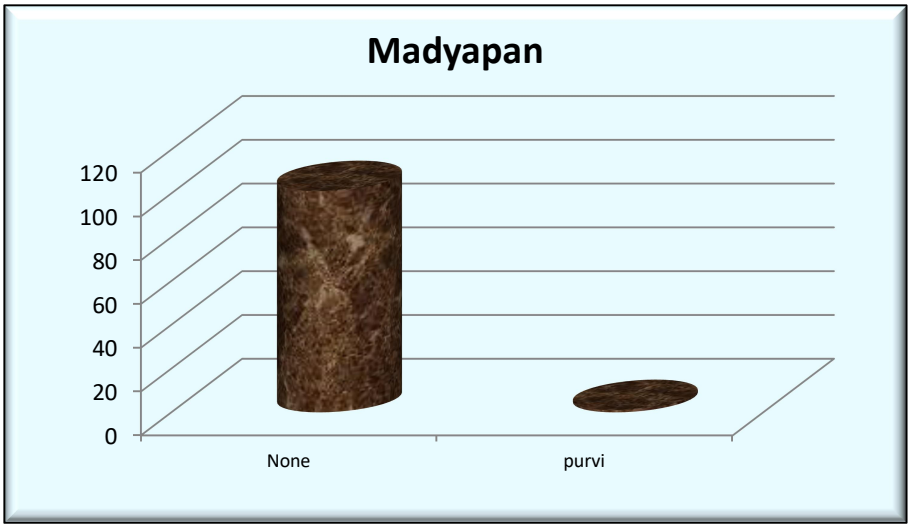


Summary:There are 97.1% patients with hetu absent; 2.9% with hetu present.

Table49: Frequency distribution of patients according to Madyapan

The frequency distribution of patients according to Madyapan is given below along with it's bar graph.

Madyapan	Frequency	Percent
None	101	99.0
purvi	1	1.0
Total	102	100.0



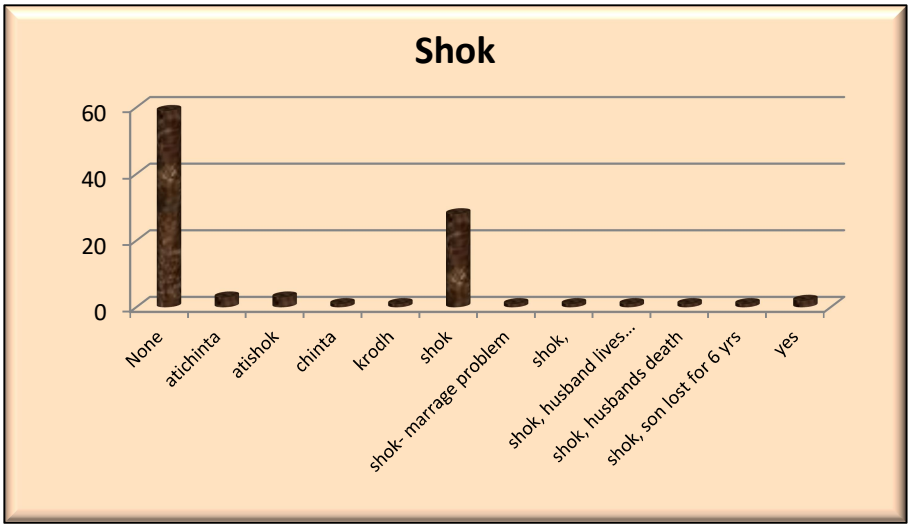
Summary:

There are 99% patients with hetu absent; 1% with hetu present.

Table50: Frequency distribution of patients according to shok

The frequency distribution of patients according to shok is given below along with it's bar graph.

shok	Frequency	Percent
None	59	57.8
atichinta	3	2.9
atishok	3	2.9
chinta	1	1.0
krodh	1	1.0
shok	28	27.5
shok- marrage problem	1	1.0
shok,	1	1.0
shok, husband lives separate from her	1	1.0
shok, husbands death	1	1.0
shok, son lost for 6 yrs	1	1.0
yes	2	2.0
Total	102	100.0

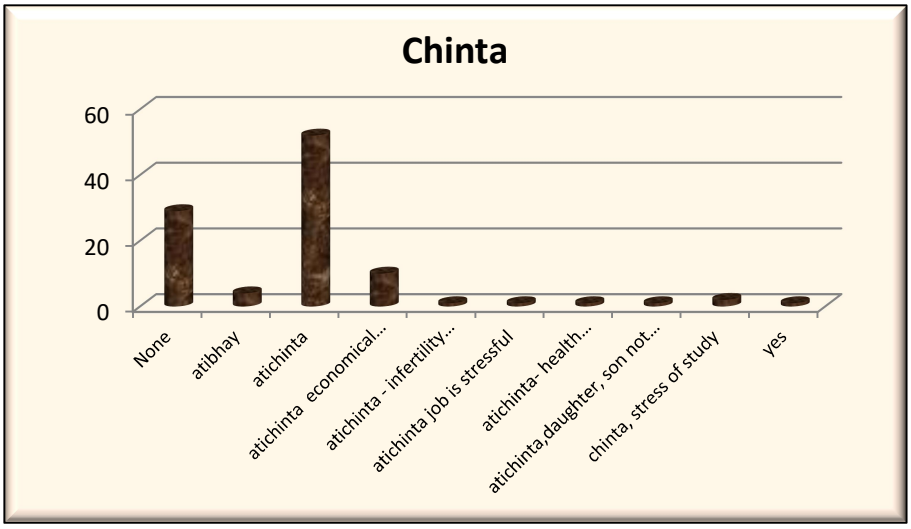


Summary:There are 57.8% patients with hetu absent; 2.2% with hetu present.

Table51: Frequency distribution of patients according to chinta

The frequency distribution of patients according to chinta is given below along with it's bar graph.

chinta	Frequency	Percent
None	29	28.4
atibhay	4	3.9
atichinta	52	51.0
atichinta economical insecurity	10	9.8
atichinta - infertility treatment	1	1.0
atichinta job is stressful	1	1.0
atichinta- health problem,daughter cannot speech	1	1.0
atichinta,daughter, son not get married as above 40	1	1.0
chinta, stress of study	2	2.0
yes	1	1.0
Total	102	100.0



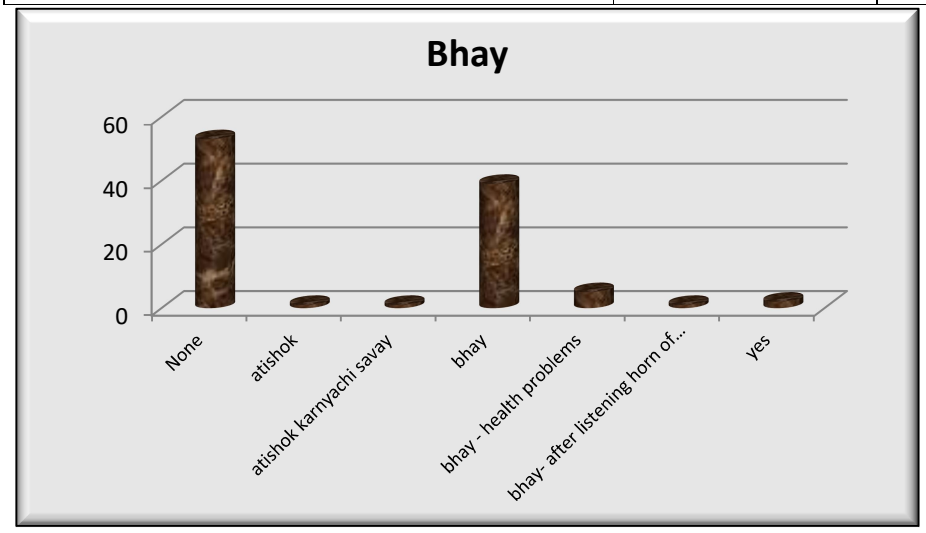
Summary:

There are 28.4% patients with hetu absent; 71.6% with hetu present.

Table52: Frequency distribution of patients according to bhay

The frequency distribution of patients according to bhay is given below along with it's bar graph.

bhay	Frequency	Percent
None	53	52.0
atishok	1	1.0
atishok karnyachi savay	1	1.0
bhay	39	38.2
bhay - health problems	5	4.9
bhay- after listening horn of ambulance	1	1.0
yes	2	2.0
Total	102	100.0



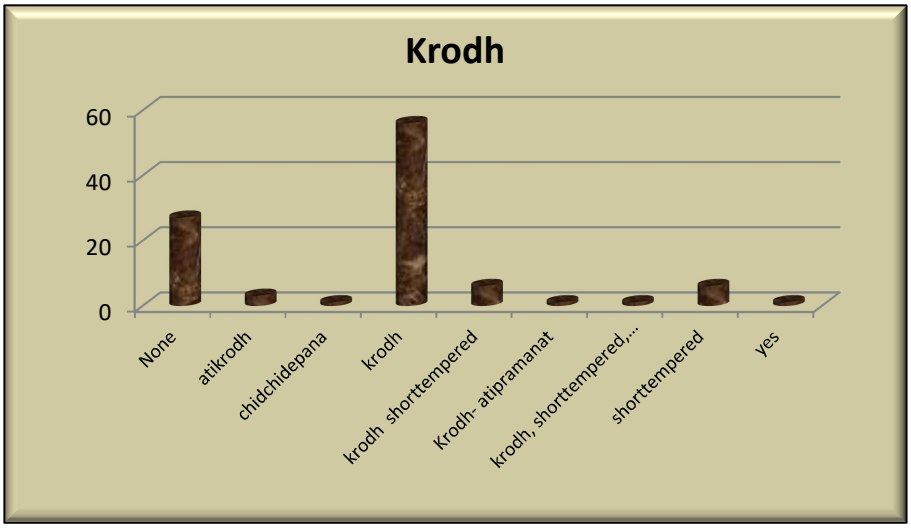
Summary:

There are 52% patients with hetu absent; 48% with hetu present.

Table53: Frequency distribution of patients according to krodh

The frequency distribution of patients according to krodh is given below along with it's bar graph.

krodh	Frequency	Percent
None	27	26.5
atikrodh	3	2.9
chidchidepana	1	1.0
krodh	56	54.9
krodh shorttempered	6	5.9
Krodh- atipramanat	1	1.0
krodh, shorttempered, always fight with husband	1	1.0
shorttempered	6	5.9
yes	1	1.0
Total	102	100.0



Summary:

There are 26.5% patients with hetu absent; 73.5% with hetu present.

Table54: Frequency distribution of patients according to Ushna gunatmak aahar

The frequency distribution of patients according to Ushna gunatmak aahar is given below along with it's bar graph.

Ushna gunatmak aahar	Frequency	Percent
None	101	99.0
krodh	1	1.0
Total	102	100.0

Summary:

There are 99% patients with hetu absent; 1% with hetu present.

Table55: Frequency distribution of patients according to green chilli thecha

The frequency distribution of patients according to green chilli thecha is given below along with it's bar graph.

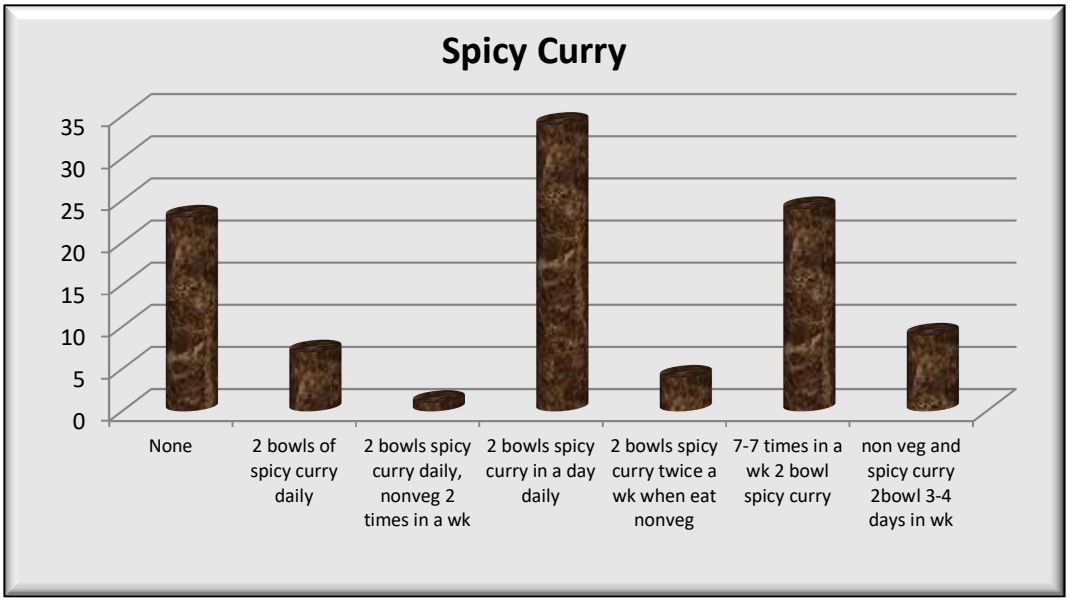
green chilli thecha	Frequency	Percent
None	99	97.1
Daily green chilli chutany	3	2.9
Total	102	100.0

Summary: There are 97.1% patients with hetu absent; 2.9% with hetu present.

Table56: Frequency distribution of patients according to spicy curry

The frequency distribution of patients according to spicy curry is given below along with it's bar graph.

spicy curry	Frequency	Percent
None	23	22.5
2 bowls of spicy curry daily	7	6.9
2 bowls spicy curry daily, nonveg 2 times in a wk	1	1.0
2 bowls spicy curry in a day daily	34	33.3
2 bowls spicy curry twice a wk when eat nonveg	4	3.9
7-7 times in a wk 2 bowl spicy curry	24	23.5
non veg and spicy curry 2bowl 3-4 days in wk	9	8.8
Total	102	100.0



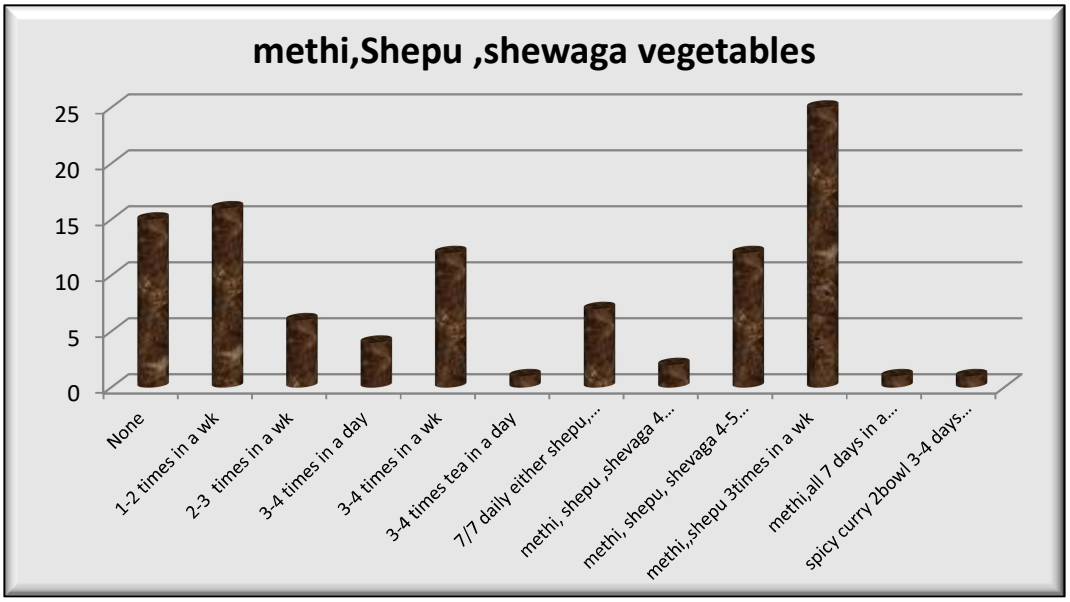
Summary:

There are 22.5% patients with hetu absent; 87.5% with hetu present.

Table57: Frequency distribution of patients according to methi,Shepu ,shewaga vegetables

The frequency distribution of patients according to methi,Shepu ,shewaga vegetables is given below along with it's bar graph.

methi,Shepu ,shewaga vegetables	Frequency	Percent
None	15	14.7
1-2 times in a wk	16	15.7
2-3 times in a wk	6	5.9
3-4 times in a day	4	3.9
3-4 times in a wk	12	11.8
3-4 times tea in a day	1	1.0
7/7 daily either shepu, methi ,shevaga	7	6.9
methi, shepu ,shevaga 4 times in awk	2	2.0
methi, shepu, shevaga 4-5 days in a wk	12	11.8
methi,,shepu 3times in a wk	25	24.5
methi,all 7 days in a wk,shepu 3times in a wk	1	1.0
spicy curry 2bowl 3-4 days in wk	1	1.0
Total	102	100.0



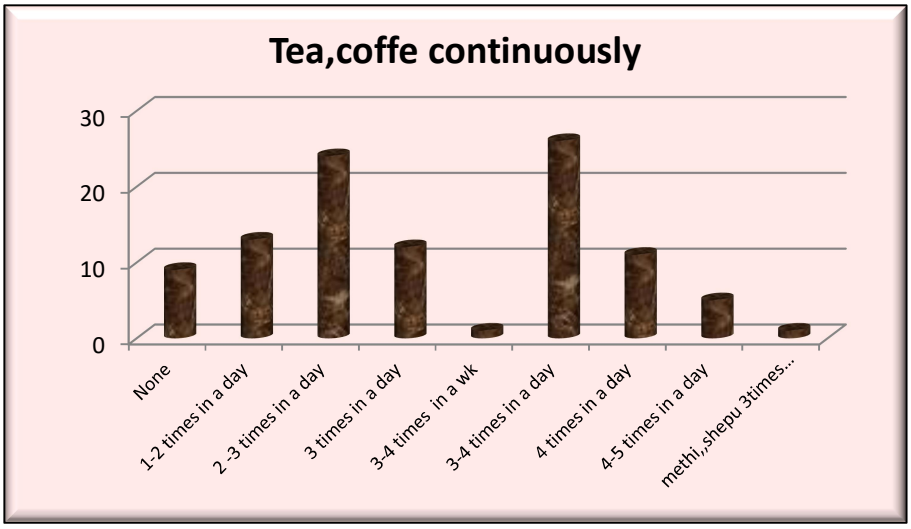
Summary:

There are 14.7% patients with hetu absent; 85.3% with hetu present.

Table58: Frequency distribution of patients according to Tea,coffe continuously

The frequency distribution of patients according to Tea,coffe continuously is given below along with it's bar graph.

Tea,coffe continuously	Frequency	Percent
None	9	8.8
1-2 times in a day	13	12.7
2 -3 times in a day	24	23.5
3 times in a day	12	11.8
3-4 times in a wk	1	1.0
3-4 times in a day	26	25.5
4 times in a day	11	10.8
4-5 times in a day	5	4.9
methi,,shepu 3times in a wk	1	1.0
Total	102	100.0



Summary:

There are 8.8% patients with hetu absent; 91.2% with hetu present.

Table59: proportion of patients according to hetu

The proportion of patients according to hetu is given below along with it's bar graph.

Sr. No.	Hetu	Proportion of patients with presence of Hetu
1	Deshvirudha	0.039
2	kalavirudha	0.01
3	Agnivirudha	0.735
4	Matravirudha	0.107
5	Satmavirudha	0.755
6	Doshavirudha	0.127
7	Sanskarvirudha	Not Applicable
8	Veeryavirudha	0.01
9	Koshtavirudha	
10	Avasthavirudha	0.01
11	Kramvirudha	0.833
12	Pariharvirudha	0.01
13	Upacaharvirudha	Not Applicable

14	Pakvirudha	Not Applicable
15	Sanyogvirudha	0.667
16	Hrudayvirudha	0.01
17	Sampadvirudha	0.196
18	Vidhivirudha	0.892
19	Papad	0.833
20	pickle	0.863
21	salty groundnut	0.284
22	Green chilli pickle	0.618
23	salted packed food eg chips, kurkure	0.186
24	Vidahiannapan(fermented food)	Not Applicable
25	pickle	0.373
26	Tamarind(chinch)	0.265
27	tomato	0.755
28	curd	0.833
29	lemon	0.225
30	Bakery Products	0.804
31	South Indian Dishes idaly, uttapa,dosa	0.157
32	chinise dish	0.157

33	punjabi dish	0.186
34	south dish	0.135
35	pizza	0.049
36	burgar	0.135
37	udid dal (black gram dal) ,Til padarth	0.216
38	IRREGULAR WORK SCHEDULE	0.804
39	IRREGULAR FOOD TAKIMG SCHEDULE	0.784
40	IRREGULAR SLEEPING TIME	0.755
41	CHANGE IN PATTERN OF WORK	0.588
42	CHANGE IN PATTERN OF TRAVELLING	0.069
43	DIWASWAP	0.853
44	ATIVYAAYAM	0.118
45	ATIMAITHUN	0.029
46	MatI Khane (Mrudbhakshanjanya)	0.029
47	Madyapan	0.01
48	shok	0.022
49	chinta	0.716
50	bhay	0.48

51	krodh	0.735
52	green chilli thecha	0.029
53	spicy curry	0.875
54	methi,Shepu ,shewaga vegetables	0.853
55	Tea,coffe, continuously	0.912

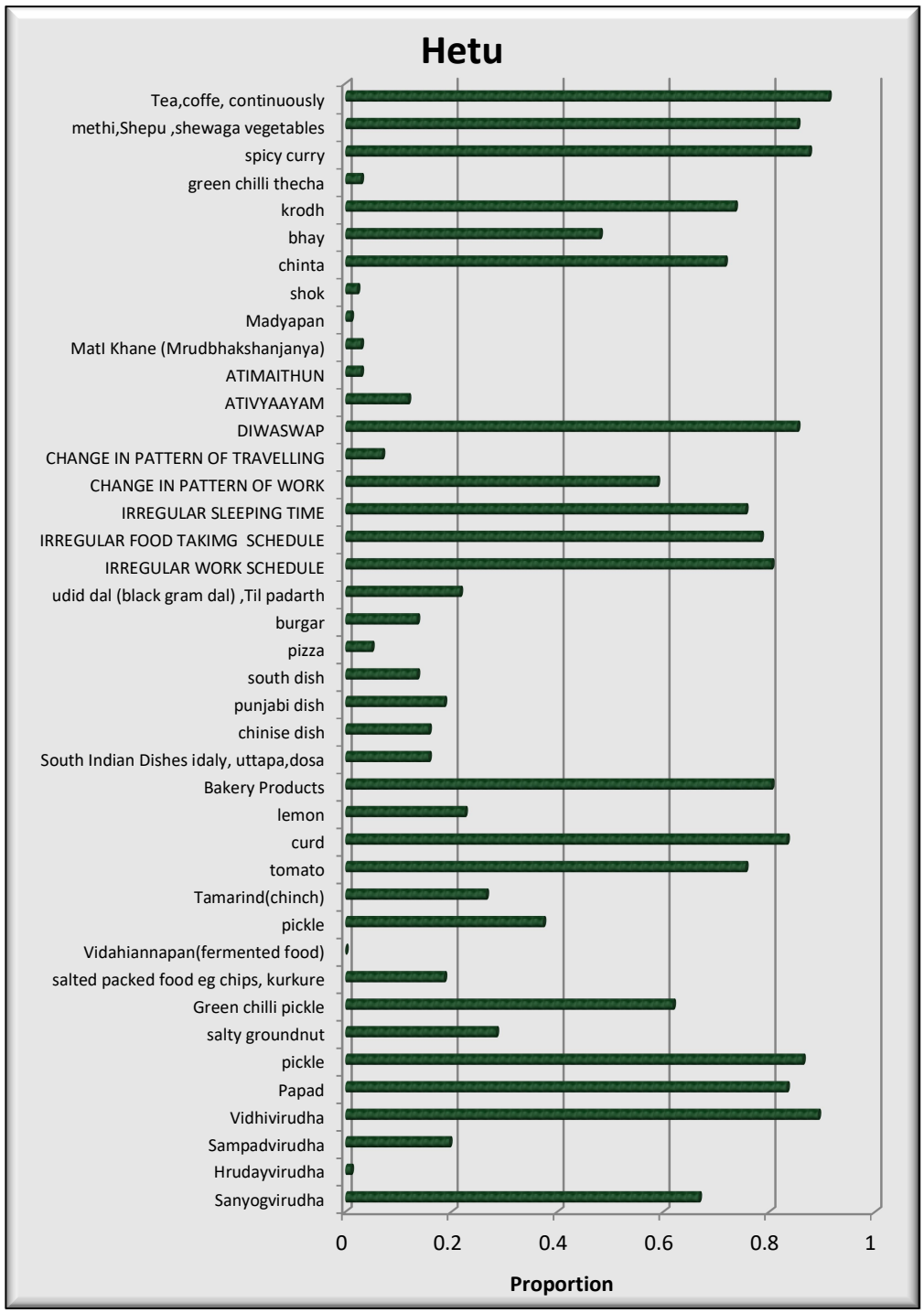

Hetu
Tea,coffe, continuously
methi,Shepu ,shewaga vegetables
spicy curry
green chilli thecha
krodh
bhay
chinta
shok
Madyapan
MatI Khane (Mrudbhakshanjanya)
ATIMAITHUN
ATIVYAAYAM
DIWASWAP
CHANGE IN PATTERN OF TRAVELLING
CHANGE IN PATTERN OF WORK
IRREGULAR SLEEPING TIME
IRREGULAR FOOD TAKIMG SCHEDULE
IRREGULAR WORK SCHEDULE
udid dal (black gram dal) ,Til padarth
burgar
pizza
south dish
punjabi dish
chinise dish
South Indian Dishes idaly, uttapa,dosa
Bakery Products
lemon
curd
tomato
Tamarind(chinch)
pickle
Vidahiannapan(fermented food)
salted packed food eg chips, kurkure
Green chilli pickle
salty groundnut
pickle
Papad
Vidhivirudha
Sampadvirudha
Hrudayvirudha
Sanyogvirudha
0
0.2
0.4
0.6
0.8
1
Proportion

Table60: proportion of patients according to hetu Viruddhaahar

The proportion of patients according to hetu Viruddhaahar is given below along with it's bar graph.

Viruddhaahar		
1	Deshvirudha	0.039
2	kalavirudha	0.01
3	Agnivirudha	0.735
4	Matravirudha	0.107
5	Satmavirudha	0.755
6	Doshavirudha	0.127
7	Veeryavirudha	0.01
8	Avasthavirudha	0.01
9	Kramvirudha	0.833
10	Pariharvirudha	0.01
11	Sanyogvirudha	0.667
12	Hrudayvirudha	0.01
13	Sampadvirudha	0.196
14	Vidhivirudha	0.892

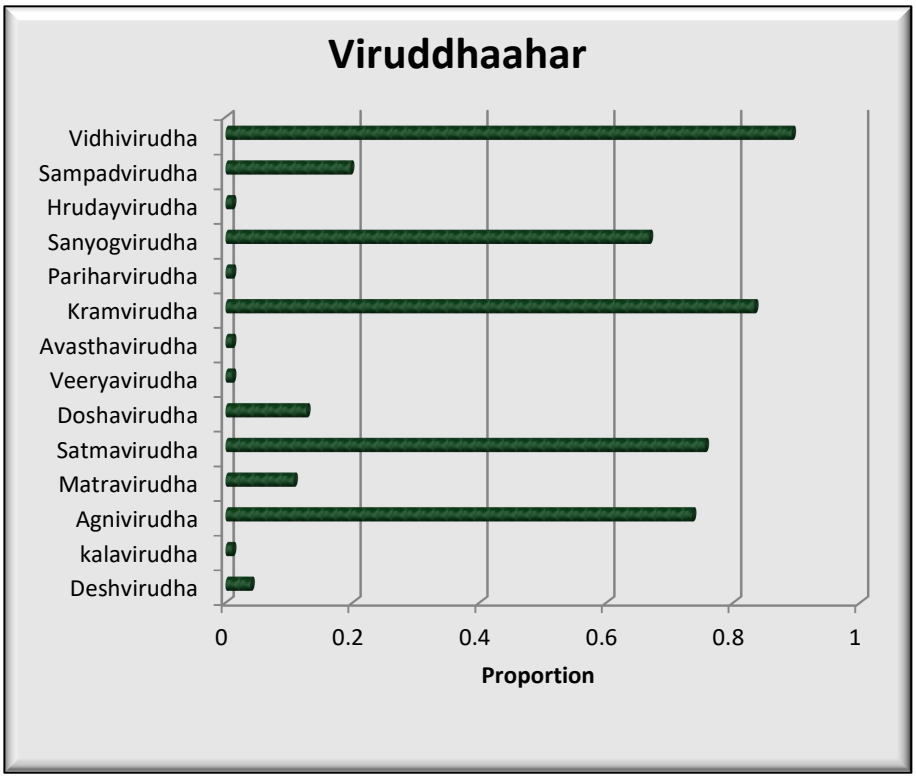

Viruddhaahar
Vidhivirudha
Sampadvirudha
Hrudayvirudha
Sanyogvirudha
Pariharvirudha
Kramvirudha
Avasthavirudha
Veeryavirudha
Doshavirudha
Satmavirudha
Matravirudha
Agnivirudha
kalavirudha
Deshvirudha
0
0.2
0.4
0.6
0.8
1
Proportion

Table61: proportion of patients according to hetu ksharannpan

The proportion of patients according to hetu ksharannpan is given below along with it's bar graph.

ksharannpan		
1	Papad	0.833
2	pickle	0.863
3	salty groundnut	0.284
4	Green chilli pickle	0.618
5	salted packed food eg chips, kurkure	0.186

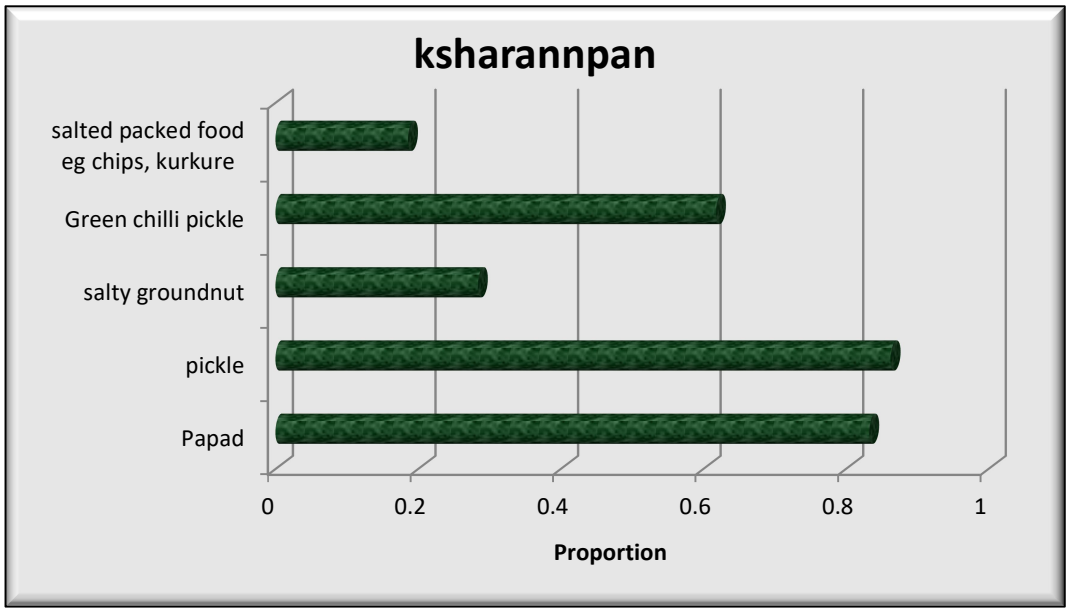


Table62: proportion of patients according to hetu Amla ras sevanadhikya

The proportion of patients according to hetu Amla ras sevanadhikya is given below along with it's bar graph.

Amla ras sevanadhikya		
1	pickle	0.373
2	Tamarind(chinch)	0.265
3	tomato	0.755
4	curd	0.833
5	lemon	0.225

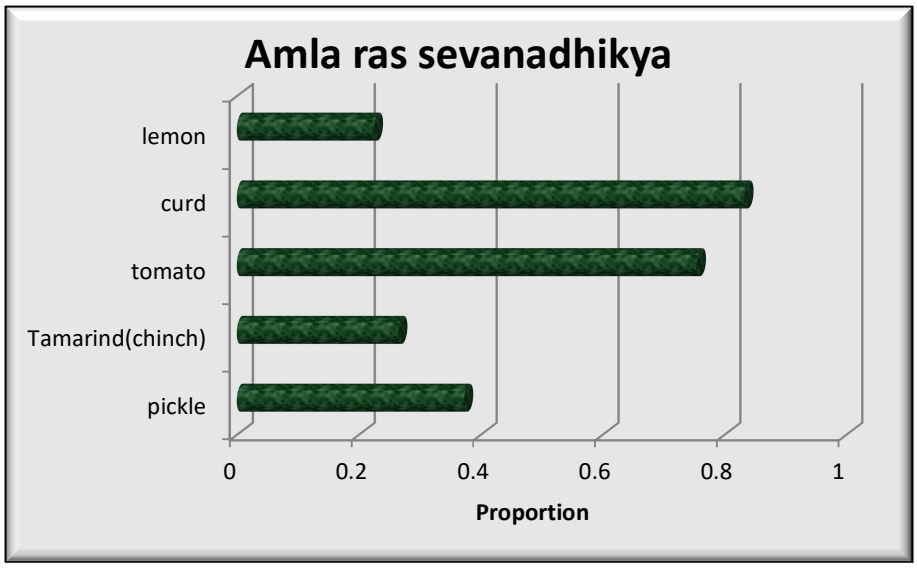


Table63: proportion of patients according to hetu Fermented food

The proportion of patients according to hetu Fermented food is given below along with it's bar graph.

Fermented food		
1	Bakery Products	0.804
2	South Indian Dishes idaly, uttapa,dosa	0.157

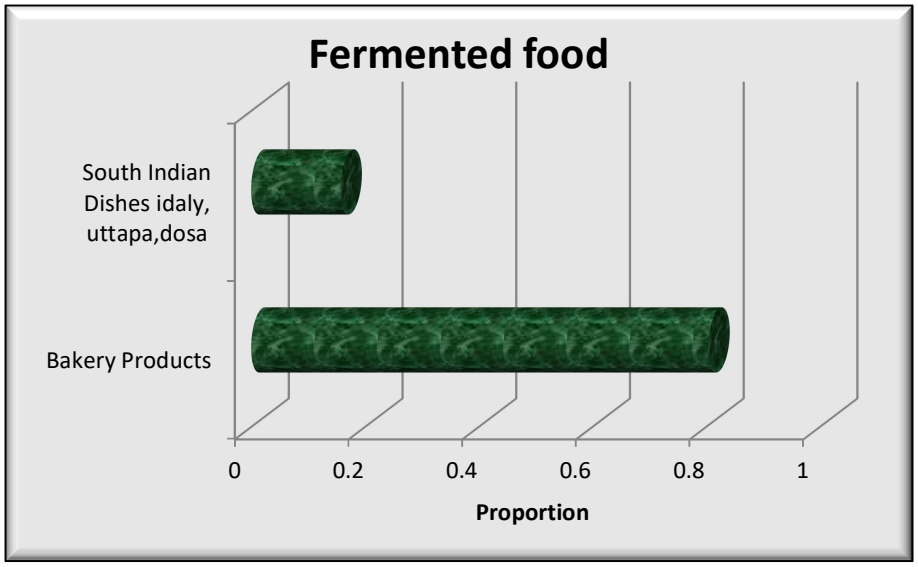


Table64: proportion of patients according to hetu Asatmya ahar sevan

The proportion of patients according to hetu Asatmya ahar sevan is given below along with it's bar graph.

Asatmya ahar sevan		
1	chinise dish	0.157
2	punjabi dish	0.186
3	south dish	0.135
4	pizza	0.049
5	burgar	0.135
6	udid dal (black gram dal) ,Til padarth	0.216

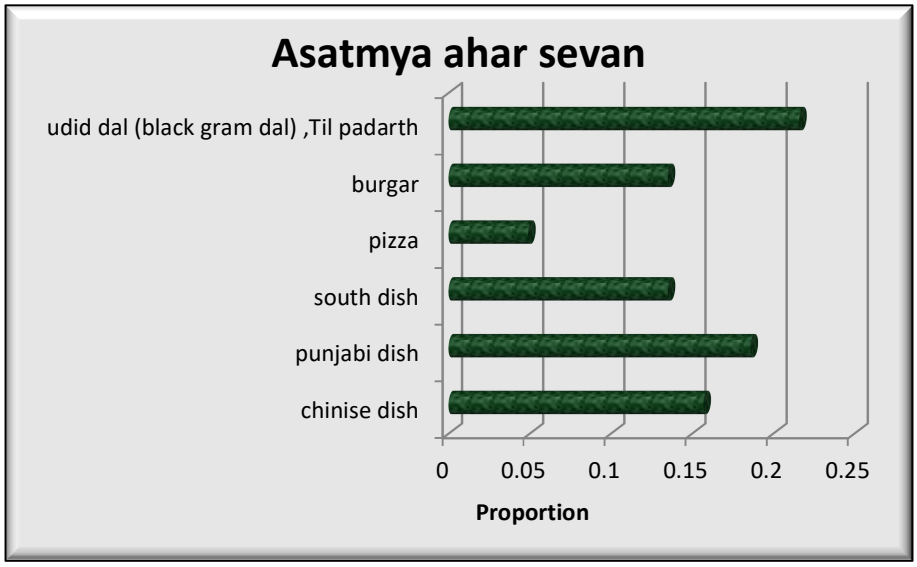


Table65: proportion of patients according to hetu Viharjanya hetu

The proportion of patients according to hetu **Viharjanya hetu** is given below along with it's bar graph.

Viharjanya hetu		
1	IRREGULAR WORK SCHEDULE	0.804
2	IRREGULAR FOOD TAKIMG SCHEDULE	0.784
3	IRREGULAR SLEEPING TIME	0.755
4	CHANGE IN PATTERN OF WORK	0.588
5	CHANGE IN PATTERN OF TRAVELLING	0.069
6	DIWASWAP	0.853
7	ATIVYAAYAM	0.118
8	ATIMAITHUN	0.029

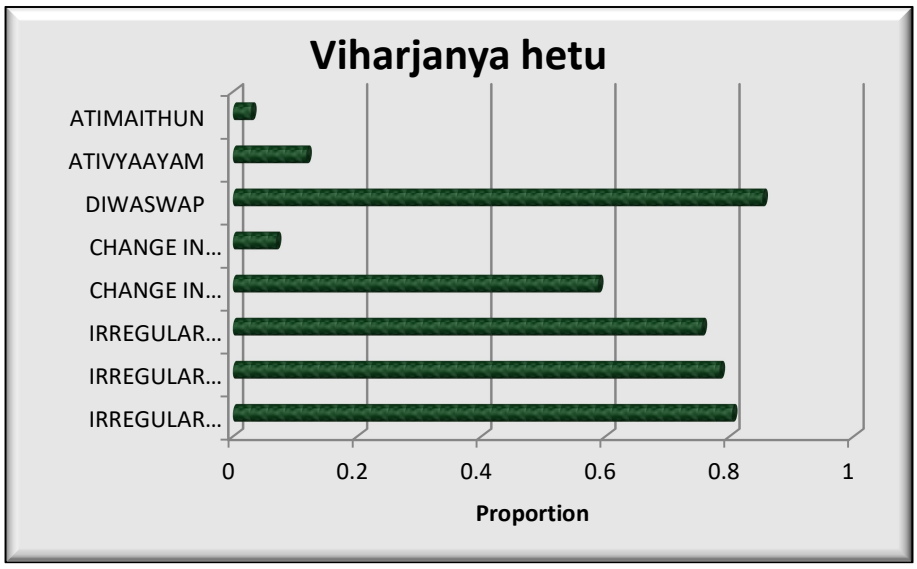

Viharjanya hetu
ATIMAITHUN
ATIVYAAYAM
DIWASWAP
CHANGE IN...
CHANGE IN...
IRREGULAR...
IRREGULAR...
IRREGULAR...
0
0.2
0.4
0.6
0.8
1
Proportion

Table66: proportion of patients according to hetu VYASAN

The proportion of patients according to hetu **VYASAN** is given below along with it's bar graph.

VYASAN		
1	MatI Khane (Mrudbhakshanjanya)	0.029
2	Madyapan	0.01

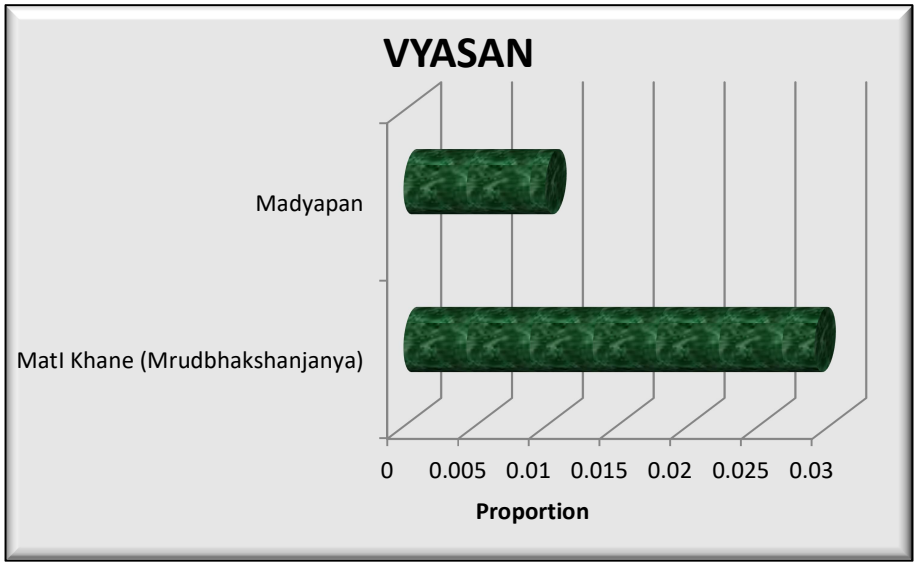


Table67: proportion of patients according to hetu Viharjanya hetu

The proportion of patients according to hetu **Viharjanya hetu** is given below along with it's bar graph.

Mansik Hetu		
1	shok	0.022
2	chinta	0.716
3	bhay	0.48
4	krodh	0.735

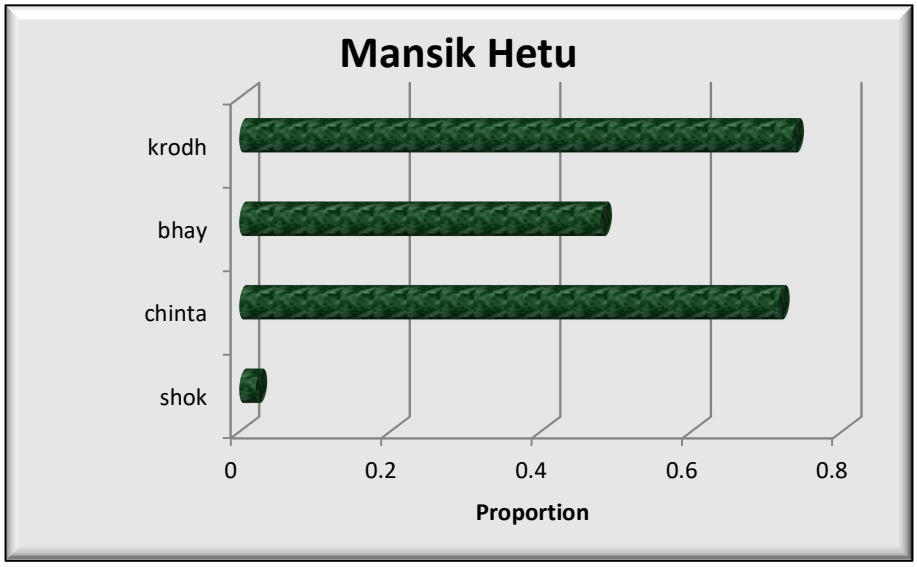
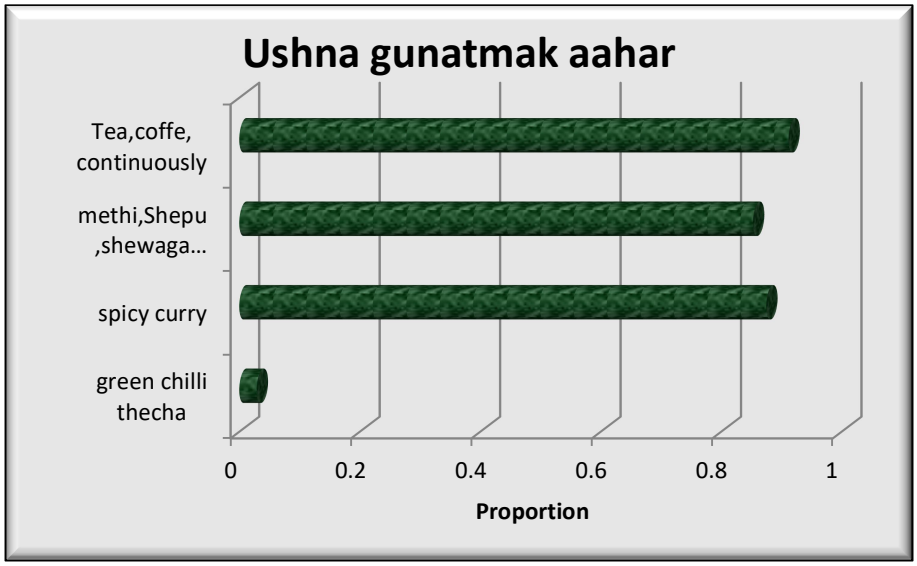


Table68: proportion of patients according to hetu Viharjanya hetu

The proportion of patients according to hetu **Viharjanya hetu** is given below along with it's bar graph.

Ushna gunatmak aahar		
1	green chilli thecha	0.029
2	spicy curry	0.875
3	methi,Shepu ,shewaga vegetables	0.853
4	Tea,coffe, continuously	0.912



The 95% confidence interval for all hetu:

The 95% confidence interval for population proportion with the hetu mentioned is given below.

Sr. No.	Hetu	Proportion of patients with presence of Hetu	95% Confidence Interval	
Viruddhaahar				
1	Deshvirudha	0.039	(0.001, 0.077)	Significant
2	kalavirudha	0.01	(0, 0.029)	Non Significant
3	Agnivirudha	0.735	(0.649, 0.821)	Significant
4	Matravirudha	0.107	(0.047, 0.167)	Significant
5	Satmavirudha	0.755	(0.672, 0.838)	Significant
6	Doshavirudha	0.127	(0.062, 0.192)	Significant
7	Sanskarvirudha	Not Applicable		
8	Veeryavirudha	0.01	(0, 0.029)	Non Significant
9	Koshtavirudha	Not Applicable		
10	Avasthavirudha	0.01	(0, 0.029)	Non Significant

11	Kramvirudha	0.833	(0.761, 0.905)	Significant
12	Pariharvirudha	0.01	(0, 0.029)	Non Significant
13	Upacaharvirudha	Not Applicable		
14	Pakvirudha	Not Applicable		
15	Sanyogvirudha	0.667	(0.576, 0.758)	Significant
16	Hrudayvirudha	0.01	(0, 0.029)	Non Significant
17	Sampadvirudha	0.196	(0.119, 0.273)	Significant
18	Vidhivirudha	0.892	(0.832, 0.952)	Significant
ksharannpan				
19	Papad	0.833	(0.761, 0.905)	Significant
20	pickle	0.863	(0.796, 0.930)	Significant
21	salty groundnut	0.284	(0.196, 0.372)	Significant
22	Green chilli pickle	0.618	(0.524, 0.712)	Significant
23	salted packed food eg chips, kurkure	0.186	(0.110, 0.262)	Significant
24	Vidahiannapan(fermented food)	Not Applicable		
Amla ras sevanadhikya				

25	pickle	0.373	(0.279, 0.467)	Significant
26	Tamarind(chinch)	0.265	(0.179, 0.351)	Significant
27	tomato	0.755	(0.672, 0.838)	Significant
28	curd	0.833	(0.761, 0.905)	Significant
29	lemon	0.225	(0.144, 0.306)	Significant
Fermented food				
30	Bakery Products	0.804	(0.727, 0.881)	Significant
31	South Indian Dishes idaly, uttapa,dosa	0.157	(0.086, 0.228)	Significant
Asatmya ahar sevan				
32	chinise dish	0.157	(0.086, 0.228)	Significant
33	punjabi dish	0.186	(0.110, 0.262)	Significant
34	south dish	0.135	(0.069, 0.201)	Significant
35	pizza	0.049	(0.007, 0.091)	Significant
36	burgar	0.135	(0.069, 0.201)	Significant
37	udid dal (black gram dal) ,Til padarth	0.216	(0.136, 0.296)	Significant
Viharjanya hetu				
38	IRREGULAR WORK SCHEDULE	0.804	(0.727, 0.881)	Significant

39	IRREGULAR FOOD TAKIMG SCHEDULE	0.784	(0.704, 0.881)	Significant
40	IRREGULAR SLEEPING TIME	0.755	(0.672, 0.838)	Significant
41	CHANGE IN PATTERN OF WORK	0.588	(0.492, 0.684)	Significant
42	CHANGE IN PATTERN OF TRAVELLING	0.069	(0.020, 0.118)	Significant
43	DIWASWAP	0.853	0.784, 0.922)	Significant
44	ATIVYAAYAM	0.118	(0.055, 0.181)	Significant
45	ATIMAITHUN	0.029	(0, 0.062)	Non Significant
VYASAN				
46	MatI Khane (Mrudbhakshanjanya)	0.029	(0, 0.062)	Non Significant
47	Madyapan	0.01	(0, 0.029)	Non Significant
Mansik Hetu				
48	shok	0.022	(0, 0.05)	Non Significant
49	chinta	0.716	(0.628, 0.804)	Significant

50	bhay	0.48	(0.383, 0.577)	Significant
51	krodh	0.735	(0.649, 0.821)	Significant
Ushna gunatmak aahar				
52	green chilli thecha	0.029	(0, 0.062)	Non Significant
53	spicy curry	0.875	(0.811, 0.939)	Significant
54	methi,Shepu ,shewaga vegetables	0.853	(0.784, 0.922)	Significant
55	Tea,coffe, continuously	0.912	(0.857, 0.967)	Significant

Discussion and Conclusion

Discussion

1. **Kshar,Lavan, Amla ras atisevan are hetus of Pandu:**

क्षारः पुनरौष्ण्यतैक्ष्ण्यलाघवोपपन्नः क्लेदयत्यादौ पश्चाद्विशोषयति, स पचन दहन भेदनार्थमुपयुज्यते;सो अतिप्रयुज्यमानः केशाक्षिहृदयपुंस्त्वोपघातकरः

संपद्यते । ये ह्येन .....

च .वि. १/१७

लवणं पुनरोष्ण्यतैक्ष्ण्योपपन्नम, अनतिगुरु, अनातिस्निग्ध्म, उपक्लेदि,विस्त्रंसनसमर्थम,अन्नद्रव्यरुचिकरम, आपादभद्रं प्रयोगसमसादगुण्यात, दोषसंचयानुबंध,तद्रोचनपाचनोपक्लेदनविस्त्रंसनार्थमुपयुज्यते। तदत्यथमुयुज्यमानं ग्लानिशैथिल्यदैर्बल्याभिनिवृत्तिकरं शरिरस्य भवति।

च. वि. १/१८

स एवं गुणोअप्येक एवात्यर्थमुपयुज्यमानो दन्तान हर्षयति तर्षयति, संमीलयत्यक्षिणी,संवेजयति लोामानि, कफं विलापयति,पित्तमभिवर्धयति रक्तं दूषयति,मासं विदहति,कायं शिथिलेकरोति,क्षीणक्षतक्रुशदुर्बलानां श्वयथुमा पादयति,अपि च क्षताभिहतदष्टदग्धभग्नशूनप्रच्युतावमूत्रितपरिसर्पितमर्दितछिन्नभिन्नविश्रिष्टोद्विध्दोत्पिष्टादीनि

पाचयत्याग्नैयस्वभावात परिदहति कण्ठमुरो हृदयं च

च, सू. २६/२

Kshar,Lavan,Amla rasatmak aahar is Ushna and Tikshna in guna so Pachan,Bhedan,Daha , Kledotpatti and Dhatushaithilya occurs.Peoples who consumes such type of foodcontinuously,Pitta dosha get vitiated in Rakta Dhatu causing adverse effect on Bal,Varn,Sneh and Oja which shows symtom like Raktalpata,Medolpata,Varnhani,Indriyshaithilya.

All these symtoms causes due to shaithilya and heaviness in Raktadhatu.

2. Viruddhahar:

षाण्ढ्यान्धवीसर्पदकोदराणां विस्फोट्कोन्मादभगन्दराणाम ।

मूर्च्छामदाध्मानगलग्रहाणी पाण्ड्वामयस्यामविषस्य चैव ।।

च. सू. २६/१०२

a) Vidhiviruddh: Aaharsevan vidhi is not proper then it have adverse effect on Agni causes Atrupti, Mandagni and Visham pak of food so there is no normal dhatu uttapatti caues dhatushithilya.
b) Hrudviruddh,Sampadviruddh,Agniviruddh,Pariharviruddh,Deshviruddha,Kal viruddha,Matraviruddh,Veeryaviruddh,Awasthaviruddh,Kramviruddh all have adverse effect on Agni,which increases samprapti of Pandu.
c) Sanyogviruddh causes impurity in Rakta dhatu as it vitiated Pitta dosha cuses heaviness and shaithilya in Rakta dhatu.

3. Fermented food

Idali, Uttapa, Dos and all kinds of Bakery items are Amla rasatmak and ushna gunatmak which again responsible for Pandu Samprapti.

4. Guru Aahar sevan

That is aahar matra is more in quantity in accordance with agni or food ie that much guru that takes more time to digest.consumtion of guru aahar causes visham pak which hamper normal dosh, dhatu and mal formation ,which hamper normal formation of Rakta dhatu causes Pandu.

5. Asatmya Aahar sevan causes Pandu:

`शानामामयानां च विपरीतगुणैः। सात्म्यमिच्छन्ति सात्म्य…….चाद्यमेव च ।

च . सू. ६/५०

Asatmya ahar: Aahar that is not pathyakar according to prakruti of pt or according to disease is Asatmya aahar.Now a days wesrern food like Pizza,Burger,Pasta,Cold drinks,Chinese are asatmya for us. It has adverse effect on pitta dosh prakopa

6. Diwaswap:

कफपित्त प्रकोप ।

च. सू. २१

Diwaswap causes kaph and pitta prakopa ,and again pitta is main dosh prakop in Pandu.

7. Ativyayam :

श्रम क्लम क्षय त्रुष्णा रक्तपित्त प्रतामकः ।

अतिव्यायामतःकासो ज्वर श्छर्दिश्च जायते ।।

च. सू. ७/३३

Ativyayam causes rakta pitta dushti which again hetu of pandu

8. Manasik Hetu :

लोभशोकभयक्रोधमानवेगान विधारयेत।

नैर्लज्ज्येष्यातिरागाणामभिध्यायाश्च बुद्धिमान ।।

च. सू. ७/२८

We have control on our mind ,so we can avoid stress due to lobh,krodh,shok,chinta,bhay.

पुण्यशब्दो विपापत्वान्मनोवाक्कायकर्मणाम।

धर्मार्थकामान पुरुषः सुखीभुक्ते चिनोति च ।।

च. सू. ७/३०

Conclusion

+

Hetus mentioned in Charak Samhita are observed in percentage

In my dissertation work and the result is

Female pts are	96%
Agniviruddha Aahar	73.50%

Asatmy Aahar	75.50%
Kramvirudha Aahar	83%
Sanyogviruddh	66.70%
Vidhiviruddh Aahar	89.20%
Ksharyukt Aahar	83.30%
Papad	61%
Packed food	19%
Amla Rasatmak Aahar	85.50%
Bakery Product	80.40%
Fermented food	16%
Chinise food	16%
Panjabi food	20%
Diwaswap	85%
Manasik Hetu: Chinta	71%
Bhay	48%
Krodh	73.50%

By observing hetus of Pandu we conclude that

1 Nidan Parivarjnam is recommended to patients and its effect is scope for further study.

2 Treat the Pandu accordingly hetus so there is specification in treatment also and results are quick which is again scop for study.

3 Observational study of hetu of Pandu is important for apunarodhabhav of vyadhi, change in life style, change in diet pattern.

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