

A STUDY ON
PITHA PERUMPAADU
(MENORRHAGIA)
(Dissertation Subject)

**For the partial fulfillment of the requirements
to the degree of**

DOCTOR OF MEDICINE (SIDDHA)
Branch I – Maruthuvam



GOVERNMENT SIDDHA MEDICAL COLLEGE
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INTRODUCTION

“SIDDHA IS A DIVINE GIFT TO MANKIND”

Siddha medicine is the India’s traditional system of medicine, which is the oldest healthcare system in the world with its roots more than 5000 years in the vedic era. Siddha system has grown with the cultural background and lifestyle of Dravidans. It is a judicious combination of science and philosophical outlook. It has been cultivated by spiritual scientists called “**SIDDHARS**”.

Siddha defined as the “**Science of life**” or “**Knowledge of life**” or “**Knowledge of longevity**”. Siddhars have developed this science by the experience in observing the nature and its relation with human beings. Siddha deals with natural system of medicines having less side effects. So the Siddha system of medicine is still today, a living science.

Our Siddha medical science is based on Panchaboothic and Mukkuttra theory. The imbalance of these three Mukkuttras leads to various diseases.

The treatment in Siddha medicine is aimed at keeping the three humours in equilibrium.

**“clk;gpdh yd;wp Azh;Tjh dpy;iy
clk;gpdh Yd;dpaNj ahk;”**

– xsit Fws;

**“NjfkpUe;jy;Nyh rpj;njy;yh khlyhk;
NjfkpUe;jhf;fhw; Nruyhk; G+uzk;
NjfkpUe;jhf;fhw; nranyy;yhk; ghh;f;fyhk;
NjfkpUe;jhf;fhy; NruyhKj;jpNa”**

- jpU%yh;

Health is the most fundamental prerequisite for the development of humans and their advancement in all fields. Woman have special needs for

themselves. Their health determines the health of future generation. So women need equitable treatment from birth, the same love and care as much as men.

The Siddha System of medicine also deals with the problems affecting the women's health and a lot of formulations are available in the Siddha classics which can counter the problems for a better living.

Although women live longer than men, they suffer more ill-health, visit their general practitioner more and take more medications.

Women in the reproductive age group constitute about 25% of the Indian population. Menstrual disorders(39%) are the most frequent gynaecologic complaint of adolescent women. Menorrhagia is the common gynaecological problem encountered by women.

Yugimuni, the author of Yugi Vaidhya Chinthamani, a classical Siddha literature of the 15th century has described Pitha Perumpaadu in one of the four types of Perumpaadu.

The clinical features of Perumpaadu can be compared with Menorrhagia in modern medicine. I have done a preliminary study about the disease and efficacy of trial medicines. To treat Menorrhagia patients, two trial medicines are selected.

Medicines are

1. Sadhurmuga chooranam - 2gm thrice a day as decoction in hot water, after food. (During menstrual periods)
2. Soothra Abhayaathy legium - 5gm twice a day after food (After menstrual periods)

Appreciation and appropriate application of Siddha Science are sure to give happy, healthy and harmonious life to all.

This is a preliminary research compilation.

I humbly contribute this work to the glory Siddha system of medicine.

AIM AND OBJECTIVES

The role of women in framing the society is obviously greater. So concentrating on her health becomes more important. Healthy women is one who can bring forth a healthy generation and gives complete shape to a family. Women is the key to the provision of the health services for the family and society, yet she has been neglected in health care. Hence it is foremost important in focussing on her health.

Menorrhagia is one of the most common and significant gynaecological problems and is seen in about 10-15% of women. It strikes at the core of a women's psyche affecting her physical, mental and spiritual health. She finds it hard to talk about her problems and experience, unless they are fellow sufferers. Some times menorrhagia is of sufficient magnitude so as to incapacitate day-to-day activities. Nowadays menorrhagia has become a common problem among the female society.

Being a women, I have selected this common ailment which hinders the development of women.

The aim of this study is to evaluate the efficiency of Siddha medicines in the management of Perumpaadu.

The main aim of the study is to arrest the over menstrual bleeding as well as to correct the problem, that is Anaemia by using the trial medicines.

Medicines are

1. Sadhurmuga chooranam - 2gm thrice a day as decoction in hot water, after food. (During menstrual periods)
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OBJECTIVES:

The author has in-depth dealt with the following objectives.

- To collect various Siddha and Modern literature dealing with aetiology, classification, clinical features, diagnosis, prognosis, complications, diet and treatment of Pitha Perumpaadu.
- To analyse the incidence of disease with varying age, habit, occupation, social status, land and seasons.
- To use Siddha and modern parameters to confirm diagnosis, severity and progress of the disease.
- To assess the medicine efficacy and the action of trial medicines for the treatment of Pitha Perumpaadu.
- To make biochemical analysis, phytochemical studies and pharmacological studies of medicine tried in this disease.
- To insist Yoga, Pranayamam and Dhyanam along with medicines for attaining good results.
- To record the results and observation and to illustrate it with necessary tables and graph.

REVIEW OF LITERATURE

SIDDHA ASPECT

PITHA PERUMPAADU

VERUPEYAR (Synonyms) OF PERUMPAADU

,uj;jNuhfk;
,uj;jg;ngUf;F
rpuhtk;
Nrhtpjgpujuk;
gpujuNuhfk;
Jthiy#jfk;

IYAL (Definition)

- (i) Perumpaadu in general can be defined as excessive loss of blood during menstrual periods both in amount and duration but the menstrual cycle is unaltered.
- (ii) The Siddhar 'Agathiar' explains Perumpaadu in his version as

**“tUfpd;w ,uj;je;jhd; ngUk;ghnld; ghh;
td;ikAs;s ,uj;je;jhd; mjpfxh dhy;
njhpfpd;w ehspdpNy epd;wplh ky;
jpNufj;jpy; rpyehl;fs; tbe;jhYe;jhd;
FwpFz;L.....
.....”**

ghly; vz; : 85> gf;fk; : 221

mfj;jpah; Fzthflk;

According to Agathiar, excessive and prolonged menstrual bleeding is termed as Perumpaadu.

- (iii) In T.V. Sambasivam Pillai Vol. 3 Pg: 2174 Perumpaadu is defined as excessive menstruation with unusual frequency or continuing for longer

time than ordinary at the proper menstrual periods marked by shivering pain in the loins.

NOIVARUM VAZHI (Aetiology)

A. General aetiology for Perumpaadu, as summarized by YUGIMUNI are as follows:

“fUjpNa fdkhd nfhLik nra;J

fztidNa epe;jidjhd; nrhd;d NgUk;

gUjppad; Kd; kyryj; ijtpl;l NgUk;

guNjrp Naiofisg; gopf;fpd; Nwhh;f;Fk;

FUjpNa apiuf;fpd;w fhye; jd;dpy;

\$rhkw; GU\q; ifgz;zp Ndhh;f;Fk;

RUjpNa guNghfk; tpUk;gp Ndhh;f;Fk;

RUf;fpNa ngUk;ghLw; gtpf;Fe; jhNd”

ghly; vz; : 718> gf;fk; : 280

-A+fpkhKdpth; itj;jpa rpe;jhkzp 800

“jhndd;w fhuq;fs; kpFf;if ahYk;

rz;lhsf; Nfhgj;jpd; rypg;gp dhYk;

Cnnd;w khkprq;fs; nghrpj;j yhYk;

cwf;fk;wp tpop;jyh Y}opj; jPahy;

ghndd;w grpap;wpy; nghrpf;if ahYk;

ghukhQ; Rikjhq;fy; gfY wf;fk;

\$nnd;w FWf;fyha; Kl;fpj; J}q;fy;

F&ukhk; ngUk;ghL \$Le; jNd”

ghly; vz; : 719> gf;fk; : 280

- A+fpkhKdpth; itj;jpa rpe;jhkzp 800

- Those who abuse or show severe cruel activity to her husband
- Voiding of urine and faeces in the direction of Sun

- Abusing the poor people and disrespecting the Sages
- Having sexual intercourse during menstrual period
- Indulging in excessive intercourse
- Overconsumption of spicy food
- Vigorous anger
- Taking Nonvegetarian food
- Disturbance in sleep
- Intake of food without appetite
- Lifting heavy weights
- Daytime sleep
- Sleep in discomfort position

B. According to “**Sarabendhirar Vaidhya Muraikal**” **Karbini Bala Roga**

Sikichchai Pg: 1

“irNahfQ; nra;aj; jdpjdp RopNahLk;
nka;ahf tpe;J tpotpog; Gz;zhFk;
ikA+Wq; fz;zhI;F kfj;jhk; ngUk;ghlhk;
nfha;A+e; jhz;bw; nfhg;gspf;F kjj;jk;”

-mfj;jpah;

rk;Nghfj;jpdhq; mf;fpdp mjpfhpj;Jf; fUf;Fopapy; tpe;J tpOe;NjhWk;
Gz;zhfpr; nrt;tpsePh; Nghy; cjpuK; tbe;J nfhz;bUf;Fk;. tapw;Wtyp
cz;lhfK;.

Other causes of Perumpaadu mentioned in “**Sarabendhirar Vaidhya Muraikal**” are

- Poisoned bevarages
- Taking more food without digestion
- Indigestion
- Excessive coitus
- Riding in vehicles
- Lifting heavyweights

- Traumatic injury

C. In “**Aaviyalikkum Amudhamurai Surukkum**” – Karukkol Ilakkana Padalam, Perumpaadu aetiological factor is described as

**“irNahfQ; ntk;ik rhh;e;JNk ntl;ilahFk;
nka;ahf tpe;J tpo;e;jplk; nte;J Gz;zhk;
ikA+Wq; fz;zh; fhk;ngUk; ghLjhDk;
nfha;A+q; Fa;aq; nfhg;gspf;F Fq;FUjp”**

ghly; vz; : 119> gf;fk; : 58

Due to excessive coitus ,the ejaculation leads to vaginal ulceration causing Perumpaadu.

D. In **Agathiar Gunavagadam**

**“ghNueP ngUk;ghLtUk; tifiat; Nfsha;
gf;Ftkha; tUfpd;w fz;lkhiy
CNueP %j;jpuf; Fz;bf;fhapd; Nuhfk;
cj;jkNd gPypfh Nuhfe; jhDk;
NjNueP ehs;gl;l ghz;LNuhfk;
njspthf ,e;jNuhfk; jd;dh iyah
rPNueP rpidg;igf;Fk; fUg;igf;F kg;gh
rpwg;ghf mjpfuj;j NkWq; fhNd”**

ghly; vz; : 83> gf;fk; : 22

**“fhZtha; #jfk; ntspahF kg;gh
fUg;igjhd; moiynfhz;L NghtjhNy
G+Ztha; rk;Nghf kjpfj;jh Yk;
nghy;yhj Gj;Jfshw; fl;bah Yk;
NgZtha; ngUk;gh Lz;lh nkd;W
ngykhfj; jhd;nrhy;tha; cyfj;Njhh;f;F
fhZtha; mg;NghJ fUg;ig epd;W
fUthd ,uj;je;jhd; tUFe; jhNd”**

Perumpaadu occurs in association with diseases like

- Tubercular adenitis
- Renal diseases
- Splenic disorders
- Chronic anaemia
- Ovarian and Uterine Causes
- Uterine congestion
- Beningn and malignant tumours
- Excessive coitus

E. “Agathiar Perunool Vaithya Kaviyam” enumerates the aetiology as,

**“laKk; gpj;je;jhD kide;jpLq; fhye;jd;dpw;
nfha;AW kpuj;je;jhWq; nfhg;gspj;NjhLe;jz;by;
ikAW fz;zpdhh;f;F kNfhjuk; ngUk;ghlhFe;
njha;AW NkfKz;lhe; njhlh;r;rpia Kiwaha; NfNs”**

gf;fk; : #Uzh

When kapham mingles with Pitham, there is excessive menstrual bleeding along with Ascites and Veneral diseases.

F. In Magalir Maruthuvam Dr. P. M. Venugopal H.P.I.M. had listed the aetiological factors of Perumpaadu in Pg. 36

- Tumours
- Salphingitis and Oophoritis
- Sepsis of Pelvic tumour
- Tuberculosis (Initial stage)
- Hormonal changes especially Hypothyroidism
- Aged females during menopause
- Cardiac diseases

- Psychological reasons
- Family problems

G. According to “**Anubhava Vaidhya Deva Ragasiyam**”

- Intake of excessive food
- Indigestion
- Uterine congestion
- Excessive coitus
- Climbing hills
- Excess walking, and excess sleep
- Fasting
- Loss of bodyweight
- Lifting heavyweight
- Injury by sticks & rods
- Daytime sleep

-];jphPNuhfepjhdKk;;> rpfpr;irAk; IInd part, gf;fk; : 270> 271

H. According to “**T.V. Sambasivam pillai**” Vol. V Page: 581

- Perumpaadu is an immoderate secretion of the menstrual discharge
- Uterine blood vessels lose their strength, muscle fibres get congested leading to menorrhagia.

NOI ENN (Classification)

A. YUGIMUNI discusses Pitha Perumpaadu under the types of Perumpaadu

“**ciunra;j ngUk;ghL ehy jhFk;**

cfe;JNk thjj;jpd; rpuht nkhd;W

Giunra;j gpj;jj;jpd; rpuht nkhd;W

Nguhd Nrl;Lkj;jpd; rpuht nkhd;W

Jiunra;j njhe;jkhQ; rpuht nkhd;W

Jifnay;yhk; ehYtpjr; rpuht khr;R

fiunra;j tpjDila cw;gj;jp nay;yhk;

fz;lgb nrhy;yNt fUjp lhNa”

ghly; vz; : 717> gf;fk; : 280

- A+fpkhKdpth; itj;jpa rpe;jhkzp 800

YUGIMUNI has classified Perumpaadu into 4 types

- 1) Vatha Perumpaadu
- 2) Pitha Perumpaadu
- 3) Kabha Perumpaadu
- 4) Thontha Perumpaadu

B. According to “**Anubhava Vaidhya Deva Ragasiyam**” Pg: 271

There are 4 types of Perumpaadu

1. Vatha Perumpaadu
2. Pitha Perumpaadu
3. Kabha Perumpaadu
4. Sannipatha Perumpaadu

C. **T.V. Sambasivam Pillai**’s classification resembled that of **YUGIMUNI**

1. Vatha Perumpaadu
2. Pitha Perumpaadu
3. Kabha Perumpaadu
4. Thontha Perumpaadu

T. V. Sambasivam Pillai Vol. 3, Pg. 2174

D. According to **Magalir Maruthuvam** Dr. P.M. Venugopal H.P.I.M.

Perumpaadu is classified into two types

1. rhjhuz ngUk;ghL (Sadharana Perumpaadi)
2. mrjhuz ngUk;ghL (Asadharana Perumpaadi)

Asadharana Perumpaadu depending on age and symptoms further subdivided into three types,

1. kq;ifg; gUt tajpy; Vw;gLk; ngUk;ghL

2. gps;isg;NgW tajpy; Vw;gLk; XOq;fw;w ngUk;ghL
3. KbT G+g;G Vw;gLk; fhyq;fspy; fhZk; ngUk;ghL

NOI KURIKUNANGAL (Clinical Features of Pitha Perumpaadu)

A. According to YUGI VAIDHA CHINTHAMANI

“Mnkd;w td;dj;ij ,wq;nfhI; lhJ

mOfpd;w kQ;rs;epwk; Nghy; Cw;Wk;

Ntnkd;w NahdpapNy Ntf;fh Lz;lhk;

NkdpANk ntSj;J kpLf;F NghFk;

fhnkd;w fhy;ifA kow;w yhFk;

fUfyha; fl;bNghY jpuk; tPOk;

Njnk;d;w rpWfLg;gh kq;f nky;yhk;

rPwpaNjhh; gpj;jj;jpd; rpuht khNk”

ghly; vz; : 721> gf;fk; : 281

- A+fpkhKdpth; itj;jpa rpe;jhkzp 800

Clinical features according to **YUGIMUNI** are

- Indigestion with loss of appetite
- Menstrual bleeding in rotten yellow colour
- Soreness of vagina
- Pallor of the body
- General weakness of limbs
- Bleeding with black coloured blood clots
- Body pain

B. According to “Anubhava Vaidhya Deva Ragasium IInd part, Shthree Roga Nithanamum, Sikhisaium” Page: 271

Clinical features of Pitha Perumpaadu are

1. Menstrual bleeding in yellow, red and black colour
2. Profuse bleeding
3. Bleeding associated with pain

4. Increased body temperature

Other literature references for Perumpaadu

C. In **ruNge;jpuh; itj;jpa Kiwfs;** (fh;g;gpzp> ghyNuhf rpfpr;ir) Clinical features of Perumpaadu are

- Excessive menstrual bleeding
- Knobbing pain in body
- Giddiness
- Dryness of tongue
- Irrelavant talk
- Increased body temperature
- Body pain

D. Dr. S. Chidambarathanu Pillai in “**Madhar Maruthuvam**” had grouped females by their age group under 4 groups (gUtq;fs;)

thiy

jUzp

gpwtpil

tpUj;ij

gpwtpil gUtk; - 16- taJ Kjy; 45 taJ tiu

“**cz;lhd gpwtpil jhdpnul; bd;Nky;**

cw;wnjhU Inahd;ghd; taJkl;Lk;

tpz;lhnU khjhe;jhpJ JIq;Fk;NghJk;

NtjidAk; clyrjp ntUz;L Njwp

kz;ilapNy NehAz;lha; khh;gpy;f; Fj;Jk;

ke;jKld; kbNrhk;gy; jiy Nehf;fhL

fz;lJil apLg;G jiyTsr; ryhfp

fhZNk tha;T rh;j;jy; rpy Ngh;f;fhNk”

gf;fk; : 17

In “**Mathar Maruthuvam**”, the author had stated the clinical features as:

During every month Mentrual periods is associated with

- Body pain

- Headache
- Chest pain
- Lassitude
- Pain in the neck, hip and thighs
- Sometimes flatulence
- Headache

“ghh;j;jplNt kq;ifaw;F nuj;j#iy
 gfUfpNwzb tapw;iwg;gw;wp epw;Fk;
 Nfhh;j;jpl NtAjpuKJ jpuz;LNk jhd;
 nfhjpg; ngLj;J khjtplha; fhye;jd;dpy;
 Nrh;j;jplNt #jfq;fs; kpFe;J fhZk;
 rpW typaha;fUf; FopAk; gpuz;Lisf;Fk;
 Vh;j;jplNt JilapLg;G cisr;ryhFk;
 ,uj;j #iyf; FzKpJ jhd; ghU ghNu”

-khjh; kUj;Jtk;> gf;fk;: 61

- Overbleeding during menstrual cycle
- Bleeding associated with mild pain
- Knocking pain in thigh and abdomen

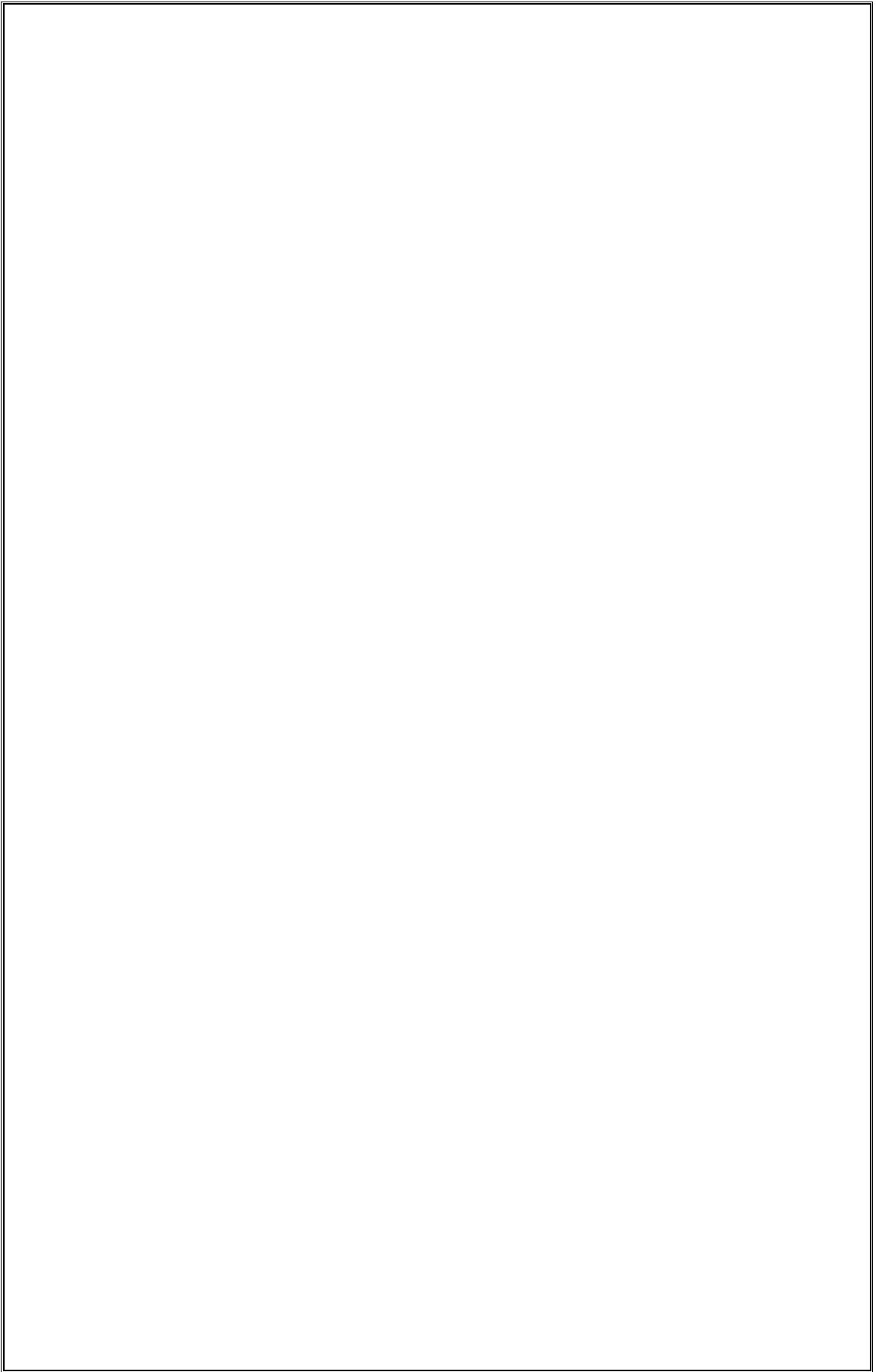
E. In **Agathiyar 2000 IInd** part under
 ,uj;jNuhfk; my;yJ ngUk;ghl;bd; ,y\zq;fs;

“,uj;j nkhUf;fhy; jifahky; nydnt NahL Nghy;tPOe;
 jpUf;Fk; rpuj;jpy; fdg;GKz;lhfj; jpkha;rpjwp tpOkpuj;jk;
 rhj;juj;j Nuhfnkdr; nrhy;Yk; ey;yty;NyhNu”

ghly; : 9> gf;fk; : 305

Clinical manifestations of Perumpaadu as per **Agathiyar 2000** are

- Overbleeding with blood clots
- Headache
- Scattered blood



F. In “Agathiya Mamunivar Ayurvedham”

“,uj;jnkhUf;fhw;wyp fhaknydNt tLNghy; tpOe;jpUf;F
Kuj;jTyp YWjpnfl;L Tlypw;Wau kpFe;jpUf;FQ;
rpuj;jpw; fdg;GKz;lh FQ;rpjka;r; rpf;fp tpOkpuj;je;
Juf;fuj;jNuhf nkdr;nrhy;Y ey;yty; NyhNu”

ghly; : 906> gf;fk; : 223

In “Agathiya Mamunivar Ayurvedham” the following features are mentioned

- Over menstrual bleeding
- General weakness
- Headache
- Bleeding with bloodclots

G. In “Dhanvanthri Vaidhyam” IInd part

“ifAld; fhYq; fhe;Jq; fhj;jpu Kyh;e;J tw;W
ikayhq; fytpjd;id kWj;jpLq; fh;g;gq;NflhQ;
nra;aePh; NghYQ;rw;Nw rpte;jpLq; FUjpNghYk;
nga;ANk ahfpy; khNd, ngUk;ghnld;wwpFtPNu”

ghly; : 23> gf;fk; : 215

Clinical symptoms as per “Dhanvanthri Vaidhyam” are

- Burning sensation of upper and lower limbs
- Emaciation of body
- Loss of libido
- Failure to conceive
- Watery or reddish vaginal discharge

H. In “Sikucharathna Deepam” Perumpaadu Roga Elambagam

C. Kannusamipillai manifests the following features:

- Headache
- Lowbackpain

- Generalised bodypain
- During menstrual bleeding, abdominal distension resembles like a gravid women
- Vulva colour changed to black
- Foul smell bleeding per vagina

I. In “**T.V. Sambasivam Pillai**”, the clinical features mentioned are

- Pain in the chest and Breasts
- Menstrual flow duration prolonging for more than a month or even two
- Burning sensation and pain in the eyes, palms and vagina
- Breasts may become heavy and swollen

J. In “**Magalir Maruthuvam**”

- Excessive menstrual bleeding
- Duration increased
- Sometimes bulky uterus

NOI NITHANAM (Prognosis of PithaPerumpaadu)

YUGIMUNI predict that the Pitha Perumpaadu can be cured.

Various verses are given in relation with the prognosis of Pitha Perumpaadu.

1. In Perumpaadu and in certain diseases if a combination of emaciation, dyspnoea and hiccough occur, it results in death of the patient.

It is quoted in Sathaga Naadi as follows.

“njhFj;jpl;l ePhpopT Nkf#iy
 RutPf;fQ; re;eptyp Njhl khe;jk;
 kpFj;jpl;l fpuhzp mjprhuk; thjk;
 tplghfe; jpus;ghz;L Nrhif fhkhiy
 tFj;jpl;l ngUk;ghL kQ;rs;NehT
 gFj;jpl;l apisg;GINd Rthrk; tpf;fy;
 gw;wpdhy; kuznkd;W gFj;Jr; nrhy;Ny”

-rjf ehb

2. Kannusamiyam has stated that if in Perumpaadu and in other diseases like bronchial asthma, diarrhoea, dysmenorrhoea, carbuncle and in hypertension, any Vatha related diseases occur, then the prognosis may be lated or bad.

“ke;jhu fhr tUTk; ngUk;ghL

njhe;j tjprhuk; NjhifNa-te;jZFk;

fh;g;gr;# iyg;gpsit fhzpuj;jk; gpj;jkjpg;

gw;Wtha; Te;jPuhg; ghh;”

-fz;Zrhkpak; vd;Wk; itj;jpa Nrfuk;

ghly; : 50> gf;fk; : 16

“Njfj;JW koYk; jPjh kjpnyhpr;ry;

Ntfg; ngUk;ghL ntz;zpwkha;g; Nghftjpy;

ehw;wNky; %r;R etpyf; fgkaf;fk;

Njhw;w Tly;rhAQ; nrhy;”

-fz;Zrhkpak; vd;Wk; itj;jpa Nrfuk;

ghly; : 68> gf;fk; : 20

Kannusamy Pillai also states that if the person suffering from Perumpaadu has the following symptoms, there is no prognosis. The condition of the patient rapidly declines, if there is

- Burning sensation of the body.
- White mingled bleeding with bad odour.
- Palpitation with dyspnoea.
- Cough and giddiness, then the recovery is impossible.

NAADI NADAI:

According to **Sathaga Naadi Nool**,

Pitha Naadi and

Vatham with Uttinam are felt in Perumpaadu Patients.

Succeeding quotations from Sathaga Naadi Nool confirms the fact.

gpj;j ehb

“cWjpAs;s gpj;jkN Njhd;wpy; ntg;G
c\;zthAtj;jp Rukjp Ruq;fs;
kwjpAld; fpWfpWg;G gapj;jpa Nuhfk;
tsh; NrhifaonyhpT fhe;jy;ifg;G
,Ujaj;jpy; fyf;fkJ kwg;G jhfk;
vOq;fdT Nka idT kaf;f %h;r;ir
rpwpJ ngUk;ghL uj;jk; gpuNkfq;fs;
Nrh;e;J kpFgzp gyTQ; rpwf;Fe;jhNd”

-rjfehb> gf;fk; : 166

Neha;ehly; Neha;Kjdhly;> ghfk;-1

“te;jpj;j gpj;jkjp fhpj;J epd;why;
thATld; ntg;gpuj;j NuhfQ; #iy
njhe;jpj;j Fd;kKld; FINdha; kpf;f
Jah;Ghp Kisapw;#L rput ul;rp
epe;jpj;Jg; NgrpLj yhly; ghly;
epj;jpiuaw; Wg;gae;J Nfhgq; nfhs;sy;
re;jpj;j fhkhiy gyTk; gpj;je;
rhjpf;F kjptjdj; ija yhNs”

-mq;fhjppghjk;> ghly; : 205 gf;fk; : 33

thjcl;bzehb

“rpwg;ghd thjj;jpYI;bde;jhNd
Nrh;e;jpL fpyjprhuKisr;ry; thA
ciug;ghd nghUknyhL mf;fpdp ke;jk;
cz;lhfK; ePh;r;rpWg;G gpuNkfq;fs;
gpwg;ghL kjfhpePh; fug;ghd; uj;jk;
gpuNkfk; ngUk;ghL GwePh;f;Nfhit
mwg;ghd thA#iy Nrj;JkNuhfk;
Mdgy gpzpfSNk te;jlUe;jhNd”

-rjfehb> gf;fk; : 178

Neha;ehly; Neha;Kjdhly;> ghfk;-1

The clinical condition is basically due to the imbalance of **“Pitham”**. Pitham is deranged primarily and later it deranges vatham and the derangement of Pithavatham leads to the derangement of kizhnokkukaal (abanaan) which in turn cause the disease.

NOI KANIPPU VIVAATHAM: (VERUPADUTHI KANITHAAL)

1. VATHA PERUMPAADU

“\$LNk jiytypA Nkw;f Lg;Gk;
\$whd KJfpLg;Gf; Filr;r Yz;lhk;
thLNk Njfnky;yhq; fUf;f yhFk;
khjtplha; jhpj;JNk ike;jd; Nghyhk;
CLNk tapW}jp cilr;r yhfp
Cw;WNk nre;epwKq; fUf yhfj;
NjLNk Jh;f;fe;jQ; Nru nthl;lh
nrkwpA thjj;jpd; rpuht khNk”
ghly; vz; : 720> gf;fk; : 281
- A+fpkhKdpth; itj;jpa rpe;jhkzp 800

Excessive bleeding through vagina with black colour blood clots, headache, low backpain and body pain are the common symptoms of Vatha and Pitha Perumpaadu but foul smell bleeding, distension of abdomen, black colour seen all over the body are the other symptoms of Vatha Perumpaadu from which it is differentiated from Pitha Perumpaadu.

2. KABHA PERUMPAADU

“MFNk nts;isepw khf Cw;Wk;
mypahd ehw;we;jhd;kpf Tz;lhfK;
NtFNk clk;ngq;Fk; tpG+jp G+h;f;Fk;
nte;joyha; Alk;ngq;Fk; vhpr;ryhFk;
ghFNk glglg;G %r;R Kz;lhk;
ghukhq; NfhionahL ,UkyhFk;
NjFNk abf;fbf;F kaf;f khFk;
Nrl;Lkj;jpd; rpuhtnkD;Nw nrg;g yhNk”
- ghly; vz; : 722> gf;fk; : 282
- A+fpkhKdpth; itj;jpa rpe;jhkzp 800

Over menstrual bleeding is the only common symptom of Pitha and Kabha Perumpaadu. Kabha Perumpaadu has the signs and symptoms of white

colour mingled menstrual bleeding with extensive foul smell, ash colour complexion of the body and cough with giddiness from which it is differentiated from kabha Perumpaadu.

3. THONTHA PERUMPAADU

**“nrg;gNt fUq;fy;yha; rptg;G khFk;
Nrh;e;jjpNy nfl;baha; fWg;gha; tPOk;
cg;gNt tapwJT KISR;ryhFk;
Cryh ehw;wKlndh Of;fkhFk;
eg;gNt kQ;rs;epw eag;G khFk;
ehdpNa jiyjhDe Lf;f yhFk;
Jg;gNt tha;ePUkp fNt Cw;Wk;
njhe;jkhk; ngUk;ghL #l;b NdhNk”**

ghly; vz; : 723> gf;fk; : 282
- A+fpkhKdpth; itj;jpa rpe;jhkzp 800

Reddish black colour menstrual bleeding is the common symptom of Pitha and Thontha Perumpaadu. Thontha Perumpaadu has other signs and symptom of abdominal distension, foul smell bleeding, tremors of head and excessive salivation from which it is differentiated from Pitha Perumpaadu.

SAATHIYA ASAATHIYANGAL

The knowledge of prognosis is very important for physicians to have an accurate idea in treating the disease. Pitha Perumpaadu has a good prognosis and it is treatable.

**“#l;baNjh urhj;jpaj;ij nrhy;yf; Nfsha;
nrhYk; Nrl;gngUk;ghL njhe;jr;rpuhtk;
G+l;bdNjh hpuz;Lk; gpiof;nfhI; lhJ
Gfohd rhj;jpaj;ijg; Gfyf; Nfsha;
thl;bdNjhh; thjj;jpd; ngUk;gh NIhL
tifahd gpj;jj;jpd; rpuhte; jhDk;
jPl;bdNjhh; kUe;Jf;Fs; nraK khFk;
nrg;gpdNjhh; ed;D}iyj; njspe;J ghNu”**

- ghly; vz; : 724> gf;fk; : 282

- A+fpkh%dpth; itj;jpa rpe;jhkzp 800

Incurable types of Perumpaadu:

1. Kabha Perumpaadu
2. Thontha Perumpaadu

Curable types of Perumpaadu:

1. Vatha Perumpaadu
2. Pitha Perumpaadu

MUKKUTTRA VERUPAADUGAL (PATHOLOGY)

According to Siddha system, body is constituted by 96 thathuvaas. Normal structural and physiological state of the body is maintained by equilibrium with Mukkutram and Seven Udarkattukkal.

As the Udarkattukkal are affected by the extrinsic and intrinsic factors, there is deterioration in the structural and functional status of the body. When the causative factor take hold of Udarkattukkal and Mukkutram it results in incoordination of functions, thereby the disease manifests and expose its clinical features.

In Perumpaadu, the clinical condition is due to the imbalance of **‘Pitham’**. Pitham is deranged primarily and later it deranges vantham and the derangement of Pitha vatham leads to the derangement of **Kizhnokkukaal** (Abaanan) which in turn cause the disease. The pathogenesis of the disease depends upon the affected Vatham and Pitham.

PINIYARI MURAIMAI (DIAGNOSIS)

**“Nehawpe;J Neha;Kjyp Nehf;fwpe;J NehAjd;
jhawpe;J Nghf;Fe; jukwpe;J fhaepiy**

**nehe;jopah tz;z fh;tpg;ghh; Nehapdhh;f;F
je;ijnaJ ew;gz;bjh;”**

-Njiuah; ntz;gh

Pini means the disease,

Ari means Identity,

Muraimai means methods.

It is the method of diagnosing disease affecting the humans.

The methodology of diagnosing in Siddha System is very unique. It is based on the following principles.

1. Poriyal Arithal
2. Pulanal Arithal
3. Vinaathal
4. Envagai thervu

PORIYAL ARITHAL AND PULANAL ARITHAL

Porigal are the five organs of perception namely nose, tongue, eyes, skin and ear. Pulanal are the functional units of porigal. The five senses are smell, taste, sight, sound and tactile sensation. Poriylarithal and Pulanal arithal means examination of the Pori and Pulan of the patient by Pori and Pulan of the physician.

VINAATHAL

Vinaathal is asking questions concerned with the disease to the patient or to the person who is taking care of her when the patient is not able to speak.

The above principles correspond to the methodology of interrogation, inspection and palpation in modern medicine for arriving at a clinical diagnosis of the disease.

FINDINGS WITH RESPECT OF PITHA PERUMPAADU

Pori, Pulanaal therthal

Mei(Skin)

Pallor of the skin.

Mild yellowish discolouration of the skin, the characteristic feature of all Pitha diseases.

Vaai (Tongue)

Pallor of the tongue.

Kan (Eyes)

Pallor of the conjunctiva and lower eyelids.

VINAATHAL

Menstrual history, obstetric history

Anorexia, giddiness, palpitation, breathlessness and insomnia are questioned

ENVAGAI THERVUGAL (Eight diagnostic methods of Siddha)

Diagnosis is confirmed by “**Envagai Thervugal**”. The classical method of clinical examination in our system is known as “**Envagai thervugal**”

Various literatures explains that Envagai thervugal is the best method to obtain the correct data of the clinical entity.

A. Theraiyar about “Envagai thervugal”

“ehbg;ghprk; ehewpk; nkhothpop
kyk; %j;jpukpit kUj;JtuhAjk;”

“nka;f;Fwp epwe;njhdp tpopeh tpUkyk; iff;Fwp”

-rjfeh> gf;fk; : 253

-Neha;ehly; Neha;Kjdhly;> ghfk;-1

B. In “Agathiar Vaidhya Rathna Surukkam”

“ehbahy; Kd;Ndhh; nrhd;d ew;Fzq;fshYk;

ePba tpopapdhYk; epd;w ehl;Fwpg;gpdhYk;

thba NkdpahYk; kynkhL ePhpdhYQ;

#ba tpahjp jd;idr; Rfk; ngwtwpe;J nrhy;Ny”

C. Kannusami had mentioned it as “Attavitha Paritchai”

“njhFf;fYw;w tl;ltpjg; ghPl;ir jd;id
Jyf;fKWk; gz;bjNu njsptjhf
gFf;fhpa ehbiaeP gpbj;Jg;ghU
gfh;fpd;w thh;ijiag;ghh; ehitg;ghU
tFf;fhpa Njfkijj; njhl;Lg;ghU
tskhd rhPuj;jpd; epwj;ijg; ghU
rfpf;fhpa kyj;ijg;ghh; ryj;ijg; ghU
rhh;e;jtpop jidg;ghh;j;J njsptha;f; fhNz”
-fz;Zrhkp guk;giu itj;jpak;

As per the above literatures “Envagai Thervugal” consisting of eight diagnostic parameters is the best method for diagnostic procedure.

The parameters are

1. Naadi
2. Sparisam
3. Naa
4. Niram
5. Mozhi
6. Vizhi
7. Malam
8. Moothiram

1. NAADI

Naadi is the seat anchor of energy on which the entire thathus of body are functioning. It is a binding force between the soul & body.

Naadi is the best parameter of all parameters of Envagai Thervu. Naadi Pareetchai or pulse reading reflects the character of three humors involved by palpating the arteries especially Radial Artery in the right hand of male and left hand in female.

Naadi is felt as Vatham, Pitham and Kabham respectively with the tip of the Index, Middle and Ring finger over the lower end of radius in the Mathirai pattern 1:1/2:1/4

In females, the normal gait pattern of Snake, Frog and Swan in Vatha, Pitha and Kabha humours is affected in Perumpaadu.

ngz;fSf;F ehbelf;Fk; tpjk;

**“ghk;ngd thjehb gFg;Gld; rh;g;gk;NghYk;
Ntk;ngd gpj;je;jhDk; tpUk;G kz;^fk;NghYk;
rhk;ngd rpNyj;kehb rLjpapyd;dk; NghYk;
euk;ngdg; ngz;fSf;F ehb jhldf;Fe;jhNd”**

- Mj;kul;rhkph;j tapj;jparhurq;jpufk;> gf;fk; : cU>

**“ghh;f;fNtngz;fSf; fplJgf;fk;
gjpthfg;ghh; j;jplnt gfuf;NfSk;
fhh;f;fNtth jkJ rh;g;gk;Nghyhq;
fdkhdgpj;jkJ jtisNghyhQ;
Nrh;f;fNtiaankd;w ehb jhDQ;
rpWeilahtd;dk; Nghw; nropg;ghaf; fhZk;
Mh;f;FNk Njhd;Wkpe;j ehb %d;Wk;
mDjpdK ey;ypth ywpe;J NjNw”**

ghly; vz; : 4> gf;fk; : 9

-gjpnz; rpj;jh;fs; ehb rh];jpuk; ghpG+uzehb

In Pitha Perumpaadu, Pitha Naadi having twice its normal phenomena is referred as the pathological naadi for Perumpaadu.

GENERAL FINDINGS:

2. SPARISAM (Palpation)

The following points are elicited by sparisam-temperature of skin, swelling, dryness of skin, any abnormal growth, thickness of skin, hypersensitivity, ulcers, oedema etc.

3. NAA (Tongue)

Colour of the tongue, dry or wet, coated or not, excessive salivation, redness, pallor, ulceration, yellowish discoloration of tissues, any malignant growth, condition of teeth and gums, any deviation, speech pattern and movements of the tongue are noted.

4. NIRAM (Colour of the skin)

Any abnormal colour changes (Pallor, Cyanosis, Yellowish discolouration, Hypo / Hyperpigmentation, Erythema) are noted.

5. MOZHI (Voice)

Clarity of speech, whether it is high pitched or low pitched, any disurbances in speech, or it resembles the sound of any instruments are noted.

6. VIZHI (Eyes)

Pallor, colour, vision, lacrimation, eyeball movements, drooping of eyelids, any specific disease of the eyes are noted.

7. MALAM (Stools)

Colour, nature of stools, smell, odour, froth, quantity, nature of defaecation, abnormal constistency are noted.

8. MOOTHIRAM (Urine)

Quantity. colour, volume, froth, smell, frequency, retention, presence of abnormal constituents are noted.

FINDINGS IN PERUMPAADU:

Sparisam	–	Sometimes pain and tenderness in abdomen
Naa	–	Pallor of tongue
Niram	–	Pallor of the skin
Mozhi	–	Normal pitched voice
Vizhi	–	Pallor of lower eyelids
Malam	–	Normal defaecation
Moothiram	–	Usually normal micturition

In urine examination, two other methods are also employed in diagnosing the disease. They are

- (1) Neerkuri and
- (2) Neikuri

NEERKURI

**“te;j ePh;f;fhpvil kzk; Eiu vQ;rnyd;
iwe;jpaYstit aiwFJ KiwNa”**

-Neha;ehly; Neha;Kjdhly;> gf;fk;-265

GENERAL FEATURES OF URINE EXPLAINED ARE

Niram	–	Colour of urine
Edai	–	Specific gravity of urine
Manam	–	Odour of urine
Nurai	–	Frothy nature of urine
Enjal	–	Quantity and deposits of urine

The amount is usually normal. There is no froth or specific odour. The urine colour is casual light reddish yellow. Few epithelial cells and pus cells are sometimes noted.

NEIKKURI

**“epwf;Fwpf; Fiu;j epUkhz ePhpw;
rpwf;f ntz;nza;Nahh; rpWJsp eLtpLj;
njd;Wwj; jpwe;njhyp Nafhjik;jjp
dpd;wjptiy Nghk; newptpopawpTk;**

nrd;wJ GfYQ; nra;jpia AzNu”

-Neha;ehly; Neha;Kjdhly;> gf;fk;-279

A drop of gingelly oil is dropped on the urine sample kept in the sunlight and left it without disturbing for sometime.

Neikkuri is observed by the spreading nature of oil in the urine sample.

VATHA NEER

“munt d ePz;bd; m†Nj thjk;”

“mZFnea; ghk;gpw; fhzpy; mdpyNeha;”

-Neha;ehly; Neha;Kjdhly;> ghfk;-1> gf;fk; : 279

The drop of oil spreading like a snake indicates Vatha Neer.

PITHA NEER

“Mopg;Nghy; gutpd; m†Njgpj;jk;”

“tl;lkhapd; jzptpyhg; gpj;j Nehahk;”

-Neha;ehly; Neha;Kjdhly;> ghfk;-1> gf;fk; : 279

The drop of oil spreading like a ring indicates Pitha Neer.

KABHA NEER

“Kj;njhj;J epw;fpd; nkhoptnj d;fgNk”

“ K j;njdpd; laNeha; jhNd”

-Neha;ehly; Neha;Kjdhly;> ghfk;-1> gf;fk; : 280

The drop of oil spreading like a pearl indicates Kabha Neer.

In Perumpaadu the Neikkuri noted are Vatham and Pitham.

Envagai thervugal are the most used diagnostic implements in Siddha system of medicine.

Besides Envagai thervugal, a disease can be diagnosed with the help of other methods namely **Thinaigal, Paruva Kaalangal, Uyirthatthukkal, Udal thatthukkal and Poripulangal**. Combinations of all these diagnostic criteria are very helpful to attain a proper diagnosis with complete entity based on principles of Siddha science.

PARUVAKAALAM(Seasonal effects)

Siddhars classified a year into six seasons ie. Paruva Kaalam each constituting two months. The humoral theory ie. Vatha, Pitha and Kabham has got some changes in Paruvakaalam (Thannilai Valarchi, Vetrunilai Valarchi, Thannilai adaithal) the humoral changes in Paruvakaalam causing certain diseases. Study of them will be of much useful in diagnosis.

PARUVAKAALAM

S. No	Paruvakaalam	Synonym	Kuttram	Suvai
1.	Kaarkaalam (Aavani – Puratasi) Aug 16 – Oct 15	Early rainy	Vatham↑↑ Pitham↑	Inippu, Pulippu, Uppu
2.	Koothirkaalam (Iyppasi – Karthigai) Oct 16 – Dec 15	Late rainy Autumn	Vatham (-) Pitham ↑↑	Inippu, Kaippu, Thuvarppu
3.	Munpanikaalam (Margazhi – Thai) Dec 16 – Feb 15	Early dew winter Part I	Patham (-)	Inippu, Pulippu, Uppu
4.	Pinpani Kaalam (Maari – Panguni) Feb 16 – Apr 15	Late dew winter Part II	Kabham↑	Inippu, Pulippu, Thuvarppu
5.	Elavenil Kaalam (Chittirai – Vaigaasi) Apr 16 – Jun 15	Early Summer	Kabham↑↑	Kaippu, Karppu, Thuvarppu
6.	Muthuvenil Kaalam (Aani – Aavani) Jun 16 – Aug 15	Late Summer	Kabham (-) Vatham↑	Inippu

↑ Accumulation (Thannilai Valarchi)

↑↑ Aggravation (Vetrunilai Valarchi)

(-) Allieviation (Thannilai Adaithal)

THINAI (Lands – Geographical area)

Thinaigal affects the person in a same manner as the seasons. It has been classified into 5 types, depending on the surrounding vegetation, landscape, ecological state and occupational status.

S. No	Thinai (Land)	Geographical Area	Common disease
1.	Kurinji (Hilly tract)	Mountain and its surroundings	Kabham and Liver diseases
2.	Mullai (Sylvian tract)	Forest and its surroundings	Pitham, Vatham and Liver diseases
3.	Marutham (Fertile area)	Field and its surroundings	Ideal place for healthy living
4.	Neithal (Coastal area)	Sea and its surroundings	Vatham and liver diseases
5.	Paalai (Arid area)	Desert and its surroundings	Vatham, Pitham and Kabha diseases

MUKKUTTRAM (UYIR THATHUKKAL)

Basic principles of Siddha science is Uyirathukkal. The equilibrated state of uyirathukkal indicates their importance in the maintainance of health, Vatham, Pitham and Kabham are the 3 forms of Uyirathukkal. These are the vital forces of the body. They are responsible for normal physiological function of the body. Disturbances of equilibrated state of Uyirathukkal from their normal ratio 1:1/2:1/4 leads to some pathological changes in the body and thus produce the disease. Intrinsic and entrinsic factors affect the mukkuttram.

UYIRTHATHUKKAL

Vatham

Pitham

Kabham

Each one of it has got its own characters and functions in the body.

VATHAM

Synonym:

Vali or Vaayu

It is the combination of Vayu and Aahaya Boothams.

It is responsible for all movements of the body. Vatham controls both Kanmedhriyam and Gnanendhriyam. It regulates respiration and 14 vegas. It helps in the uniform functioning of seven Udalthathukkal.

Varieties of Vatham

**“Kiwahk; gpuhzNdh lghdd; tpahdd;
%h;f;fkh KjhdndhL rkhddhFk;
jpwikahq; \$h;kndhL fpUfud;whd;
Njtjj;j NdhL jdQ; nraDkhFk;”**

-rpj;j kUj;Jthq;fr;RUf;fk;> gf;fk; : 142

On the basis of the place of existence and functions, Vatham is classified into ten types namely

1. Praanan
2. Abaanan
3. Vyaanan
4. Uthanan
5. Samaanan
6. Naagan
7. Koorman
8. Kirukaran
9. Devathathan
10. Thananjeyan

VARIETIES OF VATHAM

S.No	Name	Location	Functions
1.	Praanan (Uyirkaal)	Heart, Chest	Regulates respiration, digestion and tissue nutrition.
2.	Abaanan (Kizhnokku Kaal)	Anus, lower abdomen, hip joint	Responsible for excretion process. Normal evacuation of bowels and bladder, concerned with menstruation and ejaculation of semen, Expulsion of foetus.
3.	Vyaanan (Paravukkal)	Heart, all over the body	Functions of nervous system, Innervation of organ system and locomotor activity, blinking and opening of eyes.
4.	Uthanan (Melnokkukkal)	Chest, Umbilicus, Neck, Nose	Responsible for reflexes such as cough, hiccough, vomiting and sneezing. Controls speech and breathing.
5.	Samaanan (Nadukkal)	Abdomen, All over G.I. tract	Maintain equilibrium of other vayus. Secretion of digestive enzymes and juice and absorption of nutritive material, assimilation.
6.	Naagan	Brain	Responsible for higher intellectual functions. Responsible for blinking movements of eyes.
7.	Koorman	Brain	Responsible for opening and closing of eyes, normal vision, lacrimation and yawning.
8.	Kirukaran	Tongue and Oropharynx	Produces nasal and salivary secretion, sneezing and cough. Stimulates appetite.
9.	Devathathan	Anus and genitalia	Responsible for fatigue, anger, argument, anxiety and emotions.
10.	Thananjeyan	—	After death escapes on the third day by bursting out of the cranium.

Affected Vatham in Pitha Perumpaadu

1. Praanan – affected because of Breathlessness and dyspnoea
2. Abaanan – affected because of excessive menstrual bleeding
3. Vyaanan – affected because of pallor of the skin
4. Samaanan – affected because of loss of appetite

Uthanan		Not affected
Naagan		
Koorman		
Kirukaran		
Devathathan		

PITHAM

Synonym:

Azhal

It is the life manifestation of Thee bootham in the body. It carries out metabolism, digestion, absorption of food, colouration of blood, vision, appetite etc. Pitham enhances haemopoietic function. It is also responsible for perspiration, giddiness, anger, memory, bitter and sour taste.

Varieties of Pitham:

Based on the location and function, it is divided into five types.

1. Anilam
2. Ranjagam
3. Saadhagam
4. Aalosagam
5. Praasagam

S. No	Name	Location	Functions
1.	Anilam	Stomach, Small Intestine	Gives appetite, helps in digestion.
2.	Ranjagam	Stomach, Liver, Spleen	Maintains the haemoglobin concentration of blood.
3.	Saadhagam	Heart	Performs desired action. Controls the whole body.
4.	Aalosagam	Eyes	Responsible for vision.
5.	Praasagam	Skin	Gives complexion to the skin.

Affected Pitham in Pitha Perumpaadu

1. Anilam - affected because of loss of appetite
2. Ranjagam - affected because of pallor of skin and lower eyelids.
3. Saadhagam - affected because the person is unable to do her regular work properly
4. Aalosagam - not affected
5. Praasagam - affected because of pale and dry skin

KABHAM

Synonym:

Iyam

Kabham is the life manifestation of Neer and Mann boothams. It is responsible for coordination and defence mechanism of the body. It aids the formation of various preservative fluids eg: mucous, synovial fluid

Varieties of Kabham:

Based on the location and functions, kabham is classified into five types.

1. Avalambagam
2. Kilethagam
3. Pothagam

4. Tharpagam
5. Santhigam

S. No	Name	Location	Functions
1.	Avalambagam	Heart, Lungs	Supports all other types of kabham
2.	Kilethagam	Stomach	Moistens and nourishes the food
3.	Pothagam	Tongue	Gives taste sensation
4.	Tharpagam	Head	Keeps the eyes cool
5.	Santhigam	Joints	Stability, lubrication and movements of joints

Affected kabham in Pitha Perumpaadu

1. Avalambagam - affected because of low Hb levels.
2. Kilethagam - affected because of loss of appetite.
3. Pothagam - not affected
4. Tharpagam - not affected
5. Santhigam - affected due to back pain

When the three humors are deranged, they affect the seven Udalthaathus which inturn produces various symptoms according to severity.

UDAL THAATHUGAL (UDAL KATTUKKAL)

The human body is built by the seven Udal thathukkal which are functioning in harmony in healthy conditions and are deranged in a diseased state.

1. Saaram
2. Senneer
3. Oon
4. Kozhuppu
5. Enbu
6. Moolai
7. Sukkilam / Suronitham

These are seven basic principles which constitute the entire material part of the body.

1. SAARAM

The final product of the digestive process. It is responsible for physical growth and personality development. It strengthens the body and mind.

2. SENNEER

The Saaram after absorption is converted into Senneer. It is responsible for knowledge, strength and healthy complexion. It imparts colour to the body.

3. OON

It gives structure and shape to the body and responsible for the movement of the body.

4. KOZHUPPU

It lubricates the organs and thus facilitates their functions.

5. ENBU

It forms the basic skeletal framework of the body. It protects the vital organs and responsible for locomotion.

6. MOOLAI

Present inside the core of the bone which strengthens the bone.

7. SUKKILAM / SURONITHAM

Responsible for reproduction

AFFECTED UDAL THAATHUS IN PITHA PERUMPAADU

Saaram	-	affected because of loss of appetite and lack of briskness
Senneer	-	affected because of pallor of skin and conjunctiva, low Hb levels.
Oon	-	not affected

Kozhuppu	-	not affected
Enbu	-	not affected
Moolai	-	not affected
Suronitham	-	affected because of over menstrual bleeding

PININEEKAM

Our Siddha system of medicine is focussed more on prophylaxis than on treatment. The changes in food habits and lifestyle paves way for the derangement of mukkuttram, which is the root cause for several ailments. So now it becomes necessary to have pinpoint knowledge in diagnosing and treating the disease.

Pitha Perumpaadu which is caused by an increase in Pitha kuttram was treated in such a way that the trial medicines given normalises the elevated Pitha Kuttram. The disturbed Vatha and Kabha kuttram was also brought back to the normal condition.

Treatment is given not only for the recovery of diseases but also for its prevention and rejuvenation. They are

1. Kaappu (Prevention)
2. Neekkam (Treatment)
3. Niraivu (Restoration)

KAAPPU (Prevention)

Preventive aspect is very much stressed in Siddha literature.

**“kUe;njd Ntz;lthk; ahf;iff; fUe;jpa
jw;wJ Nghw;wp Az;zpd;”**

– jpUf;Fws;

Dietary habits are highlighted by Thiruvalluvar in these lines. There should be sufficient time interval between successive intake of food so that they are well digested and passes down to the intestine.

This is perhaps a prophylactic measure.

NEEKKAM (Treatment)

Treatment aspect should be based on the derangement of kuttram and on normalising the altered kuttram.

Treatment is based on

- ❖ To bring the tridosha to normal
- ❖ To treat the disease according to the symptoms through medicines
- ❖ To increase the natural immunity

This fact is mentioned in “Theraiyar Vemba” as

**“Nehahsp gz;bjde; Neha;f;F kUe;jpila
Ndahd ehy;t hplkhJk; - J}akUe;
jpd;Fznkd; whjp apak;gpdh uhfkj;jpd;
ew;Fzkh NahJfpNwd; ehd;”**

– Njiuah; ntz;gh> gf;fk; : 150

LINE OF TREATMENT

For Pitha Perumpaadu the line of treatment is as follows.

1. Administration of Internal medicines
 - a. To stop excessive menstrual bleeding
 - b. To treat anaemia and other relevant symptoms and advise to take Iron enriched diet
2. Pathiyam that includes diet restriction and actions. It normalises the vitiated humours and helps to maintain a longer medicine action.
3. Advice to maintain physical hygiene
4. Improving general health and nutrition
5. Yoga therapy to strengthen the pelvic organs and musculature
6. Pranaayama therapy to normalise the thatthuvas
7. Health Education / awareness regarding the physiological changes that occur during menstrual cycle to be given. This helps to minimize psychosomatic problems.
8. Advice to reduce stress and proper rest & relaxation

9. To take rich iron and fibre containing diet.

PATHIYAM

Proper dietic regimen enhances the effect, bioavailability of the medicine and helps to maintain good health. This form of medical advice in Siddha is termed as Pathiyam which is very important in Siddha System of medicine. If dietic regimen is not followed properly, certain foods may become incompatible and antagonize the medicine effect and produce harmful effects to the body.

The use of Pathiyam is explained in the following verse:

**“gj;jpaj;jp dhNy gyZz;lh Fk;kUe;J
gj;jpaq;fs; Nghdhw; gyd;NghFk; - gj;jpaj;jpw;
gj;jpaNk ntw;wpjUk; gz;bJuf; fhjypdhw;
gj;jpaNk Aj;jpnad;W ghh;”**

– Njiuah; ntz;gh> gf;fk; : 159

**“cyjpypr;rh gj;jpaq;fz; gPh;\$u khq;fh
ayfpdikf; fha;nfhj; jtiu – fyfKdp
ke;jtif \$o;g;ghz;l khfLFnfhs; nsd;NwhJ
kpe;jtif aPj;Jd;g Nj”**

- rpfpr;rhu;djPgk;-fz;Zrhkpg;gps;is> gf;fk; : 309

ghfw;fha;> khq;fha;> fj;jphpf;fha;> nfhj;jtiu> fy;ahzG+rzpf;fha;>
mfj;jpf;fPiu> ke;jKs;s gjhh;j; j tiffs;> fLF> vs; Kjypatw;iw ePf;fp gpwtw;iw
nfhs;tJ ,r;rhgj;jpak;.

gj;jpa gjhh;j;jq;fs;

DIET

In Pathartha Guna Chinthamani, following diets are advised.

**“nghd;dhq; fhzp rpWfPiu
Gjpa eWnea; tuhy;Fwit
nrhd;Ndhq; Nfhitf; fha;tw;wy;
Rz;il atiug; gpQ;RINd
gd;dh mg;ig nts;Ss;sp
ghpa KUq;if ,sk;gpQ;Rk;
ed;dPh; tpisj;j rpWgaW
ed;khq; fha;f;Fs; gpQ;Red;Nw”**

-rpj;j kUj;Jthq;fr; RUf;fk;> gf;fk; : 413

nghd;dhq;fhzp> rpWfPiu> Gjpa nea;> tuhy;> Fwit Nfhitf;fha;>
Rz;iltw;wy;> mtiug;gpQR> nfht;it> nts;isg;G+z;L> KUq;ifg;gpQ;R>
rpWgaW> khq;fha;gpQ;R Kjyptw;iw cl;nfhs;s Ntz;Lk;.

**“mj;jpg;gpQ;R fUthio
mjd;wd; gpQ;R G+thFk;
fj;jpj; jphpAk; Ch;f;FUtp
fhil AINd rptyhik
Rj;j khq;fha; eWk;gUg;Gk;
RwhkPd; jpUf;iff; fUthlhk;
gj;jpaj;jpy; ,itjpug;
gr;irkPd;fs; gif ahNk”**

-rpj;jkUj;Jthq;fr;RUf;fk;> gf;fk; : 414

mj;jpg;gpQ;R> thiog;G+> gpQ;R> Ch;f;FUtp> fhil> fTjhhp> Mik>
khq;fha;g;gUg;G> RwhkPd;> jpUf;iff; fUthL Kjypad MFk; nghUl;fshFk;.

YOGA

Yoga helps us directly to hold physical forces in balance and indirectly to develop mental and spiritual powers. Yoga practice tone up the pelvic organs and muscles and promote good circulation. Minor structural and functional defects of the body can be rectified by the systemic practice of Yogasaanas and Praanayamas.

The following Aasanas are advised in Menorrhagia

1. Suryanamaskara
2. Bhujangasana
3. Shalabhasana
4. Dhanurasana
5. Paschimottanasana
6. Chakrasana
7. Sarvangasana
8. Halasana
9. Viparita Karni Asana

Pranaayama - Abdominal breathing and Naadi Shodhana
Diet - Vegetarian diet with fresh fruits and Salads
Precautions - Avoid strenuous and inverted postures while menstruating.

NIRAIVU (RESTORATION)

LIFESTYLE MODIFICATION:

In “**Theraiyar Pinianugaavithi**” certain traditional principles of prevention are mentioned. In addition “**Sarabenthirar**” prescribes a few rules to be followed at the time of the menstrual periods.

DONT’S

- ❖ Avoid makeups
- ❖ Avoid anchanam for the eyes
- ❖ Avoid purgatives
- ❖ Avoid heavy work
- ❖ Avoid activities like jumping, too much of crying and laughing
- ❖ Avoid emotional stress of any cause
- ❖ Avoid tobacco chewing or snuff
- ❖ Avoid strong tea & coffee

- ❖ Avoid fast food and spicy items
- ❖ Avoid excess salt, spices, sweets and fat foodstuffs

DO'S

- ❖ Advice to take plenty of fibre rich foods like fruits, greens, nuts and leafy vegetables.
- ❖ Advice to take Iron enriched greens, vegetables and cereals. Iron containing vegetables and fruit supplementation (100mg/day) prevents anaemia.
- ❖ Vit. 'C' enriched diet which ensures Iron absorption and Capillary constriction.
- ❖ Daily consumption of dates supports the therapy.
- ❖ Salt restricted diet.
- ❖ Reducing Caffeine, Sugar and alcohol intake may be beneficial.
- ❖ Reduce stress.
- ❖ **Hip bath** – Hot water hip bath as routine practice should be taken for 10 minutes at temperature of 50°C –60°C.
- ❖ Gentle exercises such as deep breathing exercises, progressive muscle relaxation, range-of-motion exercises to keep the joints mobile and slow relaxed walking promotes good oxygenation and circulation and can even help to increase energy.

Prevention of disease is also achieved by following proper diet and good habits. Proper diet not only means the intake of nutritious diet but also abstinence from edible substances which are injurious to the health.

The line of treatment aims at bringing back the affected thaathus to normal by the administration of internal medicine.

Medicines are

1. Sadhurmuga chooranam - 2gm thrice a day as decoction in hot water, after food. (During menstrual periods)
2. Soothra Abhayaathy legium - 5gm twice a day after food (After menstrual periods)

Finally, reassurance of the patient gives her a moral boost thereby speeding up the recovery.

MODERN ASPECT
ANATOMY OF FEMALE REPRODUCTIVE SYSTEM

The female reproductive organs or genitalia are divided into external and internal organs.

External Genitalia

Synonym : Vulva

Pudendum

The vulva is an ill-defined area which in gynaecological practice comprises the whole of the external genitalia and conveniently includes the perineum. The external genitalia collectively known as the vulva consists of,

Monsveneris	Vestibule of the vagina
Labia majora	Bulb of the vestibule
Labia minora	Greater vestibular glands
Hymen	Clitoris

Vulva is bounded anteriorly by the mons veneris, laterally by the labia majora and posteriorly by the perineum.

Internal Genital Organs

The internal organs of the female reproductive system lie in the pelvic cavity and consist of the vagina, uterus, two uterine tubes and two ovaries.

Vagina

The Vagina is a fibromuscular membranous sheath lined with stratified epithelium, communicating the uterine cavity with the exterior at the vulva. It runs obliquely upwards and backwards at an angle of about 45° between the bladder in front and rectum and anus behind. The vagina constitutes the excretory channel for the uterine secretion and menstrual blood.

Uterus

The uterus (womb) is a thick walled hollow, muscular organ flattened anteroposteriorly. It lies in the pelvic cavity between the urinary bladder in front and the rectum behind. The uterine tube opens into its upper abdominal part and at its perineal end its cavity communicates with that of the vagina.

Measurement

The uterus is a pear-shaped organ, measuring about 7.5 cm in length, 5cm in breadth at its cranial part and nearly 2.75 cm in thickness. It weighs about 30 to 40 gms.

Position

Normal position – Anteversion and Anteflexed. Anteversion means that the uterus leans forward.

Anteflexion means that it is bent forward almost at right angles to the vagina with its anterior surface resting on the urinary bladder.

The uterus usually inclines to the right (dextro-rotation) so that the cervix is directed to the left (Levo-rotation) and comes in close with the left ureter. In about 15-20%, normally the uterus remains in retroverted position.

Parts of the Uterus

Body or Corpus

Isthmus

Cervix

Body

The triangular body lies between the openings of the uterine tubes and the isthmus. The body is further divided into fundus, the part which lies above the openings of the uterine tubes. The superolateral angles of the body of the uterus project outwards from the junction of the fundus and body called the cornua of the uterus. The uterine tube, round ligament and ligament of the ovary are attached to each cornu.

Isthmus

The Isthmus is a constricted part measuring about 0.5 cm situated between the body and the cervix. The part cranial to the isthmus is the body, caudal to it the cervix.

Cervix

The Cervix is the lowermost part of the uterus lying between the isthmus and the vagina. It is about 2 cms long. It is divided into a supra vaginal part – the part lying above the vagina and a vaginal part which lies within the vagina each measuring 1.25 cm..

Structure of the Uterus

The walls of the uterus are composed of three layers of tissue an external or serous, a middle or muscular, an internal or mucous coat from outside inwards.

Perimetrium (Serous coat)

The serous coat is derived from peritoneum, which is distributed differently on the various surfaces of the uterus Anteriorly it extends over the fundus and the body where it is reflected on to the upper surface of the urinary bladder. This fold of peritoneum forms the Vesicouterine pouch.

Posteriorly, the peritoneum extends over the fundus, the body and the cervix, then it is reflected on to the rectum to form the Rectouterine pouch.

Laterally only the fundus is covered because the peritoneum forms a double fold with the uterine tubes in the upper free border. This double fold is the Broad ligament which at its lateral end attaches the uterus to the sides of the pelvis.

Muscular coat (Myometrium)

It is the thickest layer in the uterine wall. It forms the chief bulk of the substance of the uterus. It is thick opposite the middle of the body and fundus and thin at the orifices of the uterine tubes. Myometrium consists of bundles of

unstripped muscular fibres intermix with areolar tissue, blood vessels, lymphatic vessels and nerves. Muscle fibres are continued on to the uterine tube, the round ligament and the ligament of the ovary, some passing at each side into the broad ligament and others running backwards from the cervix into the uterosacral ligaments.

Mucous membrane (Endometrium)

The mucous lining of the cavity is called endometrium. It consists of lamina propria and surface epithelium.

The surface epithelium is a single layer of ciliated columnar epithelium. The lamina propria contains stromal cells, endometrial glands, vessels and nerves. The glands are simple and tubular lined by mucus secreting non-ciliated columnar epithelium which penetrate the stroma and sometimes even enter the muscle coat. All the components are changed during menstrual cycles. The endometrium is changed to decidua during pregnancy.

BLOOD SUPPLY OF UTERUS

Arterial Supply

The arterial supply is by the Uterine arteries which are branches of the Internal iliac arteries. They pass up the lateral aspects of the uterus between the two layers of the broad ligaments. They supply the uterus and uterine tubes and join with the ovarian arteries to supply the ovaries. Branches pass downwards to anastomose with the vaginal arteries to supply the vagina.

Venous drainage

The veins are large and follow the same route as the arteries and eventually drain into the Internal iliac veins.

Lymphatic drainage

There are deep and superficial lymph vessels which drain lymph from the uterus and the uterine tubes to the aortic lymph nodes and groups of nodes associated with the iliac blood vessels.

Nerve Supply

The nerve supply of the uterus is derived principally from the sympathetic system and partly from the parasympathetic system. Sympathetic components are from T₅ – T₆ (motor) and T₁₀-L₁(sensory) spinal segments. The parasympathetic system is represented on either side by the pelvic nerve which consists of both motor and sensory fibres from S2, S3.

Supports of the Uterus

The uterus is supported in the pelvic cavity by surrounding organs, muscles of the pelvic floor and ligaments that suspend it from the walls of the pelvis.

The Pelvic Musculature:

The pelvic muscles of importance in gynaecology are those of the pelvic floor. These muscles are grouped into three layers.

- (i) Those of the pelvic diaphragm – Two levator ani muscles
- (ii) Those of the urogenital diaphragm and
- (iii) Superficial muscles of the pelvic floor.

Ligaments

The principal ligaments of the uterus are the broad ligaments, the round ligaments, the uterosacral ligaments and the cardinal ligaments. In addition, certain peritoneal folds are called ligaments: the vesicouterine (Anterior ligament of Douglas), rectouterine (Posterior ligament) and sacrogenital ligaments.

Functions of the Uterus

After puberty the uterus goes through a regular cycle of changes, the menstrual cycle, which prepares it to receive, nourish and protect a fertilized ovum. It provides the environment for the growing fetus, during the 40-week gestation period, at the end of which the baby is born. The cycle is usually regular lasting between 26 and 30 days. If the ovum is not fertilized, a new cycle begins with a short period of bleeding (menstruation).

PHYSIOLOGY

Since menstrual problems are one of the commonest presentations to the physicians, the understanding of the physiological spectrum of menstruation is essential to tackle such problems.

Menstrual Cycle

Menstruation is the periodic and cyclical discharge of blood, mucus and cellular debris from the uterine mucosa, which occurs due to progesterone withdrawal after ovulation in non fertile cycles. These cyclic events which take place in a rhythmic fashion during the reproductive period is called menstrual cycle. It is initiated in response to changes in the hormonal production by the ovaries which themselves are controlled by the pituitary and hypothalamus. It takes place at approximately 28 day intervals between menarche (onset of menstruation) and menopause (cessation of menstruation)

Duration of Menstrual Cycle

The duration of menstrual cycle is usually 28 days. The cycle length may vary from 21 days to 35 days.

Clinical features of normal Menstruation

The amount of menstrual flow is 30ml. Duration of flow is 2-5 days. In healthy menstruation the blood which is discharged does not coagulate. Because normally the blood is coagulated as it is shed from the endometrium, but thereafter it is liquefied by fibrinolytic activity (plasminogen activator). Hence history of passing clots during menses indicates abnormally excessive bleeding (more than 80 ml).

Changes during Menstrual Cycle

During each menstrual cycle, series of changes occurs in ovary and accessory sex organs – Uterus, vagina and cervix

Ovarian Changes

During each menstrual cycle ovarian changes occur in two phases.

- A. Follicular phase and
- B. Luteal phase

Follicular Phase

This extends from the 5th day of the cycle until the time of ovulation which takes place on the 14th day. During this phase, the primordial follicle of the ovary develops into a graffian follicle. On the 7th day of the menstrual cycle, one of the follicle outgrows the others, which develop into graffian follicle. On the 14th day of the menstrual cycle the graffian follicle is ready to release the ovum.

Ovulation

Ovulation is the process in which there is rupture of graffian follicle with consequent discharge of ovum into the fallopian tube influenced by leutinising hormone. The ovulation occurs usually on the 14th day of menstrual cycle in a normal cycle of 28 days.

Luteal Phase

This phase extends between 15th and 28th day of menstrual cycle. After ovulation, the ruptured follicle develops into a yellow body called corpus luteum.

Corpus Luteum

The corpus luteum reaches the maximum development about one week after ovulation. The corpus luteum acts as a temporary endocrine gland. It secretes large quantity of progesterone and small amount of oestrogen. Leutinizing hormone influences the secretion of these two hormones.

If the ovum is not fertilized, the corpus luteum degenerates into the corpus luteum menstrualis. The cells decrease in size and the corpus luteum

becomes smaller and involuted. If the ovum is fertilized and pregnancy occurs, the corpus luteum persists and increases in size. It is transformed into corpus luteum gravidalis or corpus luteum of pregnancy.

Endometrial cycle :

Every month the uterus prepares for a pregnancy by generating a thick bed of secretory endometrium for the implantation. Due to failure of fertilization or implantation of zygote, the menses starts. Hence menstruation is described as **“weeping of a disappointed uterus for a baby”**.

The endometrium has two principal components, the glandular epithelium and supporting stromal cells. During menstrual cycle, the epithelium differentiates to form three functional zones. The basalis, spongiosum and stratum compactum.

The endometrial events can be divided into three phases.

- 1. Menstrual phase (Destruction phase, Phase of bleeding or Menstruation)**
- 2. Proliferative phase (Preovulatory phase, Follicular phase or Postmenstrual phase, Oestrogen phase).**
- 3. Secretory phase (Postovulatory, Progestational phase, Premenstrual phase).**

Menstrual Phase :

The beginning of each endometrial cycle is characterised by complete shedding of the spongiosum, and stratum compactum layers (Day 1) during menstruation which lasts for 3-5 days. The fall in plasma progesterone and oestrogen levels due to degeneration of corpus luteum leads to withdrawal of hormonal support of the endometrium, which causes menstruation. The first event is profound vasoconstriction of uterine blood vessels, which leads to decreased supply of oxygen and nutrients to endometrium. Disintegration starts in the entire lining except the basalis layer that will regenerate the endometrium in the next cycle. After the initial period of vasoconstriction, the endometrial

arteriole dilates resulting in haemorrhage through vascular capillary wall. The menstrual flow consists of blood mixed with endometrial debris and mucus.

Proliferative phase :

Menstrual flow ceases and endometrium begins to thicken as it regenerates from the basalis layer. The period of growth lasts for 10 days – between the cessation of menstruation and occurrence of ovulation (from 5th day or 6th day to 14th day). The ovarian follicular phase corresponds to menstrual proliferative phase of endometrial cycle. The uterine changes during the menstrual cycle are caused by the changes in plasma concentration of oestrogen and progesterone. During proliferative phase a rising plasma oestrogen level will lead to reconstruction and growth of endometrium. Both glandular and stromal component achieve proliferation which peaks at 8-10 days of cycle and corresponds to peak oestrogen level. During this phase the endometrium grows from approximately 0.5 mm to 3-5 mm in thickness.

Secretory phase :

It begins on day 15 and ceases 5-6 days prior to menstruation. Soon after ovulation the endometrium begins to secrete various substances and the part of the menstrual cycle between ovulation and the onset of next menstruation is called the secretory phase. The circulating progesterone which is secreted by the corpus luteum after ovulation acts upon the oestrogen primed endometrium to convert it to actively secreting tissue. Its glands become coiled and filled with glycogen. The blood vessels become more numerous and densely coiled. Various enzymes are secreted in the glands and connective tissue.

The endometrial growth ceases on (22nd or 23rd day of cycle) prior to menstruation in an infertile cycle. The regressive changes in the endometrium are pronounced 24-48 hours prior to menstruation. The thickness of the endometrium reaches its highest 5-6 mm.

Mechanism of menstrual bleeding :

The degenerative changes are predominantly of vascular origin. Stasis of blood and spasm of the arterioles lead to the damage of the arterial walls. Phase of relaxation leads to escape of blood out of the vessels through the damaged walls. The bleeding occurs from the broken arteries, veins and capillaries and also from the stromal haematoma. The blood along with the superficial functional layer is shed into the uterine cavity. The blood coagulates in the uterine cavity but soon liquefies by plasmin unless the bleeding is very brisk and rapid. The menstrual flow stops as a result of combined effect of prolonged vasoconstriction, myometrial constriction and local aggregation of platelets with deposition of fibrin around them. Resumption of oestrogen secretion to clot formation over the decapitated stumps of endometrial vessels.

Role of Prostaglandins :

Arteriolar constriction and endometrial necrosis are caused by prostaglandins. The endometrium and partly the myometrium synthesize the prostaglandins from arachidonic acid by the enzyme cyclo-oxygenase.

Different prostaglandins have got different action.

1. PGF_2 causes myometrial contraction and vasoconstriction. It plays a dominant role in normal cycle.
2. PGE_2 causes myometrial contraction but causes vasodilatation.
3. PGI_2 (Prostacyclin) causes myometrial relaxation and vasodilatation. It also inhibits platelet activity.

Thus the menstrual pain and blood flow are probably related to the relative proportion of different prostaglandins present in the endometrium.

Hormones in relation with menstrual cycle :

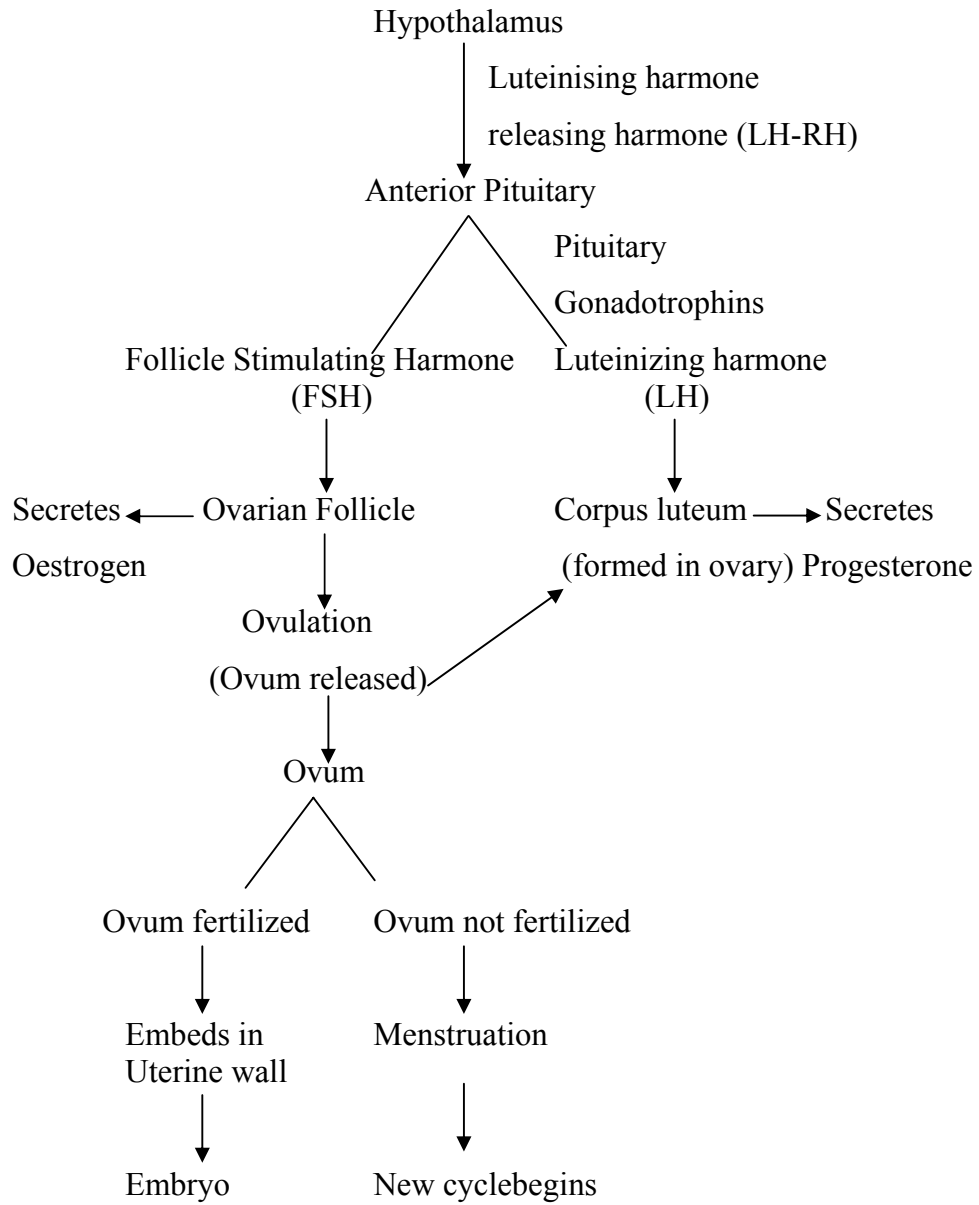
Hormonal interplay in normally menstruating women includes:

- Growth and development of the Graffian follicle
- Ovulation
- Maintenance and demise of corpus luteum

- Endometrial growth and shedding
- The pelvic clock in the ovary, regulated by the endocrine messages from hypothalamus – pituitary, is essential for successful reproduction and for generating a 28-day menstrual cycle.

Oestrogen secreted in the follicular phase produces proliferative changes in the endometrium and induces receptors for progesterone. In luteal phase, progesterone acts on the oestrogen primed endometrium having sufficient number of receptors and produces secretory changes. In the infertile cycle, with the fall of oestrogen and progesterone, the endometrium becomes unsupported to the hormones and degeneration occurs leading to menstruation.

FEMALE REPRODUCTIVE HORMONES IN MENSTRUAL CYCLE
HYPOTHALAMUS – PITUITARY – OVARIAN AXIS (HPO axis)



MODERN ASPECT MENORRHAGIA

Synonym

Hypermenorrhoea

Menostaxis

In Greek, men-month (lunar month),
rhegnai – to burst forth.

Definition

The menstrual cycle is unaltered but the duration and quantity of the menstrual blood loss are increased.

Important characteristics in menorrhagia

1. Excessive flow at the time of an expected period.
2. Blood loss of 80ml or more since upper limit of normal menstruation is taken as 80 ml per menses.
3. Abnormality in bleeding ie. Presence of blood clots
4. Menorrhagia is one of the commonest cause of Iron deficiency Anaemia. 9-14% of women lose more than 80ml per period and 60% of these women are actually anaemic.

Incidence

Menorrhagia is a common gynaecological problem accounting for nearly 15% of the outpatient attendance and almost 20% of the gynaecological operations. One fifth of women have the problem of heavy menstrual blood loss at some period during their reproductive life.

Pathophysiology

Between menarch and menopause, 400-500cycles occur in an average female menstruation. It has three clinical characteristics:-

The interval or cycle length, the duration of flow and the amount of blood loss. Duration of flow and amount of blood loss are causes for concern in

menorrhagia. A history of heavy, regular cyclical menstrual blood loss over several consecutive menstrual cycles without additional irregular bleeding suggests menorrhagia.

Mechanisms of control of menstrual blood loss

The tissue components of the endometrium are surface epithelium and associated glands with a connective tissue stroma in which is embedded on an elaborate vascular tree. The endometrial surface are large (10-45 cm²) indicating that haemostasis during menstruation is usually very efficient.

Factors involved in the control of menstrual blood are

- Haemostasis
- Vasoconstriction
- Endometrial repair

Derangement of any of these mechanisms is likely to lead to excessive menstrual loss.

Epidemiology of menstrual abnormality

- ⇒ Age does not influence the menstrual blood loss
- ⇒ Hereditary influence has been demonstrated
- ⇒ Parity plays an important factor. Parous women have a greater menstrual blood loss than nulliparous women.
- ⇒ Uterine pathology is a well-documented cause for menorrhagia than endometrial pathology.

Aetiology of Menorrhagia

Abnormal uterine bleeding (AUB) may be due to organic causes or as a result of the dysfunction of the hypothalamus – pituitary – ovary endometrial axis – designated as Dysfunctional Uterine Bleeding (DUB).

Abnormal Uterine bleeding is clinically grouped as bleeding abnormalities in childhood and adolescence, in the reproductive age group, in perimenopause and post menopause.

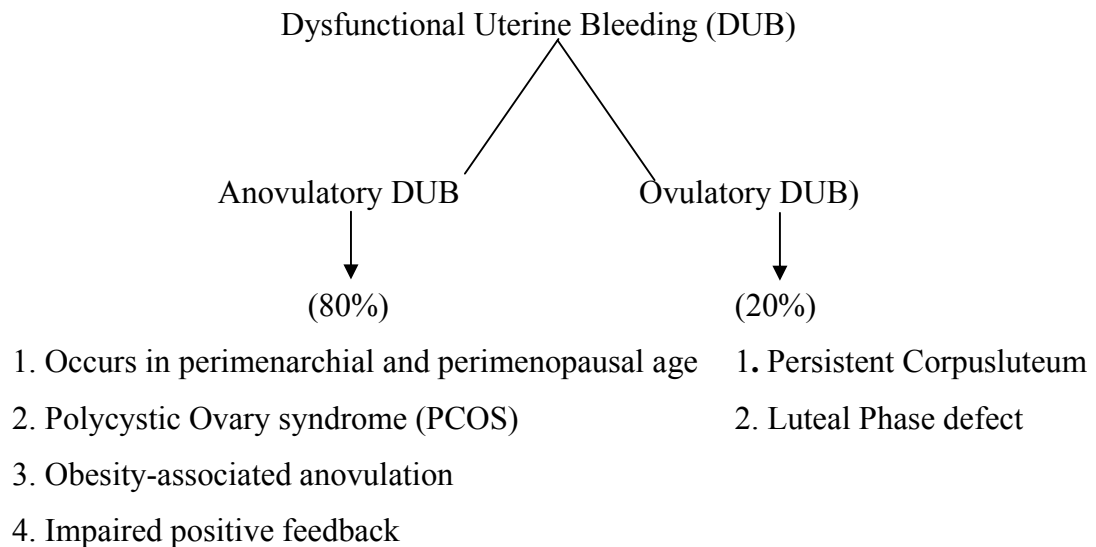
Dysfunctional Uterine Bleeding (DUB) is a symptom complex that includes any condition of abnormal uterine bleeding in the absence of pregnancy, neoplasm, infection and other pathology of the female genital tract as well as other systemic causes of abnormal bleeding. Such bleeding occurs due to endocrinologic dysfunction.

The causes of menorrhagia fall under four categories:

1. Dysfunctional Uterine Bleeding (DUB)
2. Pelvic pathology
3. Coagulation disorders
4. General causes
5. Iatrogenic

1. Dysfunctional Uterine Bleeding (DUB)

Occurs due to abnormalities of the Hypothalamus – Pituitary – Ovarian (HPO) axis.



2. Pelvic Pathology

- a) Uterine Causes - Uterine fibroids (submucous or intramural), polyps, adenomyosis, endometrial and myometrial polyps, endometritis, endometrial hyperplasia.

- b) Chocolate cysts of Ovaries, Polystic Ovarian diseases, Ovarian feminizing tumours, cervical polyps, Endometriosis.
- c) Retroverted uterus & Retroflexed uterus.
- d) Pelvic Inflammatory Disease (PID), Salphingo- oophoritis, Genital tuberculosis, Erosions.
- e) Immediate Puerperal and Post- abortal periods.
- f) Congenital deformities like Bicornuate uterus.
- g) Neoplastic conditions like Carcinoma cervix, Endometrial carcinoma and Endometrial Hyperplasia.
- h) Complications of pregnancy (Abortion, Ectopic pregnancy, Trophoblastic disease).

3.Coagulation Disorders

Coagulation defects include

- (i) Idiopathic thrombocytopenic purpura (ITP)
- (ii) Von Willebrand's disease
- (iii) Glanzmann's thrombasthenia
- (iv) Leukaemia

Sometimes Menorrhagia may be the only symptom of an inherited bleeding disorder.

4.General Causes

- a. **Severe anaemia whether cause or effect, is often associated with menorrhagia and its correction alone may control the uterine symptom.**
- b. General tuberculosis may cause Menorrhagia initially but in advanced stage, Amenorrhoea ensues.
- c. Endocrine disorders
 - i. Thyroid Dysfunction

In Hypothyroidism – Myxedema

Hyperthyroidism in initial stages and in Thyrotoxicosis

- ii. In Pituitary disorders – Acromegaly, Cushing’s syndrome
- d. Psychological disorders, emotional upset, matrimonial disharmony and anxiety states are undoubtedly important factors.
- e. Liver Dysfunction – thereby failure to conjugate inactivate oestrogen.
- f. Severe Hypertension, Diabetes mellitus, chronic nephritis

5. Iatrogenic

- a) Oestrogen prescribed for the relief of non-gynaecological conditions.
- b) Both oestrogen and progesterone administration.
- c) Intra uterine contraceptive devices (IUCD) 10-20% of women wearing the device suffer from menorrhagia in the first few months.

Pathogenesis in Abnormal Uterine Bleeding (AUB)

It is generally caused by conditions affecting the uterus or its vascularity. Whenever the uterine endometrial surface is enlarged, the bleeding surface is increased, thus contributing to excessive bleeding. Such conditions prevail in women suffering from uterine fibroids, adenomyosis, uterine polyps, myohyperplasia or endometrial hyperplasia.

Menorrhagia is also seen women with increased uterine vascularity as in chronic pelvic inflammatory disease and pelvic endometriosis.

Clinical presentations of Abnormal Uterine Bleeding

Abnormal uterine bleeding is clinically grouped as bleeding abnormalities in adolescence, in the reproductive age group and in perimenopause women.

Abnormal Uterine Bleeding in Adolescent girls

1. Due to anovulation and oestrogen excess which occurs secondary to a lack of maturation of the negative feedback in the HPO axis and may settle by itself within 2-3 years of menarche.

2. Polycystic Ovarian Disease with anovulatory bleeding.
3. Coagulation defects is the cause upto 20%
4. Conditions like Bicornuate Uterus, Genital tuberculosis, functioning Ovarian tumour
5. Thyroid dysfunction

Abnormal Uterine Bleeding in the Reproductive age group

1. Organic conditions – Fibroid uterus, Endometrial polyp, Endometriosis and pelvic inflammatory disease
2. Common causes – Pregnancy – related conditions like ectopic pregnancy, abortion and gestational trophoblastic disease
3. Polycystic ovary syndrome and obesity causing hyper-oestrogenic anovulatory menorrhagia
4. Neoplastic conditions like carcinoma cervix, endometrial hyperplasia and endometrial carcinoma
5. Both Hypo and Hyperthyroidism
6. Hepatic and renal failure
7. Contraceptives use.

Abnormal bleeding in Perimenopausal women

1. Organic conditions like endometrial polyps and submucous fibroids (18-20%)
2. Endometrial cancer (3-5%)
3. Endometrial hyperplasia (1-7%)

In fibroids more than 50% of the women have the menstrual blood loss of more than 200ml.

4. Carcinoma of cervix, vagina and endometrium.

Pathogenesis of Dysfunctional Uterine Bleeding

The aetiology is purely hormonal and the hypertrophy and hyperplasia of the endometrium are induced by a high titre of oestrogen in the circulating blood.

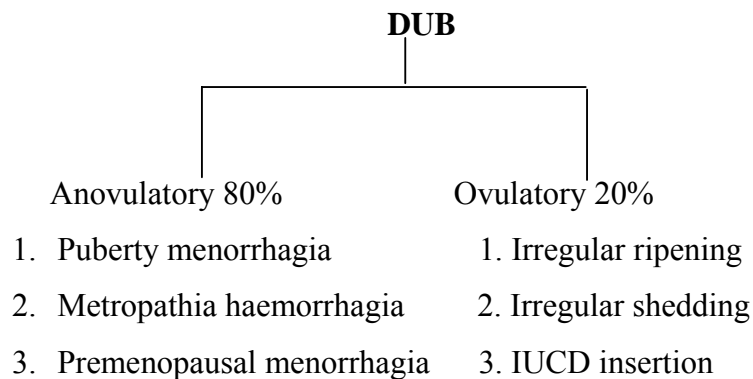
Progesterone is responsible for secretion of PGF₂ alpha in anovulatory cycles, absence of progesterone causes absence or low level of PGF₂ alpha and can cause menorrhagia. Tissue plasminogen activator (TPA), a fibrinolytic enzyme is increased and this increased fibrinolysis causes menorrhagia.

In DUB, anovulation results in a lack of progesterone and the resultant excessive proliferative response to unopposed oestrogen causes stromal cell growth that exceeds the structural integrity of its supporting matrix, and the endometrium breaks down with irregular heavy bleeding.

Classification of DUB

Dysfunctional uterine bleeding is classified into two types

- (i) Anovulatory (80%)
- (ii) Ovulatory (20%)



Metropathia haemorrhagica

Synonym: Cystic glandular hyperplasia, Schroeder's disease

This type of abnormal bleeding is usually seen in premenopausal women. There is slow increase in the secretion of oestrogen but no negative feedback inhibition of FSH. There is no ovulation, the endometrium is under the influence of unopposed oestrogen. After a variable period, the oestrogen level falls resulting in endometrial shedding with heavy bleeding. Bleeding occurs because the endometrial growth have outgrown their blood supply → necrosis → haemorrhage.

Irregular ripening of the endometrium

There is deficiency in corpus luteum function. There is inadequate secretion of both oestrogen and progesterone to support the endometrial growth. Slight bleeding occurs and continues prior to the start of proper flow. The glands are not fully ripened, the epithelium being immature for the time of the cycle and the stroma does not show the changes of the late secretory phase. Breakthrough bleeding occurs before the actual menstruation in the form of spotting or brownish discharge.

Irregular shedding of the endometrium

Occurs as a result of persistent or overactivity of corpus luteum function. There is persistent secretory changes. Normally regeneration of the endometrium is completed by the end of the third day of menstruation. In irregular shedding, desquamation is continued for a variable period with simultaneous failure of regeneration of the endometrium. There may be incomplete withdrawal of LH even on 26th day of cycle causing persistent secretion of progesterone. The menstruation comes on time, prolonged but not heavy.

Endometrial pattern in DUB

In majority (60%) the endometrium is normal in every aspect. In about 30 percent, the endometrium is hyperplastic and in the remaining there are evidences of irregular shedding, irregular ripening or atrophic pattern.

Diagnosis of Menorrhagia

Long duration of menstrual blood flow, passage of big clots, or flooding (staining the underwear) use of increased number of thick sanitary pads, pallor and low level of haemoglobin gives an idea about the correct diagnosis and magnitude of menorrhagia.

Examination of a menorrhagia patient

I. History taking

- a. **Menstrual history** - Amount of menstrual blood loss is estimated by means of the number of sanitary pads she uses, the passage of blood clots or flooding. The age of menarche, regularity of the menstrual cycles and the duration of blood flow are important.
- b. **Contraceptive History** – If the patient is using any contraceptive method or she has done so in the past
- c. **Past Obstetric History** – Details of previous pregnancies A previous history of termination of pregnancy, traumatic delivery, prolonged labour or ectopic pregnancy should be recorded.
- d. **Past Medical History** – Relevant medical disorders – Systemic, metabolic or endocrinal should be enquired
- e. **Past Surgical History** - This includes general, gynaecological or obstetrical surgery. Any histopathological report or relevant investigation related to the previous surgery is most often helpful.
- f. **Medicine History/Allergies** – Knowledge of medicine history is essential not only to identify a cause effect relationship but also to avoid drug interactions.
- g. **Social History & Family History** – Marital status, occupation, diet, living conditions, access of transport are noted.

II. General Examination

The general condition of the patient, her mental status and disposition may give a clue to the underlying pathology.

III. Gynaecological Examination

This includes Abdominal examination and Pelvic examination ie. Gynaecological examination.

Abdominal Examination

This is an integral part of a gynecological examination. Inspection, Palpation and Percussion are done to determine any pathology or ill-defined mass.

Pelvic Examination

- (i) Inspection of the external genitalia
- (ii) Vaginal Examination
 - Inspection of the cervix and vaginal walls
 - Palpation of the vagina and cervix
- (iii) Bimanual Examination of the Pelvic Organs
 - Visualisation of the vagina and cervix with a Speculum
 - Bimanual examination of the uterus and adnexa

Position

Commonly in dorsal position.

Alternative is the lateral position or Sim's position

Lithotomy position is used when various procedures are carried out.

IV. Rectal or Rectoabdominal Examination

Preferably in Virgins. Also helpful in the diagnosis of endometriosis, parametritis and carcinoma cervix.

V. Recto Vaginal Examination

It is very useful in assessing pathologies in the recto vaginal septum and parametrium.

INVESTIGATIONS

The investigation aims at

- To confirm the menstrual abnormality as stated by the patient
- To exclude the organic pelvic pathology
- To identify the possible aetiology of menorrhagia
- To work out the definite therapy protocol.

1. Complete blood count

- Haemoglobin estimation
- Total and differential leucocyte count
- Bleeding time, clotting time and platelet count if not responding to usual therapy
- Blood group and Rh factor

2. In suspected cases of thyroid dysfunction, Serum T3, T4 and TSH estimation
3. Fasting, Random and Postprandial Blood sugar estimations
4. Urine analysis – Routine tests
5. Blood tests for VDRL, HIV I & II
6. Kidney function tests – Blood urea, Serum creatinine and Uric acid
7. Liver function tests in suspected cases
8. Ultrasonogram of Abdomen and Pelvis

Special Investigations

1. Papanicolaou Test (Pap test or Surface biopsy) to rule out malignancy.
2. Diagnostic Uterine Curettage (D & C) is indicated
 - To exclude the organic lesions in the endometrium
 - To determine the functional state of the endometrium
3. Endometrial Biopsy – In diagnosing tubular endometritis and corpus luteal phase defect.
4. Hormonal Assays:- The commonly assayed hormones include FSH, LH, T3, T4, TSH, progesterone, oestradiol, testosterone, cortisol, aldosterone, dehydro epiandrosterone and androsterodione.

Imaging Techniques

1. X-ray Pelvis either plain or using contrast media
2. Ultrasonogram of abdomen and pelvis to rule out organic and pelvic pathology.

3. Computerised Tomography (CT Scan) to detect lymph gland involvement and organ metastasis in malignancy.
4. Magnetic Resonance Imaging (MRI)
Used when sonar and CT fails to detect the lesion
5. Various gynaecological endoscopy procedures.
 - Laproscopy - Cystoscopy
 - Hysteroscopy - Culdoscopy
 - Colposcopy - Sigmoidoscopy and
 - Tuboscopy - Proctoscopy
6. Laproscopy - Used to diagnose and pelvic mass, Endometriosis Tubal adhesions and Ectopic pregnancy
7. Hysteroscopy - Used to detect Uterine polyp, Fibroids and Intrauterine adhesions.

Management:-

1. General conservative treatment
2. Hormone therapy
3. Surgery

I General Conservative Treatment

1. Rest, sedatives and reassurance should be given.
2. Bed rest is imposed during bleeding phase.
3. Anaemia should be corrected energetically by diet, haematinics and even by blood transfusion.
4. Assurance and sympathetic handling of the psychologic and emotional problems are helpful
5. Oral iron therapy should be given and the response is checked by blood counts. If the response is unsatisfactory, systemic iron therapy is given until anaemia is fully corrected.

II Hormone Therapy

While isolated progesterone therapy is highly effective in anovular DUB, combined preparations of progesterone and oestrogen are effective in Ovular DUB.

In addition to hormones, Non Steroidal Anti Inflammatory Drugs (NSAID) and Antifibrinolytic agents are prescribed.

III. Surgical Management

1. Endometrial resection
 - Transcervical Resection of Endometrium (TCRE)
2. Endometrial ablation
 - Microwave endometrial ablation
 - Thermal Balloon ablation
 - Laser ablation
 - Cryo ablation
3. Hysterectomy
 - Vaginal hysterectomy
 - Laparoscopic Assisted Vaginal Hysterectomy (LAVH)
 - Total abdominal hysterectomy
 - Laparoscopic supracervical hysterectomy

MATERIALS AND METHODS

The clinical study on Pitha Perumpaadu was carried out in the Post-Graduate Department of Pothu Maruthuvam of Government Siddha Medical College attached to Arignar Anna hospital of Indian medicine, Chennai during the period of 2006 to 2008. The study involved 40 female patients.

SELECTION OF CASES

20 female cases in the Inpatient ward and 20 female cases in the Outpatient department of reproductive age group [18-45years] were taken. Before admission all the cases were carefully examined for correct diagnosis and any other co-existing systemic illness if any was ruled out.

Patients having duration of illness from 3months to 2 years were taken for study. 20 patients were admitted as Inpatients and necessary investigations were done and treatment was given with daily followup. After a degree of palliation had been achieved, they were adviced to come to Op department for further follow up. Another 20 patients were treated as Outpatients with regular weekly follow-up. Duration of the treatment was 2-3 consecutive menstrual cycles.

CRITERIA FOR ASSESSMENT

The admission of cases were strictly subjected to redesigned protocol comprising clinical features, investigations, diagnosis and treatment aspects.

The following criteria were taken:

INCLUDING CRITERIA

1. Excessive menstrual bleeding
2. Regular menstrual cycles
3. Prolonged duration
4. Presence of blood clots

5. Anaemia
6. Anorexia

EXCLUDING CRITERIA

1. Females of age group-less than 18yrs and more than 45yrs
2. Bleeding disorders
3. Malignancies like carcinoma of cervix, vagina and uterus
4. Using intrauterine contraceptive devices [IUCD]
5. With endocrine abnormalities

EVALUATION OF CINICAL PARAMETERS

A detailed history of patient's age, occupation, socio-economic status, complaints and its duration are recorded in the case sheet for each and every patient at the time of admission or first visit. Special attention was paid to record the abnormality in menstrual bleeding and amount of blood loss during menstrual cycle. Using of increased number of sanitary pads are also noted. History of any past illness, personal history, menstrual and obstetric history are noted.

CINICAL INVESTIGATIONS:

After taking the history, the patients were subjected to detailed systemic examination.

1. Routine haematological examination which included TC, DC, ESR, HB, Blood Sugar, Blood Urea, Serum Cholesterol were done.
2. Routine Urine examination was done in all patients.

SPECIAL INVESTIGATIONS:

1. Bleeding time and Clotting time was seen in all patients to detect any bleeding disorders
2. In suspected cases, Thyroid profile test was done.
3. Ultrasonogram of Abdomen and Pelvis was done in all patients.

CLINICAL DIGNOSIS BASED ON SIDDHA SYSTEM

The following parameters were followed for the diagnosis of the disease on the basis of Siddha system.

- ⇒ Poriyaal arithal
- ⇒ Pulanaal arithal
- ⇒ Vinaathal
- ⇒ Envagai thervugal
- ⇒ Uyir thaathukkal
- ⇒ Udal thaathukkal

PREPARATION AND ADMINISTRATION OF THE TRIAL MEDICINES

The medicines selected for study were

1. SADHURMUGA CHOORNAM – Reference : Pathaartha
Guna Vilakkam – Moola varkkam Page: 18
2. SOOTHRA ABHAYAATHY LEGIUM – Reference : Agathiyar
Vaidhya Chinthamani Page :254

SADHURMUGA CHOORNAM

Ingredients:

- mj;jpg;gl;il (Ficus glomerata bark)
- ehty;;gl;il (Syzygium jambulanum bark)
- fUNtyk;gl;il (Acacia arabica bark)
- eWtpypg;gl;il (Cordia myxa bark)

METHOD OF PREPARATION

The purified barks were powdered finely and sieved through a thin cloth [vasthirakaayam]. Then it was stored in a airtight container.

Dosage:

2gm thrice a day.

Method of administration :

Put the medicine in boiling water and filtering it after 15 minutes, the decoction was administered.

Indications:

Menorrhagia, Amoebic dysentery, Bacillary dysentery.

SOOTHRA ABHAYAATHY LEGIUM**Ingredients:**

1. fz;lq;fj;jphp Nth;	-	4.5 kg
(Roots of Solanum xanthocarpum)		
2. fLf;fha; (Terminalia Chebula)	-	3.5 kg
3. ePh; (Water)	-	42.4 Litres
4. nty;yk; (Jaggery)	-	3.5 kg
5. VyK; (Elettaria cardamomum)	-	44 gms
6. ,ytq;fk; (Eugenia caryophyllata)	-	44 gms
7. Rf;F (Zingiber officinale)	-	44 gms
8. kpsF (Piper nigrum)	-	44 gms
9. jpg;gpyp (Piper longum)	-	44 gms
10. mjpkJuk; (Glycyrrhiza glabra)	-	44 gms
11. rpWehfg;G+ (Mesua ferrea)	-	44 gms
12. ntl;bNth; (Vetivera zizanooides)	-	44 gms
13. Njd; (Honey)	-	1.3 Litre

Roots of Kandankathiri were cut into pieces. Kandankathiri and Kadukkai were made into a coarse powder, water was added and boiled well upto ¼ th portion and the decoction was filtered. Then the decoction was added with jaggery and boiled well to get the syrup form [Paagupatham]. Ingredients form [5] to [12] were powdered well and were added to the syrup and mixed well to get the legium. Then it was allowed to cool. Honey, as a presevative was added to the legium on the next day and stored in a bottle.

Dosage:

5gm, twice daily

Indications:

Anaemia, vomiting, pain, constipation, pepticulcer, flattulence, bronchial asthma.

EVALUTION OF TRIAL MEDICINES

1. The trial medicines were subjected to preclinical analysis like

Qualitative studies

Toxicological studies

Pharmacological studies.

The studies were conducted in the

DEPARTMENT OF PHARMACEUTICAL EDUCATION AND RESEARCH,
DR. C. L. BAID METHA COLLEGE OF PHARMACY, THORAPPAKKAM,
CHENNAI. Details are depicted later.

2. The trial medicines were also evaluated for Statistical analysis of clinical Study [Biostatistics].

CASE SHEET PROFORMA

The observations made from 20 Outpatients and 20 Inpatients with the signs and symptoms of 'Pitha Perumpaadu' and the results of clinical improvement were recorded in separate proforma.

PROPERTIES OF TRIAL MEDICINES

I. SADHURMUGA CHOORNAM

Reference : Pathaartha Guna Vilakkam

(Moola Varkkam)Pg :18

Ingredients :-

1. mj;jpg;gl;il
2. ehty;gl;il
3. fUNtyk;gl;il
4. eWtpypg;gl;il

1. mj;jpg;gl;il

Botanical name	:	Ficus glomerata or Ficus racemosa
Family	:	Fabaceae
English name	:	Country fig or cluster fig tree
Suvai	:	Thuvarppu (Astringent)
Thanmai	:	Thatpam (cold)
Pirivu	:	Inippu (sweet)
Parts used	:	Unripe fruit, fruit, bark, latex
Actions	:	Astringent, Coolent, Styptic, Carminative, Vermifuge

Properties:-

“tPW fLg;gpuj;jk; ntz;rPj uj;jnkhL

ehWtpu zq;fnsy;yhk; ehlhthq; - \$Wq;fhy;

mj;jpjU Nkfk;Nghy; MapioNa , vQ;Qhd;Wk;

mj;jpg;ghw; gl;ilf; fwp”

-gjh; ;j Fztpsf;fk;> gf;fk; : 63

mj;jpg;gl;ilf;F Mrdf;fLg;G> cjpug;Nghf;F> rPjuj;jNgjp> tpuzk;>

gpuNkfk; Mfpait jPUk;.

Chemical Constituents:-

Tannin, wax, ash containing silica and phosphoric acid, β -Sitosterol glucoside.

-Pg:32, Vol : 4 Compendium of Indian Medicinal plants.

Barks used as fine powder in Menorrhagia. Infusion of bark internally employed in treating Menorrhagia.

-Pg: 548 ,Vol. I, Dr. Natkurni's Indian Materia Medica

-Pg: 2328 Vol. III, Indian Medicinal Plants

2. ehty;gl;il

Botanical name	:	Syzygium jambolanum or Eugenia jambolana
Family	:	Myrtaceae
English name	:	Jambul, Black Plum tree, Black Berry tree
Suvai	:	Thuvarppu (Astringent)
Thanmai	:	Thatpam (Cold)
Pirivu	:	Enippu (Sweet)
Parts used	:	Almost all parts
Actions	:	Astringent, Antioxidant

Pg: 144 Vol. 27, No.1:2005 MAPA

Properties:-

**“MrpaNeha; fhr krph;f;fuQ;R thrtpid
NfrKW ghy fpufNeha; - Ngrhpa
khtpaq;f yhQ;rdkpt; td;gpzp nayhNkF
ehtYW gl;ilaj dhy;”**

-gjh;h;j; Fztpsf;fk;> gf;fk; : 463

ehty; gl;ilahy; thapy; gpw;f;Fk; Neha;fs;> ,Uky;> ngUk;ghL> <is>
Foe;ijfspy; fpuf Njhl Neha;fs;> thQ;rdk; vd;Wk; kr;rNgjq;fs; jPUk;.

Chemical Constituents :-

Bark contains tannin 12%, a Kino-like gum, alkaloid Jambosin, Two acylated flavanol glycosides and 15 Polyphenols.

Pg : 517, Vol. I , Dr. Natkarni's Indian Materia Medica

Pg : 238, Glossary of Indian Medicinal plants

3. fUNtyk;gl;il

Botanical name	:	Acacia arabica
Family	:	Leguminosae
English name:		Indian gum arabic tree
Suvai	:	Thuvorppu (Astringent)
Thanmai	:	Thatpam (Cold)
Pirivu	:	Enippu (Sweet)
Parts used	:	Leaves, bark, root, seeds and gum
Actions	:	Astringent

Properties :-

“je;j kpWFe; jdpr;#jk; Gz;zhW

ke;jRuk; gpj;jk; kbAq;fhz;-ge;j

kUNt afyh kyusf khNj

fUNtyk; gl;ilf;Ff; fhz;”

-gjh; ;j Fztpsf;fk;> gf;fk; : 223

fUNtyk;gl;ilf;F urNtf;jpd; tha;Ntf;fhL Kjypa tpuzq;fSk;> Ruk;> gpj;j

Neha; jPUk;. gy; ,WFk;.

Chemical Constituents :-

Bark contains large quantity of Tannin 32%, also leucanthocyanidins, proanthocyanidins, steroids, flavanoids, terpenoids and alkaloids.

Tannins present are hydrolyzable and condensed tannins.

– Page : 739, Vol : 27, No : 62005, MAPA

Bark is a powerful astringent and styptic

- Pg : 10, Vol : I, Dr.K.N.Natkarni's Indian Materia Medica.

4. eWtpypg;gl;il

Botanical name	:	Cordia myxa or Cordia angustifolia
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Family	:	Boraginaceae
English name	:	Sebesten fruit
Suvai	:	Thuvarppu (Astringent), Mild kaippu (Bitter)
Thanmai	:	Veppam (Heat)
Pirivu	:	Kaarppu (Pungent)
Parts used	:	Leaves, bark, seeds, fruit
Actions	:	Astringent, Mild tonic.

Properties

“eWtpypap iyf;fpuj;j ehrkt; Nth;f;F

kWtp nyYk;GUf;fp khW – eWtpypapd;

wd;gokp uj;jgpj;jQ; rhh;Nkf Ke;jPh;f;F

kpd;Gwah th;f;F kpir”

-gjh;jj; Fztpsf;fk;> gf;fk; : 456

eWtpyp ,iyf;F %yuj;jKk;> NtUf;F vYk;GUf;fp NehAk;> goj;jpw;F
uj;jgpj;jk;> gpuNkfk; jPUk;.

Chemical Constituents:-

Bark contains 20% Tannin.

Bark is powerful astringent and used in infusion in uterine disorders.

- Pg : 76, Glossary of Indian Medicinal plants
- Pg : 120 Dr. Natkurni's Indian plants and medicines.

II. SOOTHRA ABHAYAATHY LEGIUM

Reference : Agathiyar Vaidhya Chinthamani Pg : 254

Ingredients :-

fLf;fha;

fz;lq;fj;jphp Nth;

Vyk;

,ytq;fk;

Rf;F

kpsF
jpg;gpyp
mjpkJuk;
rpWehfg;G+
ntl;bNth;
nty;yk;
Njd;

1. fLf;fha;

Botanical name : Terminalia chebula
Family : Combretaceae
English name : Ink Nut, Chebulic Myrobalan
Suvai : Mainly Thuvarppu (Astringent) Also Enippu
(Sweet), Pulippu (Sour), Kaarppu
(Pungent), Kaippu (Bitter)
Thanmai : Veppam (Heat)
Pirivu : Inippu (Sweet)
Parts used : Tender Fruit, Ripe Fruit
Actions : Alterative, Gentle Laxative, Astringent,
Carminative, Antiseptic, Tonic

Properties :-

“jhil fOj;jf;fp jhY Fwpaptplg;
gPil rpypgjKw; NgjpKlk; - Milnal;lhj;
J}ykp b Gz;thj Nrhzpfh khiyapuz;
lhykpb Nghk;thpf;fh ahy;”
-Fzghlk; - %ypif tFg;G> gf;fk; : 162

Chemical Constituents:-

Chebulinic acid, Gallic acid, Tannic acid, an anthroquinone derivative, Phloroglucinol and Pyrogallol (Antioxident constituents), Terchebulin (Ellagi Tannin), Chebu Pentol (Triterpene).

Has antioxidant property.

– Pg : 175 Vol . 24 No : 2 2002 MAPA

Inhibitory effect on cellular ageing . Alterative tonic for promoting strength and preventing the effects of ageing.

- Pg : 396, Indian Medicinal plants and Drugs.

fz;lq;fj;jphp Nth;

Botanical name	:	Roots of Solanum jacquinii or Solanum xanthocarpum
Family	:	Solanaceae
English name	:	Wild eggs plant
Suvai	:	Kaarppu (Pungent)
Thanmai	:	Veppam (Heat)
Pirivu	:	Kaarppu (Pungent)
Parts used	:	Root, leaves, fruit, seeds, unripe Fruit
Actions	:	Diuretic, Expectorant, Febrifuge, Alterative, Astringent, Digestive, Appetizer, Laxative.

Properties :-

“fhr Rthrk; fjpj;j\$ba ke;jkdy;

tPRRuQ; re;ep tpisNjh\ - khRWq;fh

ypj;jiuA zpw;fh nthpfhuQ; Nrh;fz;lq;

fj;jphpAz; lhkhfpw; fhz;”

-Fzghlk; - %ypif tFg;G> gf;fk; : 167

ntg;gKk;> fhh;g;GKs;s fz;lq;fj;jphpapdhy; fhrk;> Rthrk;> \ak;> mf;dpke;jk;> jPr;Ruk;> re;epghjk;> VOtif Njhlq;fs;> thjNuhfk; NghFk;.

Chemical Constituents :-

Root is one of the constituents of of Dashmool Asava. Contains Glucoalkaloid Solanarpine, Steroid Carpesterol.

- Pg : 1760 Vol. III Indian Medicinal plants
- Pg : 1156 Dr. Natkarni’s Indian Materia Medica

,ytq;fk; (fpuhk;G)

Botanical name : Eugenia caryophyllata or Syzygium aromaticum
Actions : Stimulant, Carminative, Stomachic, Antispasmodic, Aromatic.

**“gpj;j kaf;fk; NgjpnahL the;jpAk;Nghk;
Rj;jtpuj; jf;fLg;Ge; Njhd;WNkh-nkj;j
,ytq;fk; nfhz;ltUf; Nfw; RfkhFk;
kykq;Nf fl;Lnkd tho;j;J”**

-Fzghlk; - %ypif tFg;G> gf;fk; : 82

,ytq;fj;jpdhy; gpj;jNfhgk;> mjprhuk;> the;jp> cjpuf;fopr;ry;>
Mrdf;fLg;G jPUk;. kyk; fl;Lk;

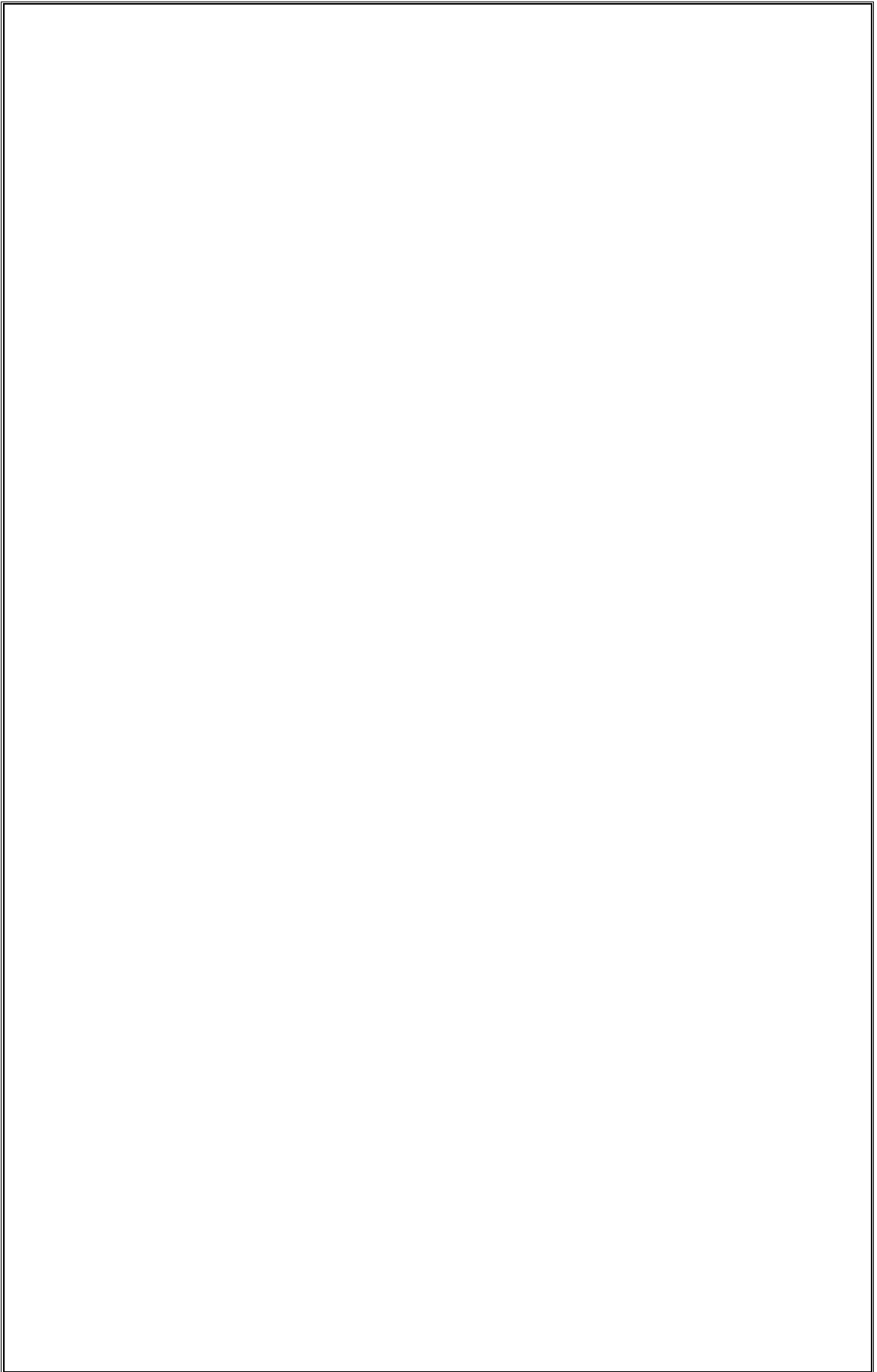
Rf;F

Botanical name : Zingiber officinale
Actions : Aromatic, Carminative, Stomachic, Digestive, Alterative, Tonic, Cardiotonic, Aphrodisiac, Liver tonic, Haematinic, Diuretic.
- Pg : 2129, Indian Medicinal plants
- Pg : 207 Vol. 27 No : 62005 MAPA

**“#iyke;jk; neQ;nrhpg;G NjhINkg; gk;koiy
%yk; ,iug;gpUky; %f;FePh; - thyfg
Njhlkjp rhue; njhlh;thj Fd;kePh;j;
Njhlk;M kk;Nghf;FQ; Rf;F”**

-Fzghlk; - %ypif tFg;G> gf;fk; : 378

Rf;fpdhy; nrhpahik> khh;ngphr;ry;> GspNag;gk;> ntg;gk;> fPo;tha;
Neha;> ,iug;G> ,Uky;> gPdprk;> fopr;ry;> ghz;L Fd;kk;> tapw;W cg;Grk;
#iytyp> tapw;WFj;jy; jPUk;.



kpsF

Botanical name : Piper nigrum
Actions : Antiperiodic, Anthelmintic, Alterative,
Carminative, Rubefacient, Aphrodisiac.

**“rPjRuk; ghz;L rpNyj;kq; fpuhzpFd;kk;
thjk; mUrpnpj;jk; kh%yk; - XJre;ep
ahr;kg]; khuk; mld;Nkfk; fhrkpit
ehrq; fwpkpsfpdhy;”**

-Fzghlk; - %ypif tFg;G> gf;fk; : 283> ghly; vz; : 957

kpsfpdhy; FspH;Ruk;> ghz;L> fg Neha;> fopr;ry;> Fd;kk;> thj> gpj;j
Neha;fs;> Ritapd;ik> %yk;> re;ep> gapj;jpa Neha;fs;> Nkf Neha;fs;> fhrk;
jPUk;.

jpg;gpyp

Botanical name : Piper longum
Actions : Carminative, Expectorant, Hepatoprotective,
Appetizer, Stomachic, Aphrodisiac,
Immunostimulant, Antipyretic, Alterative.

**“,Uky; Fd;kk; ,iug;G fag;gpzp
<is ghz;L re;ahrk; mNuhrfk;
nghUky; Cij rpug;gpzp %h;r;irNeha;
G+hpF; FQ;ry Njhlk; gPypfKk;
tUk; yg;ngUf; NfhL kNfhjuk;
thjk; MjpKj; NjhlQ; Ruq;FspH;
ngUkh iyg;Ghp Nkfg; gpIfKk;
NgUe; jpg;gpypg; Nguq;Fiuf;fNt”**

- Fzghlk; - %ypif tFg;G> gf;fk; : 411

jpg;gpypapdhy; ,Uky;> Fd;kk;> ,iug;G> fgg;gpzp> <is> ghz;L>
kaf;fk;> Ritapd;ik> nghUky;> jiytyp> %h;ir> ePNuw;wk;> <uy;fl;b>
fopr;ry;> ngUtapW> Kg;gpzp> Fsph;Ruk;> Nkff;fl;b jPUk;.

Vyk;

Botanical name : Eletaria cardamomum or Ammomum
subulatum
Actions : Stimulant, Aromatic, Carminative, Stomachic
Antiinflammatory, Antimicrobial, Antioxidant,
Anticarcinogenic.
- Pg : 635 Vol : 27 No : 5 2005 MAPA

**“tpf;fy; ngUthe;jp nta;atoy; ePh;g;Ngjp
kpf;fntOk; gpj;jk; kpFkaf;fk; - rpf;fYw;w
ke;jk; tapw;Wtyp khNj tpiue;NjhLk;
me;jKW khQ;rpf; fwp”**

-Fzghlk; - %ypif tFg;G> gf;fk; : 129

Vyf;fhapdhy; tpf;fy;> the;jp> Nkff;fhq;if> ePh;g;Ngjp> gpj;jkaf;fk;;>
ke;jk;> tapw;Wtyp jPUk;.

rpWehfg;G+

Botanical name : Mesua ferrea
Actions : Aromatic, Tonic, Mild Astrigent, Demulcent,
Carminative.

**“rpWehfg; G+tpdJ nra;ifjidr; nrhy;Nthk;
FwpahFk; Nkfj;ijf; nfhy;Yk; - newptpl;Lj;
jPjha; nry;thAitAe; jPh;f;FkpU kw;Nghf;Fk;
Nfhjha; ,ijawpe;J nfhs;”**

- Fzghlk; %ypiftFg;G> gf;fk; : 357

Mz;Fwpapy; tpOfpd;w nts;is> thjNeha;> ,Uky; rpWehfg;G+tpdhy;
tpyFk;.

mjpkJuk;

Botanical name : Glycyrrhiza glabra
Actions : Tonic, Laxative, Demulcent, coolant.

Plant extract shows oestrogenic activity. Shows significant competitive binding to oestrogen receptors (ER alpha and ER beta). Shows anxiolytic activity.

14 flavanoids are isolated. An antistress agent.

-Page No: 525, Vol:24, 2002, MAPA

-Page No: 126, Glossary of Indian Medical Plants

**“jpj;jpf;F kjpkJuf; Fzj;ijnaLj;J iuf;fpy;
rpukaf;fQ; Rujhfe; jphpNjhlq;fs;
gpj;jQ;rj; jpf;FkpJ Fzkh kJujPgdkhe;
jhJTI;bzKe; jtph;f;Fk; tpopf;fpjkhFk;”**

- Fzghlk; %ypif> gf;fk; : 10

kaf;fk;> jiyRw;wy;> Ruj;jpdhy; Vw;gLk; jhfk;> Kj;Njhlq;fs; jPUK;.
gpj;jj;ij jzpf;fr; nra;Ak; grp cz;lhfK;. fz;fSf;F ed;ik gaf;Fk;.

ntl;bNth;

Botanical name : Vetiveria zizanioides (or) Andropogon muricatus
Actions : Tonic, Antispasmodic,
Diaphoretic, Diuretic, Febrifuge, Refrigerant.

**“gpj;jtp jhfk; rrpfh kpyq;fiwg; gpj;jkdw;
wj;jpL Fl;IQ; rpuNeha; fskb jhJel;l
kj;jk dw;Gz; Idg;Gz;td; %h;r;ir thtpopNeha;
tpj;jpu Nkfj;jpd; fl;bAk; Nghk; ntl;b NthpDf;Nf”**

- gjhh;j;j Fztpsf;fk> gf;fk; : 663

ntl;bNtuhy; moyhYz;lhfwp jhfk;> fhkhiy> FUjpaoy;> Ruk;>
jiyNeha;> fOj;JNeha;> Mz;ikf;FiwT> ntwpNeha;> fz;Neha;> jPahy; te;j
Gz;> Kiy;r;pye;jp> %h;r;ir> Nkff;fl;b Mfpait ePq;Fk;.

nty;yk; (Jaggery)

**“Fd;kgpj;jk; Nghf;Fkjp Nfhiojid Az;lhf;Fe;
Jd;kyj;Jl; fPlj;ijj; Njhw;Wtpf;Fk; - ed;ikNghy;
nky;ykJ ePiu tpistpf;F khkJu
nty;ynkD ehSk; tpsk;G”**

- gjhh;j;j Fztpsf;fk> gf;fk; : 443

fUk;gpyyUe;J vLf;fg;gLk; ey;y nty;ykhDj gpj;jFd;kj;ij Nghf;Fk;.
Mdhy; neQ;rpw; fgf;fl;L> tapw;Wg;GOf;fs;> ePhpopT Nehia cz;lhf;Fk;.

Njd; (Honey)

Honey contains

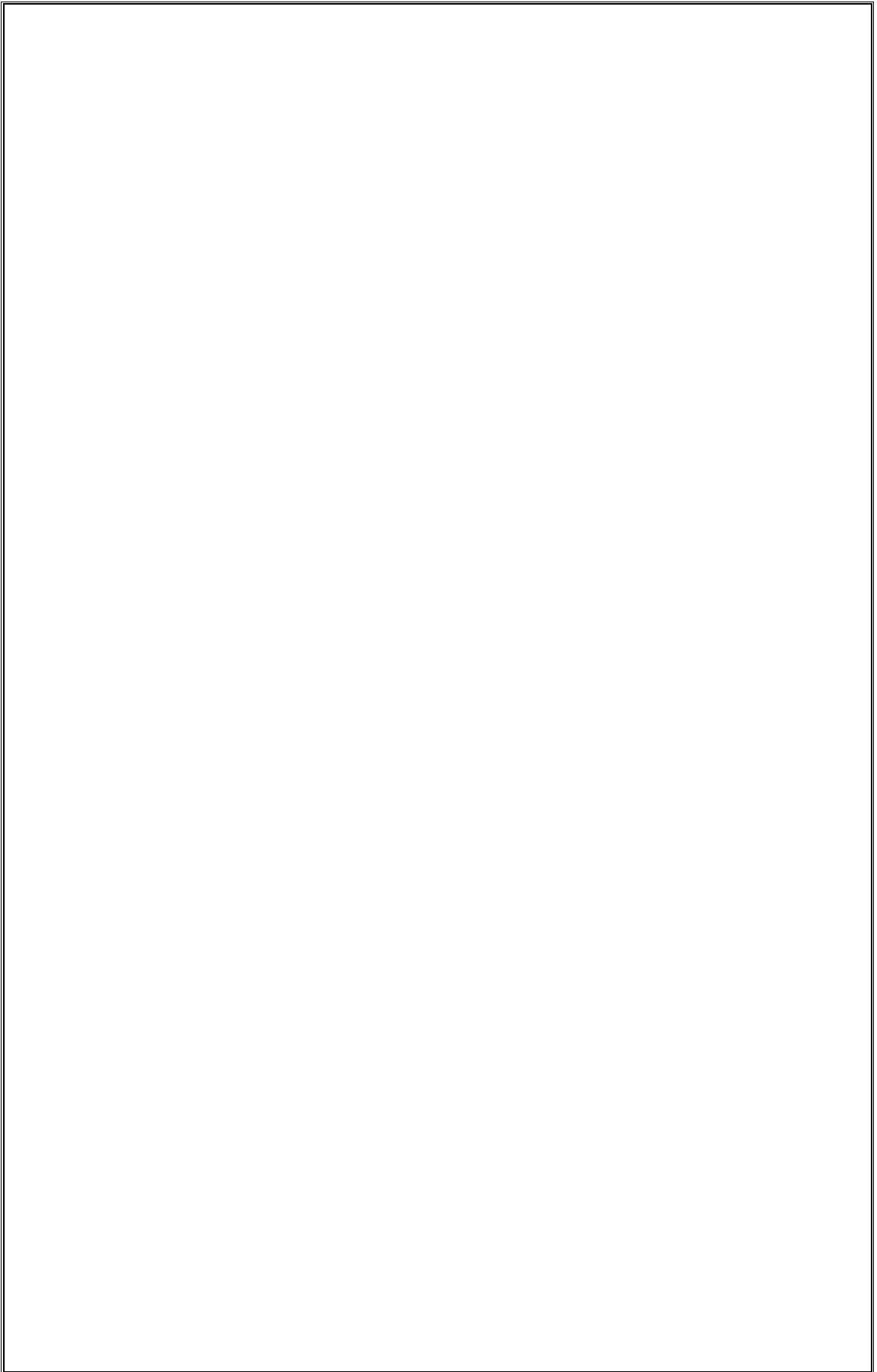
Protein	-	38%
Fat & Starch	-	71.4%
Water	-	20%
Calory	-	1606 Ib
Total nutrient	-	79.4
Hours of digestion	-	2 ½ hours

Properties:-

**“gpj;jKld; the;jp gphpahj njhe;jfgk;
vj;jptUk; tha;T kpwq;fpg;Ngh - nkj;jTNk
CdpYWk; uj;jkij Aw;wgb Rj;jpnra;Ak;
Njd; nghJf;FzNk nrg;G”**

- gjhh;j;j Fztpsf;fk> gf;fk; : 241

ey;y Njdhy; gpj;jk;> the;jp> fg rk;ge;jkhD Neha;fs;> tha;T>
,uj;jjpYs;s Fw;wq;fs; Kjypait ePq;Fk;.



**Preclinical pharmacological & Toxicological studies of
Sadhurmuga Choornam (SC) and Soothra Abhayaathy
Legium (SAL) in experimental animals**

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1.0 MATERIALS AND METHODS

1.1 Test Medicines

The following medicines were used in the study and were prepared by the methods prescribed in standard text books of siddha medicines.

1. Sadhurmuga choornam(SC)

2. Soothra Abhayaathy legium(SAL)

1.2 Preparation of medicines for dosing

All medicines used for the study was suspended each time with 1% (w/v) solution of sodium carboxy methyl cellulose (CMC) before administration.

1.3 Medicines and chemicals

Adrenochrome and fine chemicals used in these experiments were obtained from Sigma Chemicals company, U.S.A. Other analytical grade chemicals were obtained from S.d. Fine Chemicals Ltd., Mumbai.

1.4 Experimental animals

Colony inbred animal's strains of wistar rats of either sex weighing 200 - 250 g and swiss albino mice of either sex (18-25 g) were used for the pharmacological and toxicological studies. The animals were kept under standard conditions 12:12 (day/night cycles) at 22⁰C room temperature, in polypropylene cages. The animals were fed on standard pelleted diet (Hindustan Lever Pvt Ltd., Bangalore) and tap water *ad libitum*. The animals were housed for one week in polypropylene cages prior to the experiments to acclimatize to laboratory conditions. The experimental protocol was approved by the Institutional Animal Ethical Committee (IAEC).

1.5 Acute oral toxicity study

Acute oral toxicity was conducted as per the OECD guidelines (Organization of Economic Cooperation and Development) 423 (Acute Toxic Class Method). The acute toxic class method is a stepwise procedure with 3 animals of a single sex per step. Depending on the mortality and /or moribund status of the animals, on the average 2-4 steps may be necessary to allow judgment on the acute toxicity of the test substance. This procedure results in the use of a minimal number of animals while allowing for acceptable data based scientific conclusion.

The method uses defined doses (5, 50, 300, 2000 mg/kg body weight) and the results allow a substance to be ranked and classified according to the Globally Harmonized System (GHS) for the classification of chemicals which cause acute toxicity

Wistar albino rats of either sex weighing 200-250 g were fasted overnight, but allowed water *ad libitum*. Since the formulation is relatively non toxic in clinical practice the highest dose of 2000 mg/kg/p.o (as per OECD guidelines “Unclassified”) was used in the acute toxicity study.

The animals were observed closely for behavioural toxicity, if any by using FOB (Functional observation battery).

1.6 Repeated oral toxicity study

Repeated oral toxicity studies can be used to get additional information regarding the toxicity profile of a chemical. Repeated oral toxicity studies are defined as those studies where the chemical is administered to the animal for a period covering approximately 10% of the expected life of the animal. Usually, the dose levels are lower than for acute studies and allow chemicals to

accumulate in the body before lethality occurs, if the chemical possess this ability.

Experimental procedure

The following experimental procedure was followed to evaluate the repeated oral toxicity study of

Sadhurmuga Choornam (SC) and Soothra Abhayaathy legium (SAC)

Group I : Control animals received 1% Sodium carboxy methyl cellulose (CMC), 2 ml/kg/p.o. for 21 days

Group II : Aqueous solution of SC and SAL were given at the dose level of 500 mg/kg/p.o. for 21 days

Body weight, food intake and water intake was recorded at two intervals with simultaneous observation for toxic manifestation and mortality, if any. At the end of 21 days treatment all the animals were sacrificed by over dosage of ether anaesthesia. Blood was collected and used for haematological studies. Section of liver, kidney, and heart were dissected out and kept in 10% formalin for histopathological studies.

1.7 Biochemical studies

Aspartate aminotransferase (AST)

Aspartate aminotransferase was estimated using commercial AST kit (Span Diagnostics) by the method of Reitman and Frankel (1957).

Alanine aminotransferase (ALT)

Alanine aminotransferase was estimated using commercial AST kit (Span Diagnostics) by the method of Reitman and Frankel (1957).

Alkaline phosphatase (ALP)

Alkaline phosphatase was assayed using commercial ALP kit (Span Diagnostics) by the method of King (1934).

Urea

Urea was assayed using the commercial kit (Span Diagnostics) by the method of Coulambe *et al.*, (1965).

1.8 Haematological studies

Erythrocyte count

Erythrocyte count was estimated by Hemocytometer method of Ghai (1995).

Total Leukocyte Count (WBC)

Total Leukocyte Count was estimated by Hemocytometer method of John (1972).

Haemoglobin

Haemoglobin was estimated by method of Ghai (1995).

1.9 Study on Haemostatic action of SC in albino mice

Swiss albino mice of either sex, 20-25 g were randomly distributed into 3 groups of 6 animals each and the following regimen of treatment was instituted.

- Group I - Control (mixture of honey and water at 1 ml/100g, b.w)
- Group II - Test medicine SC at the dose of
500 mg/kg/p.o
- Group III - Adrenochrome 10 µg/animal/i.p

One hour after the respective treatment, the animals were anesthetized with ether. The abdomen was opened and portion of liver was cut off with fine scissors from the left lobe. A blotting paper is used to measure the time at which the profuse bleeding was stopped. The time to stop the bleeding (no more staining of blotting paper with blood) was recorded and compared with control groups.

1.10 Study on the Haematinic action of SAL on Albino rats

Albino rats of either sex weighing 60-70gm body weight maintained in colony cages under standard animal house conditions were used in the study.

The rats were kept on Iron deficient diets for 30 days and their Haemoglobin levels were monitored. Following the above undernutrition, blood was persistently shed (upto 1.5 ml/day) for three days or more from the retro orbital plexus of the rats and haemoglobin level was monitored until induction of anaemia. When the Hb level of rats fall below 8gm/dl, they were considered anaemic.

Group I – Control (mixture of equal quantity of honey and water at 1 ml/100g.b.w.

Group II – Test medicine SAL in the dose of 500 mg/kg /p.o. for 21 days.

Haematological and Biochemical estimations

Blood from all groups of animals was collected by retro- orbital puncture, for estimation of haematological and biochemical parameters. Whole blood haemoglobin content was assayed by Sahli's haemoglobinometer method. The statistical significance was calculated by using the Student's paired 't' test.

1.11 In Vivo Antioxidant study

Samples of serum collected from rats treated with test medicines were assayed for GSH (Moron *et al*, 1979).

2.0 Results

2.1 Preliminary basic, acidic radicals and phytochemical studies

The qualitative chemical analysis and acidic, basic radicals assay of the medicines showed the presence of phytoconstituents and minerals as depicted in (Table 1).

2.2 Acute oral toxicity study

SC and SAL at the dose of 2000mg/kg/po did not exhibit any mortality in rats. As per OECD 423 guidelines the dose is said to be “Unclassified” under the toxicity scale. Hence further study with higher doses was not required.

2.3 Repeated oral toxicity for 21 days

Test medicine SC and SAL at the dose of 500 mg/kg/po when administered orally for 21 days in rats did not show toxicity in renal functions.(Table 2,3 and 4).

2.4 Haemostatic activity of SC

Bleeding time of blood after acute liver injury induced one hour after treatment with SC at the dose of 500 mg/kg/po, showed significant reduction in bleeding time when compared to control. The standard medicine adrenochrome (10 µg/animal) also showed significant reduction in bleeding time (Table 5, 6).

2.5 Haematinic activity of Soothra Abhayaathy legiyam (SAL)

In the present study Soothra Abhayaathy legium (SAL) was evaluated for its haematinic effect in rats. Rats were orally fed for 21 days with SAL, with food, water ad libitum. At the end of the study haematological profiles were undertaken. The results are depicted in Table 2 and 3.

SAL administration (500 mg/kg/po) for 21 days showed significant increase in the Hb% when compared to untreated control ($P < 0.001$). A significant increase in RBC count was also observed. No change in total WBC

count and other blood parameters were observed after 21 days treatment with the medicine.

Sadhurmuga Choornam (SC) administration reduced the bleeding and clotting time of blood when compared to control. The reduction in bleeding time of SC can be compared to that of standard haemostatic medicine adrenochrome (10 µg/animal). The clotting time also was considerably reduced after treatment with SC. These two parameters have significant importance to prove the styptic activity of SC in clinical practice (Table 5 and 6).

Both acute and repeated oral toxicity studies did not show evidence of toxicity. The medicine was safe upto a dose level of 2000 mg/kg/po (OECD scale - Unclassified). 21 days repeated oral toxicity study at the dose of 500 mg/kg/po did not have any adverse effect on haematological, biochemical parameters of tissues and organs.

SC administration increased the level of antioxidant status of GSH in serum after 21 days treatment (Table 7).

2.6 Antioxidant activity

At the end of 21 days repeated oral toxicity study when the plasma of medicine treated animals was examined for GSH activity, the level of GSH activity was increased significantly ($p > 0.001$) in test groups (Table 7).

Discussion

Administration of Sadhurmuga choornam (SC) and Soothra Abhayaathy legium (SAL) are used as mode of treatment for Menorrhagia in siddha system of medicine.No published papers are available in the literature to prove the clinical efficacy of combined use of these formulations in the treatment of Menorrhagia as haemostatic and haematinic respectively.In the present study an attempt has been made to establish the pharmacological effects,acute and chronic toxicity profiles of these siddha medicines in appropriate experimental models to find out any correlation between clinical efficacy and experimental pharmacology data. According to OECD 423, medicines did not show mortality at doses 2000mg/kg/p.o and above are “Unclassified” under the toxicity scale.Hence further studies with higher doses were not attempted.

In the present study, the haemostatic herbal preparation SC is studied for its styptic activity as evaluated by bleeding time and clotting time.SC showed significant reduction in both bleeding and clotting time.The activity of SC in bleeding time can be compared to that of adrenochrome.The present study has proven the haemostatic effect of SC in the arresting bleeding significantly ($P > 0.001$) due to the presence of Tannins, Calcium and Phosphate when compared to controls.)SAL is effective in treating iron deficiency anaemia.

The GSH levels was increased significantly in animals treated for 21 days with SC and SAL in Menorrhagia. The increased levels of GSH after 21 days treatment is an indication for the antioxidant activity of SC +SAL. Both SC and SAL are found to be clinically effective medicines in the treatment of Menorrhagia and the present study scientifically proved the clinical claims made in the dissertation.

Table 1
Preliminary acid, basic radicals and phytochemical screening

S.No.	Constituents	SC	SAL
1.	Calcium	+	+
2.	Iron (Ferric)	-	-
3.	Iron (Ferrous)	+	+
4.	Sulphate	+	+
5.	Chloride	+	+
6.	Carbonate	+	+
7.	Starch	-	+
8.	Phosphate	+	+
9.	Tannic acid	+	+
10.	Unsaturated	-	-
11.	Reducing Sugar	+	+
12.	Alkaloids	+	+
13.	Steroids	+	+
14.	Proteins	+	+
15.	Tannins	+	+
16.	Phenols	+	+
17.	Flavanoids	+	+
18.	Saponins	+	-
19.	Amino acid	+	+
20.	Glycosides	+	+

Table 2

Effect of SAL on Haematological parameters after 21 days repeated oral dosing (500 mg/kg)

Groups	Hb (gm/100ml)	RBC (millions/cu.mm)	WBC (cells/cu.mm)
Control n=6	9.5 ± 0.365	3.14 ± 0.78	5323.33 ± 2.78
SAL n=6	11.66 ± 0.278 ^{***}	4.15 ± 0.47 ^{***}	5382.00 ± 3.01 ^{**}

N=6; Values are expressed as mean ± S.D followed by Students Paired 'T' Test

^{***}P<0.001 as compared with that of control

Table 3

Groups	PCV %	MCV	MCH
Control	28.25 ± 1.101	89.8 ± 0.670	30.33 ± 0.117
SC	35.0 ± 0.836 ^{***}	90.67 ± 0.497 ^{***}	30.43 ± 0.526 ^{**}

n=6; Values are expressed as mean ± S.D followed by Students Paired 'T' Test

^{***}P<0.001 when compared to control.

Table 4

Effect of SC on Marker enzyme levels of Liver and Kidney after 21 days repeated oral dosing (500 mg/kg)

Group s	ALP (K.A.Units)	AST (IU/L)	ALT (IU/L)	Urea (mg/100ml)	BUN (mg/100ml)
Control n=6	3.79 ± 0.39	72.44 ± 3.10	22.42 ± 1.65	13.60±0.93	5.59±0.41
SC n=6	4.70 ± 0.46 _{ns}	74.23 ± 4.81 _{ns}	23.44 ± 2.10 _{ns}	14.70±0.79 _{ns}	5.60±0.40 _{ns}

N=6; Values are expressed as mean ± S.D followed by Students Paired 'T' Test

Ns – non significant when compared to control

Table 5

Effect of SC on Haemostatic effect in mice

Groups	Bleeding time (Secs)
Control	93.3 ± 7.605
Test (SC) (n=6)	47.3 ± 7.177 ^{***}
Standard (Adrenochrome 10 µg/animal)	57.16 ± 3.81 ^{***}

N=6; Values are expressed as mean ± S.D followed by Students Paired ‘T’ Test

^{***}P<0.001 as compared with that of control

Table 6

Effect of SC on Haemostatic effect in mice

Group	Control	Treated
Clotting time (Seconds)	101.66 ± 14.181	58.33 ± 6.912 ^{***}

N=6; Values are expressed as mean ± S.D followed by Students Paired ‘T’ Test

^{***}P<0.001 as compared with that of control

Table 7

In vivo Anti Oxidant activity of SC after 21 days repeated oral dosing

Groups	GSH
Control	25.48 ± 2.3
Test (SC)	68.92 ± 3.6 ^{***}

N=6; Values are expressed as mean ± S.D followed by Students Paired ‘T’ Test

^{***}P<0.001 as compared with that of control.

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CHEMICAL ANALYSIS OF TRIAL MEDICINES

MEDICINE -I

Preparation of Extract

5 gms. of **Sadhurmuga choornam** is weighed accurately and placed in a 250 ml clean beaker and added with 50ml of distilled water. Then it is boiled well for about 10 minutes. Then it is cooled and filtered in a 100 ml volumetric flask and made upto 100ml with distilled water.

SL. NO	EXPERIMENT	OBSERVATION	INFERENCE
1	I. Test for Acid Radicals.		
	1. Test For Sulphate:		
a)	2ml of the above prepared extract is taken in a test tube. To this add 2 ml of 4% Ammonium Oxalate solution	Absence of white colour precipitate.	Absence of sulphate
b)	2 ml of Sodium carbonate extract is added with 2 ml of dilute Hydrochloric acid is until the effervescence ceases off .Then 2 ml of barium chloride solution is added.	Presence of white colour precipitate.	Presence of Sulphate.
2.	Test for Chloride: 2 ml of Sodium carbonate extract is added with dilute Nitric acid till the effervescence ceases .Then 2 ml of Silver Nitrate solution is added.	Presence of Cloudy white precipitate.	Presence of Chloride.
3.	Test for Phosphate : 2 ml of the extract is treated	Presence of yellow precipitate.	Presence of phosphate.

	with 2 ml of Ammonium Molybdate solution and 2 ml of concentrated Nitric acid.		
4.	Test for Carbonate: 2 ml of the extract is treated with 2 ml of Magnesium sulphate solution.	Absence of white precipitate.	Absence of Carbonate.
5.	Test for Sulphide: 1 gm of the substance is heated with 2 ml of the concentrated Hydrochloric acid	Absence of rotten egg smelling gas.	Absence of Sulphide.
6.	Test for Nitrate: 1 gm of the substance is heated with copper turnings and concentrated Sulphuric acid and viewed the test tube vertically down.	Absence of reddish brown gas.	Absence of Nitrate.
7.	Test for Fluoride and Oxalate: 2 ml of the extract is added with 2 ml of dilute Acetic acid and 2 ml of Calcium chloride solution and heated.	Absence of white colour precipitate.	Absence of fluoride & oxalate
b)	5 drops of clear solution is added with 2 ml of dilute of Sulphuric acid and slightly warmed. To this, 1 ml of dilute Potassium	KmNo4 is discoloured	Presence of fluoride & oxalate

	permanganate solution is added		
8.	Test for Nitrite : 3 drops of the extract is placed on a filter paper . On that, 2 drops of Acetic acid and 2 drops of Benzidine solution is placed .	Presence of yellowish red colour.	Presence of Nitrite.
9.	Test for Borate: 2 pinches of the substance is made into paste by using Sulphuric acid and Alcohol (95%) and introduced into the blue flame.	Absence of green tinged flame.	Absence of Borate.
II	Test for Basic Radicals:		
10.	Test For Lead: 2 ml of the extract is added with 2 ml of Potassium Iodide solution .	Presence of yellow precipitate.	Presence of lead.
11.	Test of Copper:		
a)	One pinch of substance is made into paste with concentrated Hydrochloric acid in a watch glass and introduced into the nonluminous part of the flame.	Absence of bluish green colour flame.	Absence of copper.
b)	2 ml of the extract is added with excess of Ammonia solution.	Absence of deep blue colour..	Absence of copper.

12.	Test for Aluminium: To the 2 ml of extract Sodium hydroxide solution is added on drops to excess.	Absence of white precipitate.	Absence of Aluminium.
13.	Test for Iron:	Absence of blood red colour.	Absence of Ferric Iron.
a)	To the 2 ml of extract 2 ml of Ammonium thiocyanate solution is added.		
b)	To the 2 ml of extract 2 ml of Ammonium thiocyanate solution and 2 ml of concentrated Nitric acid added.	Absence of blood red colour.	Absence of Ferrous Iron.
14.	Test for Zinc: To the 2 ml of extract Sodium hydroxide solution is added in drops to excess.	Presence of white precipitate.	Presence of Zinc.
15.	Test for calcium : 2 ml of the extract, is added with 2 ml of 4% Ammonium Oxalate solution.	Presence of white precipitate.	Presence of Calcium.
16.	Test for Magnesium: To 2 ml of extract, Sodium hydroxide solution is added in drops to excess.	Absence of white precipitate.	Absence of Magnesium.
17.	Test for Ammonium: To 2 ml of extract few ml of Nessler's reagent and excess of Sodium hydroxide solution	Presence of colour precipitate.	Presence of Ammonium.

	are added.		
18.	Test for Potassium: A pinch of substance is treated with 2 ml of Sodium nitrite solution and then treated with 2 ml of Cobal nitrate in 30% glacial Acetic acid.	Absence of yellowish precipitate.	Absence of potassium.
19.	Test for Sodium: 2 pinches of the substance is made into paste by using Hydrochloric acid and introduced into the blue flame.	Absence of yellow coloured flame.	Absence of sodium.
20.	Test for Mercury: 2 ml of the extract is treated with 2 ml of Sodium hydroxide solution.	Absence of yellow precipitate.	Absence of mercury.
21.	Test for Arsenic: 2 ml of extract is treated with 2 ml of Silver nitrate solution..	Absence of yellow (or) brownish precipitate.	Absence of Arsenic.
III	MISCELLANEOUS:		
22.	Test for Starch: 2 ml of extract is treated with weak Iodine solution.	No blue colour developed.	Absence of starch.
23.	Test for reducing sugar: 5 ml of Benedict's qualitative solution is taken in a test tube	Absence of green colour.	Absence of reducing sugar.

	and allowed to boil for 2 minutes and added 8 to 10 drops of the extract and again boiled for 2 minutes. The colour changes are noted.		
24.	Test for alkaloids:		
a)	2 ml of the extract is treated with 2 ml of Potassium iodide solution.	Absence of red colour.	Absence of alkaloids.
b)	2 ml of extract is treated with 2 ml of Picric acid.	Absence of yellow colour.	Absence of alkaloids.
c)	2 ml of the extract is treated with 2 ml of Phosphotungstic acid.	Absence of white precipitate.	Absence of alkaloids.
25.	Test for Tannic acid: 2 ml of the extract is treated with 2 ml of Ferric chloride solution.	Presence of black colour.	Presence of Tannic acid .
26.	Test for unsaturated compound: To 2 ml of the extract 2 ml of Potassium Permanganate solution is added.	No decolourisation	Absence of unsaturated compound.
27.	Test for Aminoacid: 2 drops of the extract is placed on a filter paper and dried well. After drying 1% Ninhydrine is sprayed over the same and dried well.	Absence of violet colour.	Absence of Amino acid.
28.	Test for Albumin:	Absence of Yellow	Absence of

	2 ml of the extract is added with 2 ml of Esboch's reagent.	precipitate.	Albumin.
29.	Test for Type of compound: 2 ml of the extract is treated with 2 ml of Ferric chloride solution.	Absence of green colour precipitate.	Absence of type of compound.

RESULT:

The given sample contains:

Sulphate, Chloride, Phosphate, Fluoride and Oxalate, Nitrite,
Lead, Zinc, Calcium, Ammonium, Tannic acid.

ACID RADICALS:

Sulphate, Chloride, Phosphate, Fluoride and Oxalate, Nitrite.

BASIC RADICALS:

Lead, Zinc, Calcium, Ammonium.

MISCELLANEOUS:

Tannic acid .

CHEMICAL ANALYSIS OF TRIAL MEDICINES

MEDICINE - II

Preparation of Extract

5 gms. of Soothra Abhayaathy Legium is weighed accurately and placed in a 250 ml clean beaker and added with 50ml of distilled water. Then it is boiled well for about 10 minutes. Then it is cooled and filtered in a 100 ml volumetric flask and made upto 100ml with distilled water.

SL. NO	EXPERIMENT	OBSERVATION	INFERENCE
1	I. Test for Acid Radicals.		
	1. Test For Sulphate:		
a)	2 ml of the above prepared extract is taken in a test tube. To this add 2 ml of 4% Ammonium Oxalate solution	Absence of white colour precipitate.	Absence of sulphate
b)	2 ml of Sodium carbonate extract is added with 2 ml of dilute Hydrochloric acid is until the effervescence ceases off .Then 2 ml of barium chloride solution is added.	Absence of white colour precipitate.	Absence of Sulphate.
2.	Test for Chloride: 2 ml of Sodium carbonate extract is added with dilute Nitric acid till the effervescence ceases .Then 2 ml of Silver Nitrate solution is added.	Presence of Cloudy white precipitate.	Presence of Chloride.
3.	Test for Phosphate : 2 ml of the extract is treated	Absence of yellow precipitate.	Absence of phosphate.

	with 2 ml of Ammonium Molybdate solution and 2 ml of concentrated Nitric acid.		
4.	Test for Carbonate: 2 ml of the extract is treated with 2 ml of Magnesium sulphate solution.	Absence of white precipitate.	Absence of Carbonate.
5.	Test for Sulphide: 1 gm of the substance is heated with 2 ml of the concentrated Hydrochloric acid.	Absence of rotten egg smelling gas.	Absence of Sulphide.
6.	Test for Nitrate: 1 gm of the substance is heated with copper turnings and concentrated Sulphuric acid and viewed the test tube vertically down.	Absence of reddish brown gas.	Absence of Nitrate.
7.	Test for Fluoride and Oxalate: 2 ml of the extract is added with 2 ml of dilute Acetic acid and 2 ml of Calcium chloride solution and heated.	Absence of white colour precipitate.	Absence of fluoride & oxalate
b)	5 drops of clear solution is added with 2 ml of dilute of Sulphuric acid and slightly warmed. To this, 1 ml of dilute Potassium	KmNo4 is discolourised	Presence of fluoride & oxalate

	permanganate solution is added		
8.	Test for Nitrite : 3 drops of the extract is placed on a filter paper . On that, 2 drops of Acetic acid and 2 drops of Benzidine solution is placed .	Absence of yellowish red colour.	Absence of Nitrite.
9.	Test for Borate: 2 pinches of the substance is made into paste by using Sulphuric acid and Alcohol (95%) and introduced into the blue flame.	Absence of green tinged flame.	Absence of Borate.
II	Test for Basic Radicals:		
10.	Test For Lead: 2 ml of the extract is added with 2 ml of Potassium Iodide solution .	Absence of yellow precipitate.	Absence of lead.
11.	Test of Copper:		
a)	One pinch of substance is made into paste with concentrated Hydrochloric acid in a watch glass and introduced into the nonluminous part of the flame.	Presence of bluish green colour flame.	Presence of copper.
b)	2 ml of the extract is added with excess of Ammonia solution.	Presence of deep blue colour..	Presence of copper.

12.	Test for Aluminium: To the 2 ml of extract Sodium hydroxide solution is added on drops to excess.	Absence of white precipitate.	Absence of Aluminium.
13.	Test for Iron:	Absence of blood red colour.	Absence of Ferric Iron.
a)	To the 2 ml of extract 2 ml of Ammonium thiocyanate solution is added.		
b)	To the 2 ml of extract 2 ml of Ammonium thiocyanate solution and 2 ml of concentrated Nitric acid added.	Presence of blood red colour.	Presence of Ferrous Iron.
14.	Test for Zinc: To the 2 ml of extract Sodium hydroxide solution is added in drops to excess.	Absence of white precipitate.	Absence of Zinc.
15.	Test for calcium : 2 ml of the extract, is added with 2 ml of 4% Ammonium Oxalate solution.	Presence of white precipitate.	Presence of Calcium.
16.	Test for Magnesium: To 2 ml of extract, Sodium hydroxide solution is added in drops to excess.	Absence of white precipitate.	Absence of Magnesium.
17.	Test for Ammonium: To 2 ml of extract few ml of Nessler's reagent and excess of Sodium hydroxide solution are added.	Formation of colour precipitate.	Presence of Ammonium.

18.	Test for Potassium: A pinch of substance is treated with 2 ml of Sodium nitrite solution and then treated with 2 ml of Cobalnitrate in 30% glacial Acetic acid.	Absence of yellowish precipitate.	Absence of potassium.
19.	Test for Sodium: 2 pinches of the substance is made into paste by using Hydrochloric acid and introduced into the blue flame.	Absence of yellow coloured flame.	Absence of sodium.
20.	Test for Mercury: 2 ml of the extract is treated with 2 ml of Sodium hydroxide solution.	Absence of yellow precipitate.	Absence of mercury.
21.	Test for Arsenic: 2 ml of extract is treated with 2 ml of Silver nitrate solution..	Absence of yellow (or) brownish precipitate.	Absence of Arsenic.
III	MISCELLANEOUS:		
22.	Test for Starch: 2 ml of extract is treated with weak Iodine solution.	No blue colour developed.	Absence of starch.
23.	Test for reducing sugar: 5 ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 8 to 10	Presence of green colour.	Presence of reducing sugar.

	drops of the extract and again boiled for 2 minutes. The colour changes are noted.		
24.	Test for alkaloids:		
a)	2 ml of the extract is treated with 2 ml of Potassium iodide solution.	Absence of red colour.	Absence of alkaloids.
b)	2 ml of extract is treated with 2 ml of Picric acid.	Absence of yellow colour.	Absence of alkaloids.
c)	2 ml of the extract is treated with 2 ml of Phosphotungstic acid.	Absence of white precipitate.	Absence of alkaloids.
25.	Test for Tannic acid: 2 ml of the extract is treated with 2 ml of Ferric chloride solution.	Absence of black colour.	Presence of Tannic acid .
26.	Test for unsaturated compound: To 2 ml of the extract 2 ml of Potassium Permanganate solution is added.	No decolourisation	Absence of unsaturated compound.
27.	Test for Aminoacid: 2 drops of the extract is placed on a filter paper and dried well. After drying 1% Ninhydrine is sprayed over the same and dried well.	Absence of violet colour.	Absence of Amino acid.
28.	Test for Albumin: 2 ml of the extract is added with 2 ml of Esboch's	Absence of Yellow precipitate.	Absence of Albumin.

	reagent.		
29.	Test for Type of compound: 2 ml of the extract is treated with 2 ml of Ferric chloride solution.	Absence of green colour precipitate.	Absence of type of compound.

RESULT:

The given sample contains:

Chloride, Fluoride and Oxalate, Copper, Iron, Calcium, Ammonium, and Reducing Sugar

ACID RADICALS:

Chloride, Fluoride and Oxalate.

BASIC RADICALS:

Copper, Iron, Calcium, Ammonium.

MISCELLANEOUS:

Reducing sugar.

CASE SHEET PROFORMA FOR PITHA PERUMPAADU

Govt. Siddha Medical College & Hospital, Chennai – 106
Post Graduate Department - Branch - I MARUTHUVAM (Pothu)

“PITHA PERUMPAADU”

O.P /I.P.No. :	Nationality :
Ward. No. :	Religion :
Bed No. :	Occupation :
Name :	Income :
Age/Sex :	D.O. Admission :
	(First Visit)
Permanent Address :	D.O. Discharge :
	(Last Visit)
Temporary address :	Diagnosis :

Govt. Siddha Medical College &
Hospital, Chennai – 106

Medical Officer’s Signature:

Complaints and Duration :

History of present illness :

History of previous illness :

Personal History :

Personal Habits :

Menstrual History :

Obstetric History :

General Examination

1. Consciousness :

2. Decubitus :

3. Anaemia :

4. Clubbing :

5. Cyanosis :

6. Jaundice :

7. Jugular venous pulsation :

8. Lymph adenopathy :

9. Pulse rate :

10. Heart rate :

11. Respiratory rate :

12. Blood pressure :

13. Temperature :

Siddha Aspect:

I.Nilam (Places)

Kurunchi (Mountain and their adjoining areas) :

Mullai (Forest and their adjoining areas) :

Marutham (Fertile and their adjoining areas) :

Neithal (Sea and their adjoining areas) :

Paalai (Desert and their adjoining areas) :

II.Paruvakaalam (Seasons)

Elavenil Kaalam (Chithirai-Vaigasi) :

Mudhuvnil Kaalam (Aani-Aadi) :

Kaar Kaalam (Aavani-Purataasi) :

Koothir Kaalam (Iyppasi-Karthigai) :

Munpani Kaalam (Maargazhi-Thai) :

Pinpani Kaalam (Maasi-Panguni) :

III.Yaakai (Udal Nilai)

Vatha Udal :

Pitha Udal :

Kabha Udal :

Kalappu Udal :

IV.Iym Pori / Pulangal (Gnanendriyam)

Mei (Unarthal) :

Vaai (Suvaithal) :

Kan (Paarthal) :

Mooku (Mugarthal) :

Sevi (Kettal) :

V.Kanmenthiriyam / Kanmaavidayam

Kai (Koduthal) :

Kaal (Nadaththal) :

Vaai (Pesal) :

Eruvai (Kazhiththal) :

Karuvai (Ananthithal) :

VI.Pira Uruppukalin Nilai

Moolai :

Iruthayam :

Puppusam :

Eraippai :

Kalleeral :

Manneeral :

Siruneeragam :

Siruneerpai :

Karuppai :

VII.Uyir Thathukkal

Vali (or) Vatham

Praanan	:
Abaanan	:
Vyaanan	:
Uthanan	:
Samaanan	:
Naagan	:
Koorman	:
Kirukaran	:
Devathathan	:
Thananjeyan	:

Pitham

Anila Pitham	:
Ranjaga Pitham	:
Saadhaga Pitham	:
Aalosaga Pitham	:
Praasaga Pitham	:

Kabham

Avalambagam	:
Kilethagam	:
Pothagam	:
Tharpagam	:
Santhigam	:

VIII.Udal Thaathukkal

Saaram	:
Senneer	:
Oon	:

Kozhuppu :

Enbu :

Moolai :

Sukkilam/Suronitham :

IX.Envagai Thervugal

Naa :

Niram :

Mozhi :

Vizhi :

Sparisam :

Malam- Niram :

Edai :

Irugal :

Ilagal :

Moothiram

Neerkuri - Niram :

Manam :

Edai :

Nurai :

Enjal :

Neikuri :

Naadi :

CLINICAL PARAMETERS AND PROGNOSIS

SL NO.	CLINICAL PARAMETERS	1 st Menstrual Cycle	2 nd Menstrual Cycle	3 rd Menstrual Cycle
1.	Over menstrual bleeding			
2.	Regular cycles			
3.	Presence of blood clots			
4.	Pallor			
5.	Dyspnoea			
6.	Palpitations			
7.	Generalised body pain			
8.	Lower abdominal pain			
9.	Anorexia			
10.	Giddiness			
11.	Low back pain			
12.	Headache			
13.	Soreness of Vagina			

‘+’ = Present

‘-’ = Absent

MODERN ASPECT – SYSTEMIC EXAMINATION OF GENITO URINARY TRACT

- I. Menstrual History :
- Age of Menarche :
- II. Menstrual Cycle :
- LMP :
- Regular / Days :

- Irregular / Days :
- III. Duration of Menstrual Flow :
- 1-3 Days :
- 3-5 Days :
- Above 5 Days :
- IV. Number of Pads used :
- 1st day :
- 2nd day :
- 3rd day :
- 4th day :
- 5th day :
- V. Pain During menstruation in lower abdomen
Mild / Moderate / Acute / Pricking / Spasmodic / Dull / Continuous /
Intermittent / Radiating to
- VI. Abnormal Uterine bleeding
- Character :
- Colour :
- Odour – None / Foul :
- VII. Soreness of vagina
- Yes / No :
- Duration :
- VIII. Any Associated pelvic pathology

IX. EXTERNAL GENITALIA EXAMINATION

1. Inflammation of Vulva : Yes / No
2. Inflammation of Labia : Yes / No
3. Inflammation of Clitoris : Yes / No
4. Inflammation of Urethral meatus : Yes / No
5. Inflammation of Vaginal Orifice : Yes / No
6. Inflammation of Bartholin glands : Yes / No

X. PV EXAMINATION

Internal Genitalia

- 1. Tenderness of Vulva : Yes / No
- 2. Vaginal Discharge : Yes / No
- 3. Whether cervix bleeds O/E : Yes / No

IX. SPECULUM EXAMINATION

- 1. Reddening of Vaginal Wall : Yes / No
- 2. Laceration of Vagina : Yes / No
- 3. Any erosion of Cervix : Yes / No
- 4. Any inflammation of cervix : Yes / No
- 5. Laceration of cervix : Yes / No
- 6. Polyp of cervix : Yes / No
- 7. Any discharge : Yes / No

EXAMINATION OF OTHER SYSTEMS

- 1. Gastro intestinal tract examination :
- 2. Respiratory system examination :
- 3. Cardiovascular system examination :
- 4. Central nervous system examination :

LABORATORY INVESTIGATIONS :

1. Blood :

TC

DC

ESR $\left\{ \begin{array}{l} \frac{1}{2} \text{ hr} \\ 1 \text{ hr} \end{array} \right.$

Hb

Blood Sugar F / R / PP

Blood Urea

Serum Cholesterol

Bleeding Time

Clotting Time

2. Urine :

Albumin

Sugar

Deposits

3. Ultrasonogram of Abdomen and Pelvis :

Progress Note

Date	Progress of the Patient	Drug

CASE SUMMARY :

FINAL DIAGNOSIS :

MEDICINES :

1. Sadhurmuga Chooranam - 2 gm thrice a day as decoction in hot water after food (during menstrual periods)

2. Soothra Abhayaathy Legium - 5 gm twice a day after food (after menstrual periods)

MEDICAL ADVICE :

**CASE SHEET PROFORMA FOR PITHA PERUMPAADU
DISCHARGE CASE SHEET**

Govt. Siddha Medical College & Hospital, Chennai – 106

I.P. No.	:	Occupation	:
Ward. No.	:	Income	:
Bed No.	:	Nationality	:
Name	:	Religion	:
Age	:	D.O.Admission	:
Sex	:	D.O.Discharge	:
Address	:	Diagnosis	:
		Result	:

Medical Officer's Signature:

CLINICAL PRESENTATION AT THE TIME OF ADMISSION:

CLINICAL PARAMETERS

SL NO.	Clinical Parameters	During Admission	During Discharge
1.	Over menstrual bleeding		
2.	Regular cycles		
3.	Presence of blood clots		
4.	Pallor		
5.	Dyspnoea		
6.	Palpitations		
7.	Generalised body pain		
8.	Lower abdominal pain		
9.	Anorexia		
10.	Giddiness		
11.	Low back pain		
12.	Headache		
13.	Soreness of vagina		

‘+’ = Present

‘-’ = Absent

INVESTIGATION DONE :

TREATMENT GIVEN :

1. Sadhurmuga Chooranam - 2 gm thrice a day as decoction in hot water after food (during menstrual periods)
2. Soothra Abhayaathy Legium - 5 gm twice a day after food (after menstrual periods)

Follow up treatment and medical advice:

For OP case instead of discharge case sheet, recording of progress is done.

RESULTS AND OBSERVATION

20 patients were admitted in the Inpatient ward and the remaining 20 patients were treated in the Outpatient department.

The observations were recorded and tabulations were made with reference to the following features.

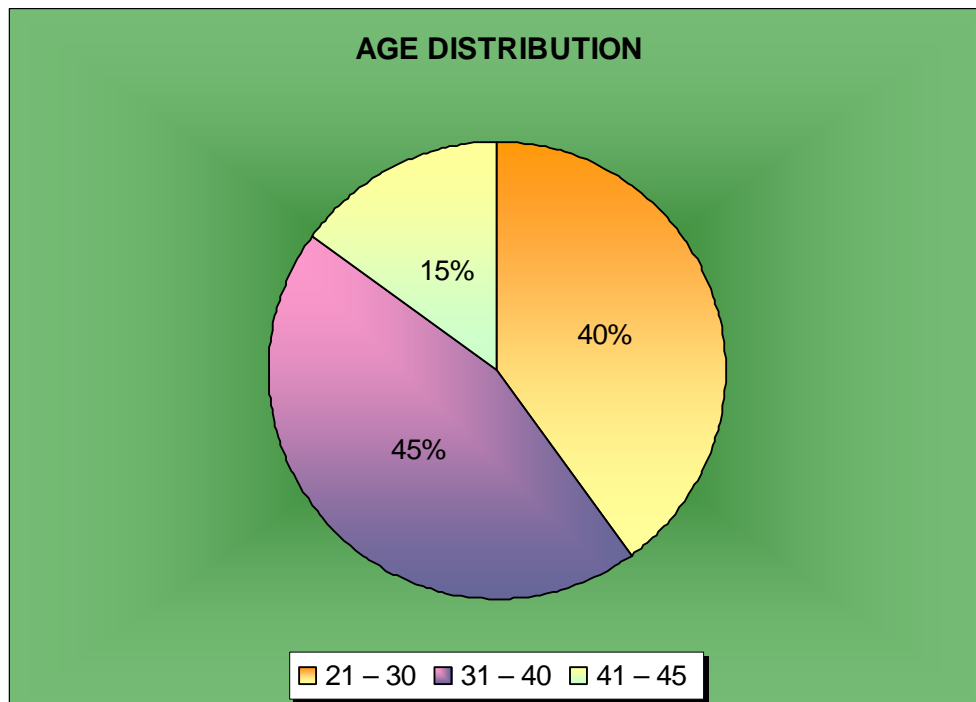
- ❖ Age distribution
- ❖ Kaalam distribution
- ❖ Religious distribution
- ❖ Socio – economic status
- ❖ Marital status
- ❖ Diet distribution
- ❖ Thinaï distribution
- ❖ Paruvakaalam
- ❖ Occupation distribution
- ❖ Duration of illness
- ❖ Aetiological factor
- ❖ Associated pelvic pathology
- ❖ Clinical features during admission
- ❖ Disturbance of Mukkuttam
- ❖ Udal thaathukkal
- ❖ Envagai thervugal
- ❖ Neerkuri / Neikuri
- ❖ Results after treatment
 1. Haemoglobin levels
 2. Duration of menstrual periods
 3. Using number of pads on menstrual periods
- ❖ Clinical response (prognosis)
- ❖ Gradation of results

OBSERVATION OF CASES

AGE DISTRIBUTION

TABLE-1

S.NO	Age in years	Number of cases	Percentage (%)
1.	21 – 30	8	40
2.	31 – 40	9	45
3.	41 – 45	3	15



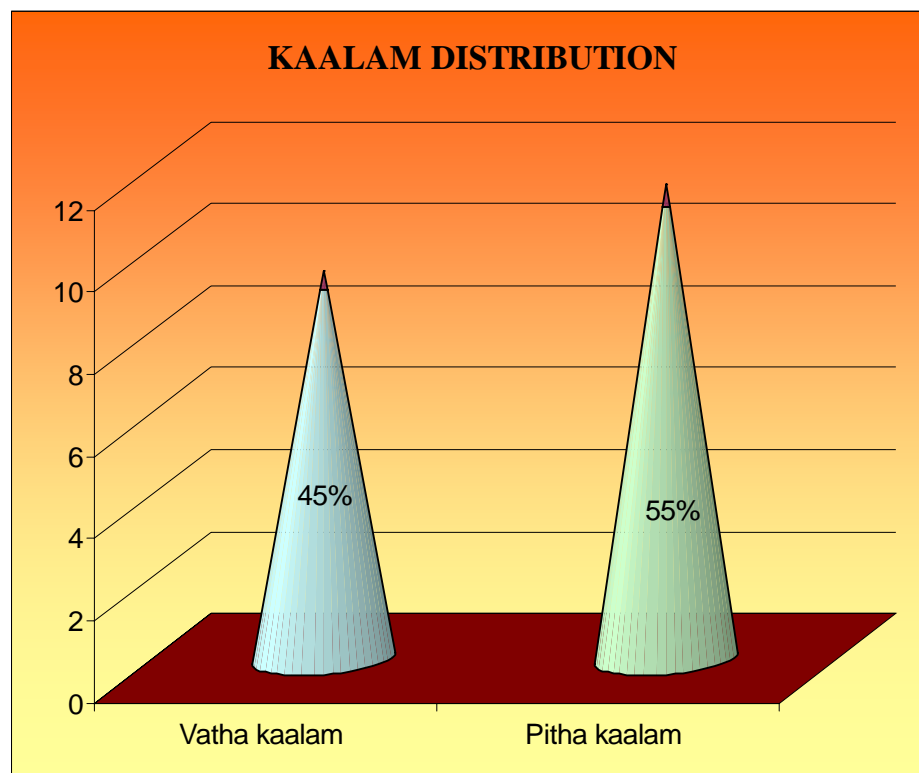
INFERENCE:

Among 20 Inpatients, 40% were in the age group between 21-30 yrs
45% were in the age group between 31-40 yrs
3% were in the age group between 41-45 yrs

KAALAM DISTRIBUTION

TABLE – 2

S. NO	Kaalam in years	Numbers of cases	Percentage (%)
1.	Vatha kaalam (upto 33yrs and 4 months)	9	45
2.	Pitha kaalam (34-66 yrs and 8 months)	11	55



INFERENCE:

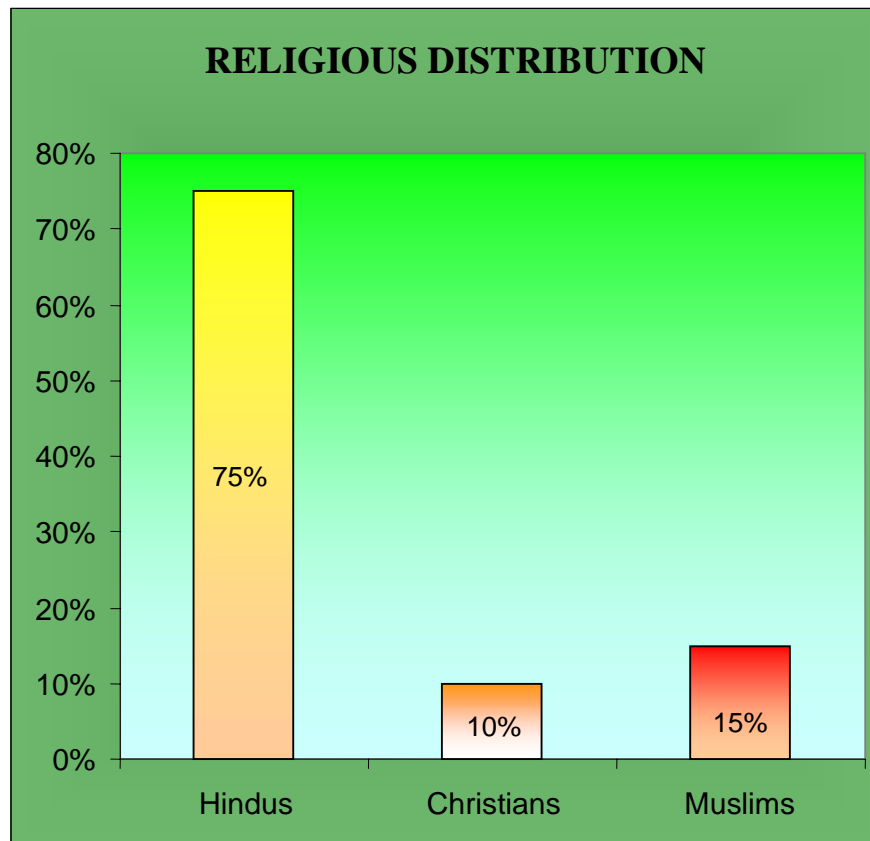
Among 20 Patients, 45% belonged to Vatha kaalam.

55% belonged to Pitha kaalam .

RELIGIOUS DISTRIBUTION

TABLE – 3

S.NO	Religion	Number of cases	Percentage (%)
1.	Hindus	15	75
2.	Christians	2	10
3.	Muslims	3	15



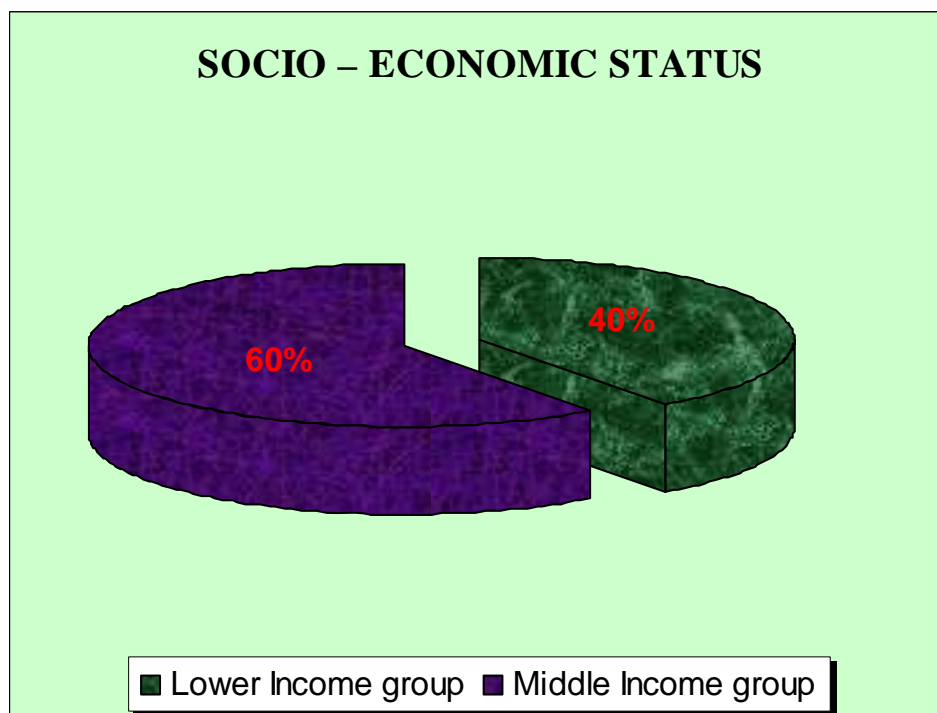
INFERENCE:

Observation showed that 75% were Hindus ,
10% were Christians,
15% were Muslims

SOCIO – ECONOMIC STATUS

TABLE – 4

S. NO	Socio-Economic Status	Number of cases	Percentage (%)
1.	Lower Income group	8	40
2.	Middle Income group	12	60



INFERENCE:

Out of 20 patients, 40 % belonged to Lower Income group,
60% belonged to Middle Income group

MARITAL STATUS DISTRIBUTION

TABLE – 5

S. NO	Marital status	Number of cases	Percentage (%)
1.	Married	17	85
2.	Unmarried	3	15

INFERENCE:

85 % were married and 15% were unmarried .

DIET DISTRIBUTION

TABLE – 6

S. NO	Diet	No of cases	Percentage (%)
1.	Vegetarian	3	15%
2.	Mixed diet	17	85%

INFERENCE:

85% patients ate mixed diet and 15% ate vegetarian diet.

DISTRIBUTION OF THINAI

TABLE – 7

S. NO	Thinai	Number of cases	Percentage (%)
1.	Kurinji	2	10
2.	Mullai	-	-
3.	Marutham	3	15
4.	Neithal	13	65
5.	Paalai	2	10

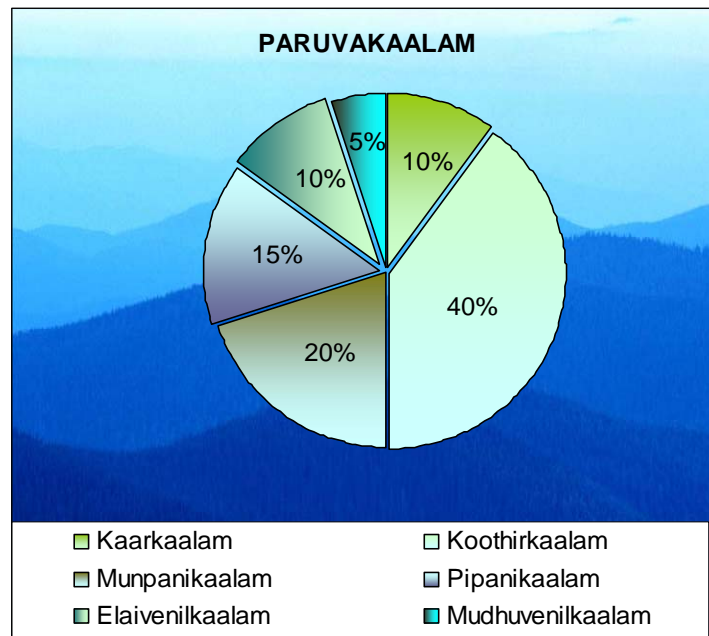
INFERENCE:

Most of the patients (65%) were from in and around Chennai. So they belonged to Neithal thinai.

PARUVAKAALAM

TABLE – 8

S. NO	Paruvakaalam	Number of cases	Percentage (%)
1.	Kaarkaalam (Aug16-Oct15)	2	10
2.	Koothirkaalam (Oct16-Dec15)	8	40
3.	Munpanikaalam (Dec16-Feb15)	4	20
4.	Pinpanikaalam (Feb16-Apr15)	3	15
5.	Elavenilkaalam (Apr16-June15)	2	10
6.	Mudhuvenilkaalam (June16-Aug15)	1	5



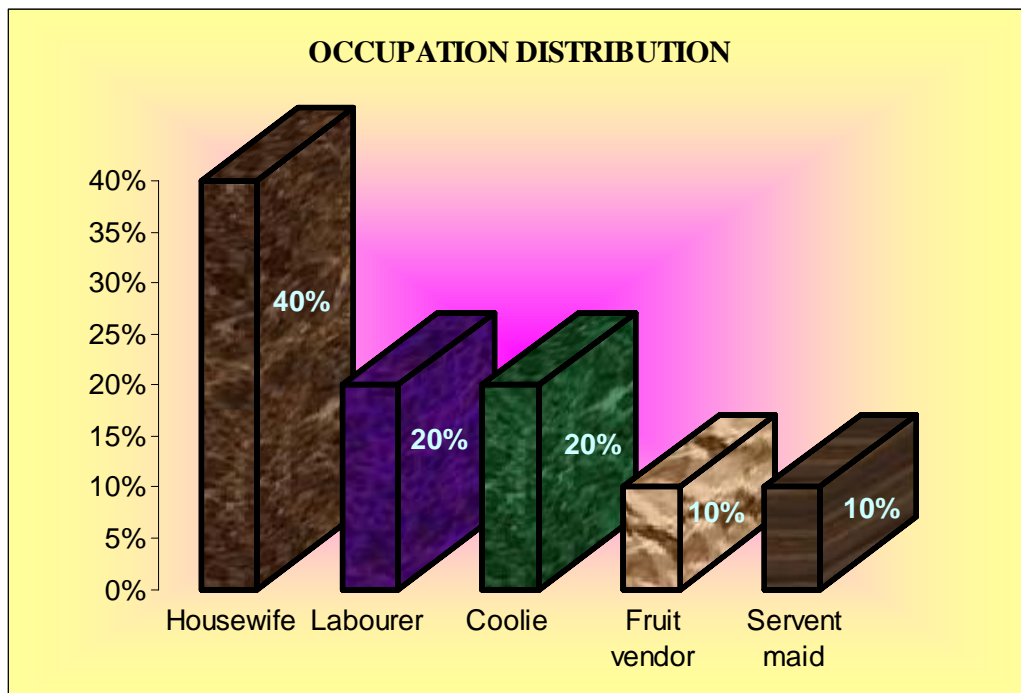
INFERENCE:

40% patients were affected in Koothirkaalam, 20% in Munpanikaalam, 15% in Pinpanikaalam, 10% in Kaarkaalam and Elavenilkaalam each, 5% in Mudhuvenilkaalam.

OCCUPATION DISTRIBUTION

TABLE – 9

S. NO	Occupation	Number of cases	Percentage (%)
1.	Housewife	8	40
2.	Labourer	4	20
3.	Coolie	4	20
4.	Fruit vendor	2	10
5.	Servant maid	2	10



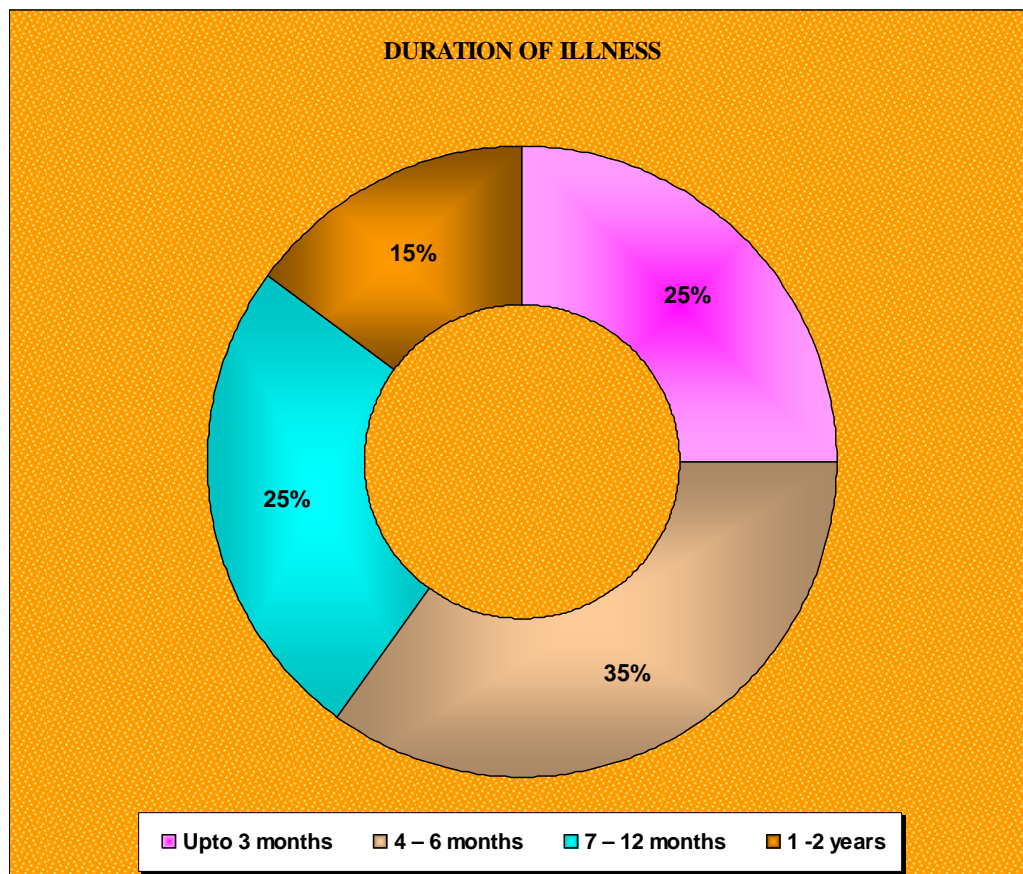
INFERENCE:

Among 20 patients, 40% were housewives, 20% were labourers, 20% were coolies, and the remaining were fruit vendors and servant maids 10% each.

DURATION OF ILLNESS

TABLE – 10

S. NO	Duration of illness	Number of cases	Percentage (%)
1.	Upto 3 months	5	25
2.	4 – 6 months	7	35
3.	7 – 12 months	5	25
4.	1 -2 years	3	15



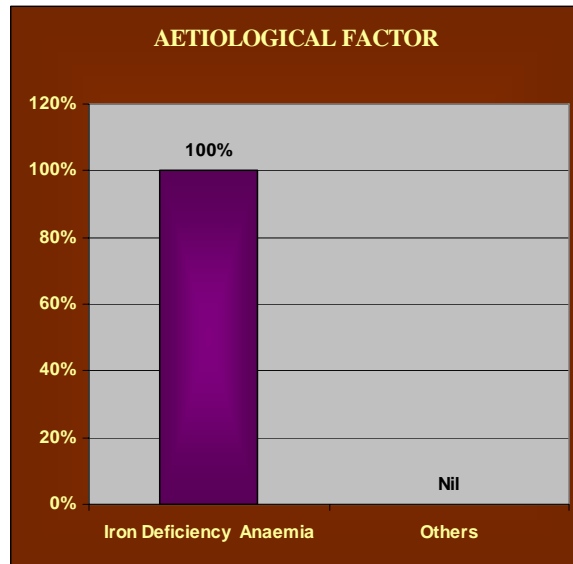
INFERENCE:

25% had duration of illness of within 3 months,
35% of duration between 4-6 months, 25% between 7-12 months,
15% of duration between 1-2 yrs.

AETIOLOGICAL FACTOR

TABLE – 11

S. NO	Aetiological Factor	Number of cases	Percentage (%)
1.	Iron Deficiency Anaemia	20	100
2.	Others	-	-



INFERENCE:

Of 20 patients ,Iron deficiency anaemia was noted in all cases.

ASSOCIATED PELVIC PATHOLOGY

TABLE – 12

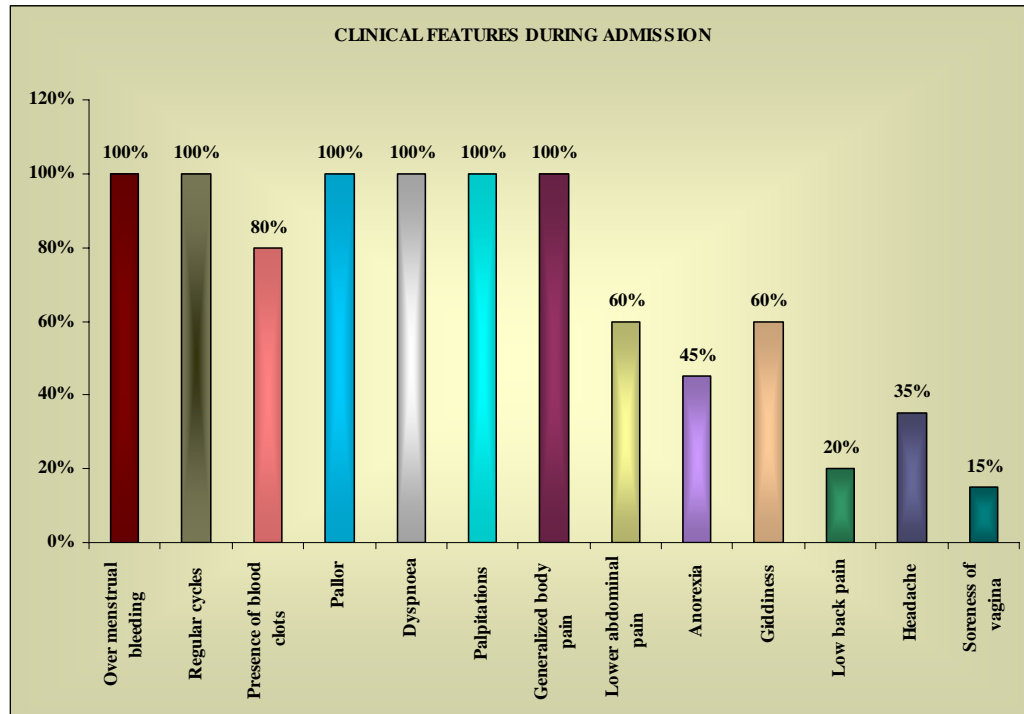
S. NO	Associated Pelvic Disease	Number of cases	Percentage (%)
1.	Poly Cystic Ovarian disease	6	30
2.	Fibroids	2	10
3.	Endometrial Polyp	1	5
4.	No abnormality	11	55

INFERENCE:

55% of the patients had no abnormalities, 30% had polycystic ovarian disease, 10% had fibroids and the remaining 5% had endometrial polyp.

CLINICAL FEATURES DURING ADMISSION
TABLE – 13

SL NO.	Clinical Features	Number of cases	Percentage (%)
1.	Over menstrual bleeding	20	100
2.	Regular cycles	20	100
3.	Presence of blood clots	16	80
4.	Pallor	20	100
5.	Dyspnoea	20	100
6.	Palpitations	20	100
7.	Generalised body pain	20	100
8.	Lower abdominal pain	12	60
9.	Anorexia	9	45
10.	Giddiness	12	60
11.	Low back pain	4	20
12.	Headache	7	35
13.	Soreness of vagina	3	15



INFERENCE:

100% cases had over menstrual heading with regular cycle intervals, pallor, generalized body pain, dyspnoea and palpitations.

80% had presence of blood clots,

60% had lower abdominal pain and giddiness,

45% had anorexia, 35% had headache,

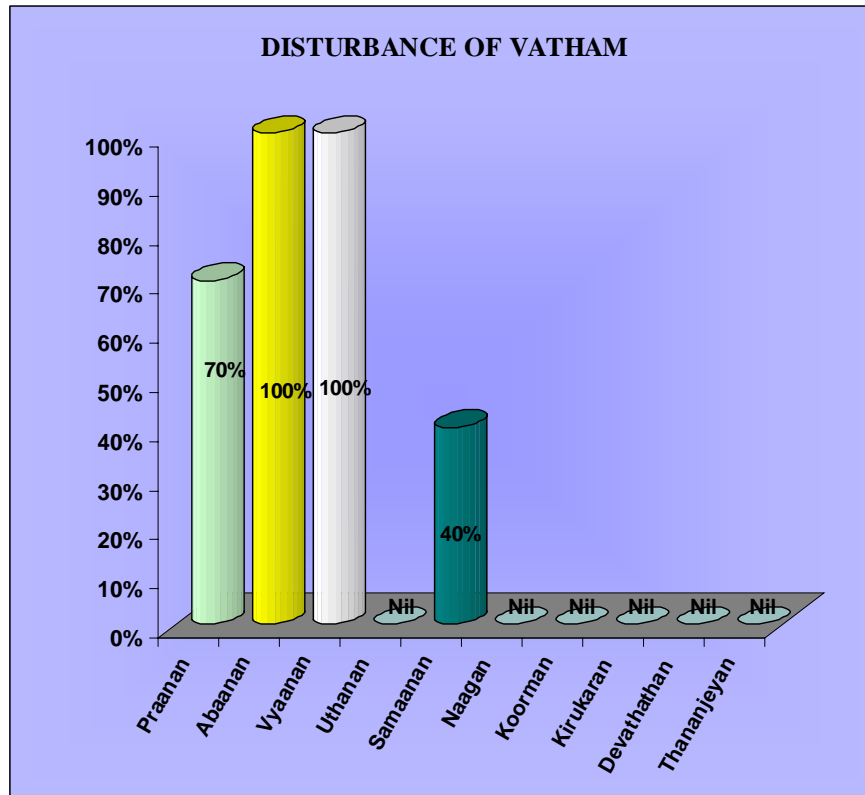
20% had low backpain,

15% had soreness of vagina.

DISTURBANCE OF MUKKUTTRAM
TABLE – 14

A). VATHAM

S. NO	Vatham Classification	Number of cases	Percentage (%)
1.	Praanan	20	100
2.	Abaanan	20	100
3.	Vyaanan	20	100
4.	Uthanan	-	-
5.	Samaanan	9	45
6.	Naagan	-	-
7.	Koorman	-	-
8.	Kirukaran	-	-
9.	Devathathan	-	-
10.	Thananjeyan	-	-



INFERENCE:

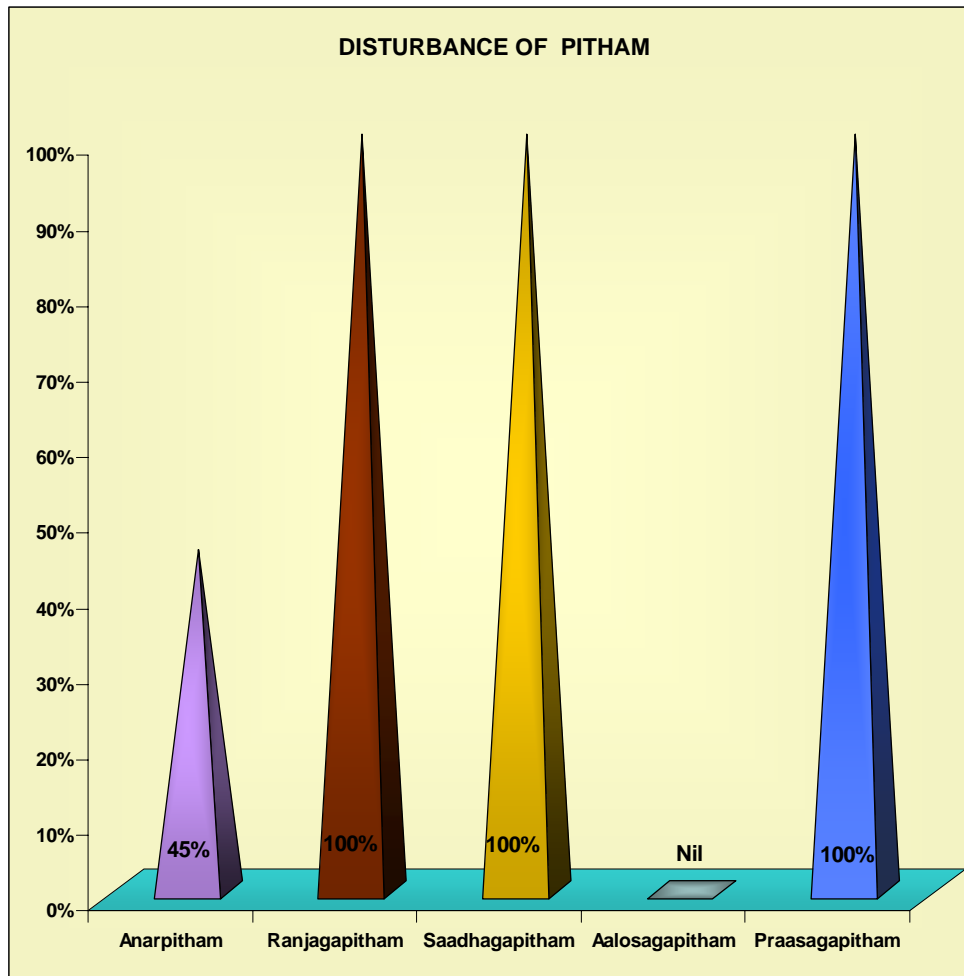
Praanan ,Abaanan and Vyaanan were affected 100%

Samaanan was affected 45%

DISTURBANCE OF MUKKUTRAM
TABLE – 15

B). PITHAM

S. NO	Pitham Classification	Number of cases	Percentage (%)
1.	Anarpitham	9	45
2.	Ranjagapitham	20	100
3.	Saadhagapitham	20	100
4.	Aalosagapitham	-	-
5.	Praasagapitham	20	100



INFERENCE:

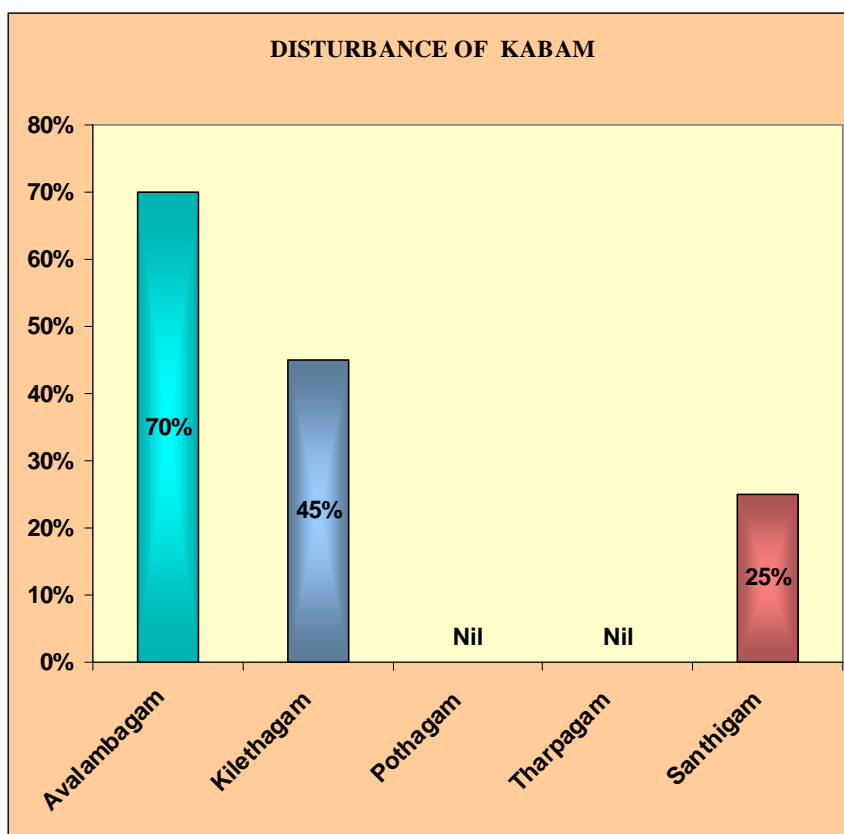
Ranjagapitham, Saadhagapitham and Praasagapitham were affected 100% Anarpitham was affected 45%.

DISTURBANCE OF MUKKUTRAM

TABLE – 16

C). KABHAM

S. NO	Kabham Classification	Number of cases	Percentage (%)
1.	Avalambagam	14	70
2.	Kilethagam	9	45
3.	Pothagam	-	-
4.	Tharpagam	-	-
5.	Santhigam	5	25



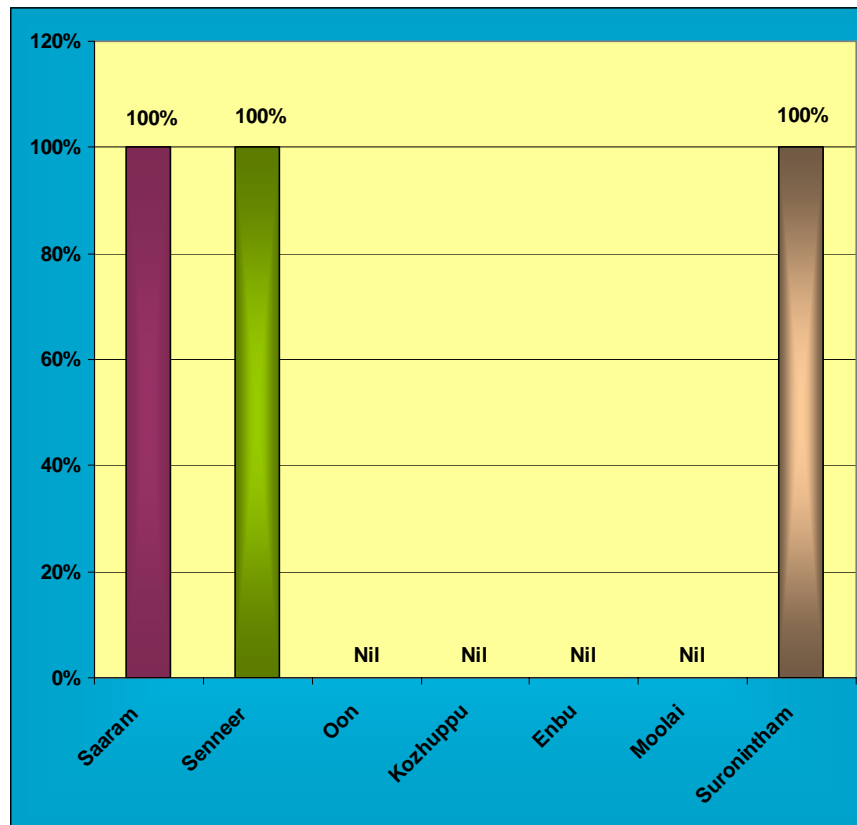
INFERENCE:

Avalambagam was affected 70% Kilethagam was affected 45% and Santhigam was affected 25%.

EZHU UDAL THAATHUKKAL

TABLE – 17

S. NO	Ezhu Udal Thaathukkal	Number of cases	Percentage (%)
1.	Saaram	20	100
2.	Senneer	20	100
3.	Oon	-	-
4.	Kozhuppu	-	-
5.	Enbu	-	-
6.	Moolai	-	-
7.	Suronitham	20	100

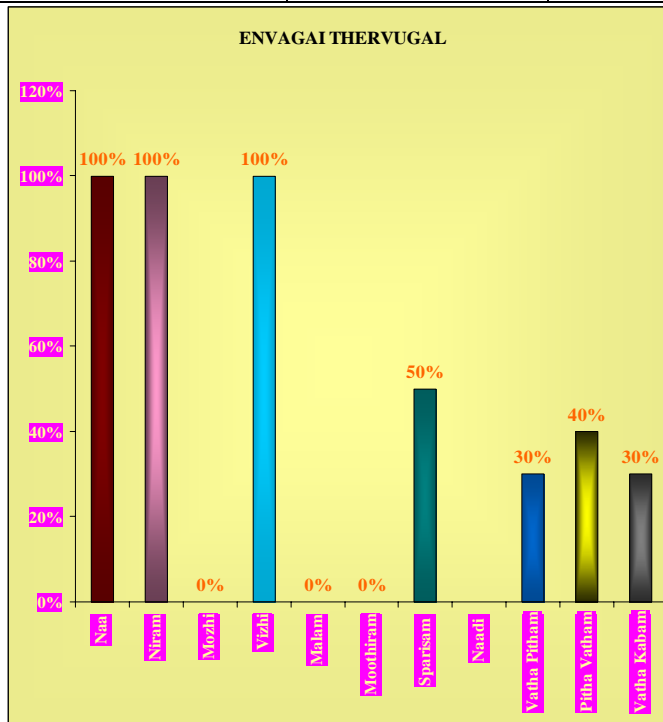


INFERENCE:

On observation, Saaram, Senneer and Suronitham were affected 100 % in all the cases .

ENVAGAI THERVUGAL
TABLE – 18

S. NO	Envagai Thervugal	Number of cases	Percentage (%)
1.	Naa	20	100
2.	Niram	20	100
3.	Mozhi	-	-
4.	Vizhi	20	100
5.	Malam	-	-
6.	Moothiram	-	-
7.	Sparisam	10	50
8.	Naadi		
	Vatha Pitham	6	30
	Pitha Vatham	8	40
	Vatha	6	30
	Kabham		



INFERENCE:

On observation, Naa, Niram and Vizhi were affected 100%

Sparisam was affected 50%

Regarding Naadi 30% showed Vatha pitham

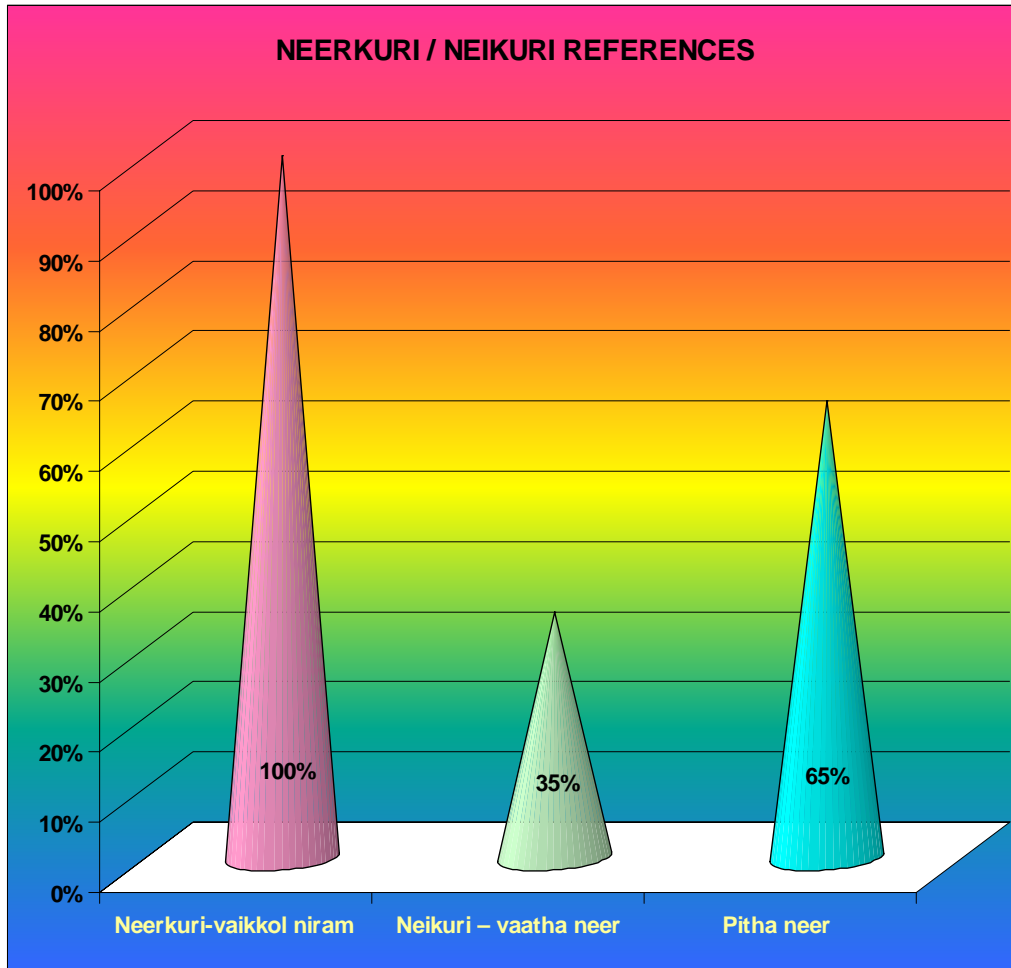
40% showed Pitha vatham.

30% showed Vatha kabham.

NEERKURI / NEIKURI REFERENCES

TABLE – 19

S. NO	Neerkuri / Neirkuri	Number of cases	Percentage (%)
1.	Neerkuri-vaikkol niram (straw yellow)	20	100
2.	Neikuri – vaatha neer (oil spreads like a snake)	7	35
3.	Pitha neer (oil spreads like a ring)	13	65



INFERENCE:

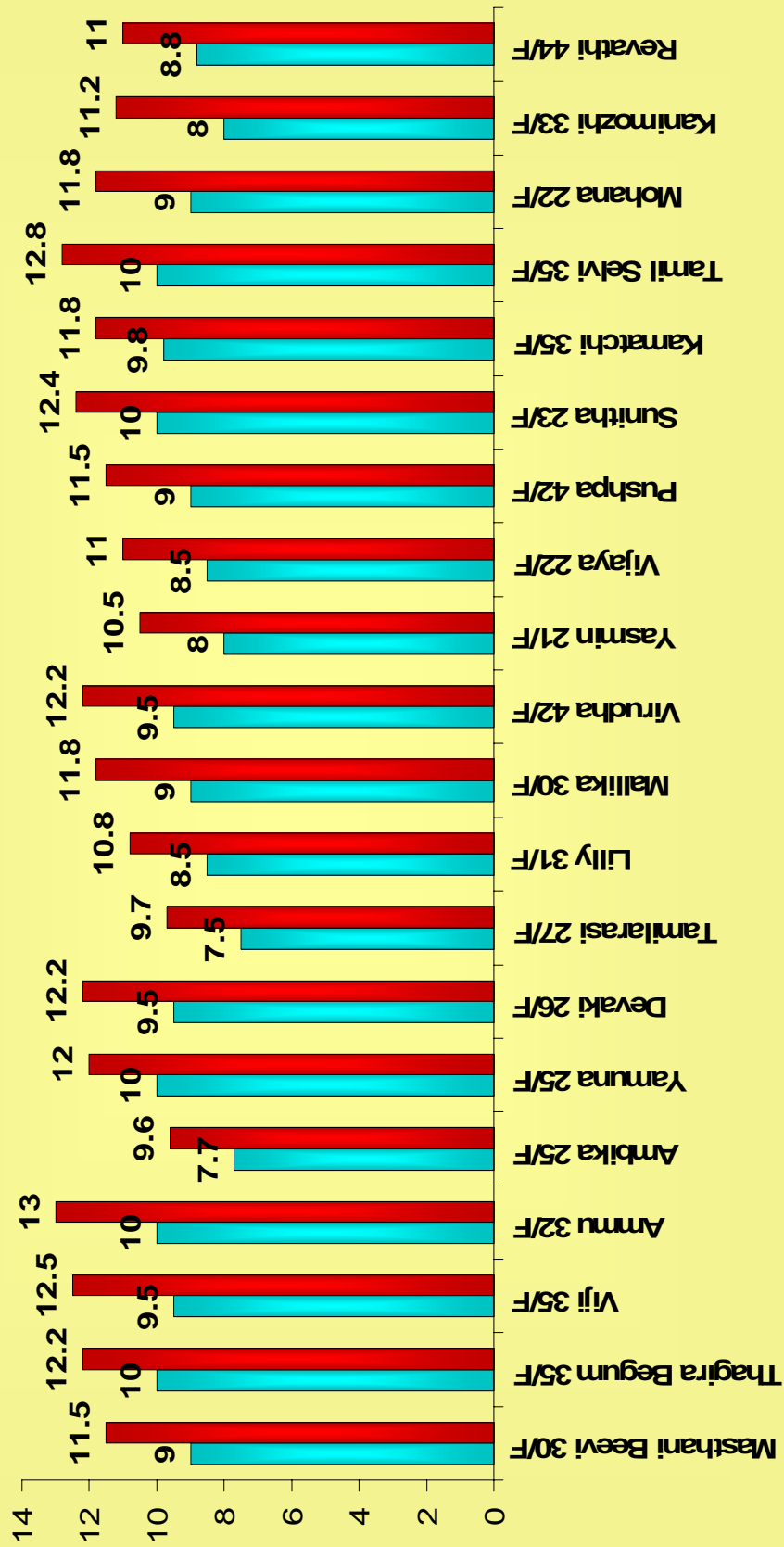
Neerkuri-Normal straw yellow colour was seen 100%.

Neikuri-Vatha Neer was seen 35%. Pitha Neer was seen 65%.

HAEMOGLOBIN LEVELS BEFORE AND AFTER TREATMETNT**TABLE – 20**

S. NO	I.P.No	Name	Before Treatment (gms)	After Treatment (gms)
1.	124/2754	Masthani Beevi 30/F	9	11.5
2.	294/899	Thagira Begum 35/F	10	12.2
3.	384/5922	Viji 35/F	9.5	12.5
4.	738/1061	Ammu 32/F	10	13
5.	873/9099	Ambika 25/F	7.7	9.6
6.	992/2233	Yamuna 25/F	10	12
7.	1098/1882	Devaki 26/F	9.5	12.2
8.	2640/1444	Tamilarasi 27/F	7.5	9.7
9.	2846/2233	Lilly 31/F	8.5	10.8
10.	1814/8557	Mallika 30/F	9	11.8
11.	1884/1272	Virudha 42/F	9.5	12.2
12.	1972/1476	Yasmin 21/F	8	10.5
13.	2048/678	Vijaya 22/F	8.5	11
14.	2173/8554	Pushpa 42/F	9	11.5
15.	2260/2160	Sunitha 23/F	10	12.4
16.	2298/3698	Kamatchi 35/F	9.8	11.8
17.	2468/1679	Tamil Selvi 35/F	10	12.8
18.	2475/2457	Mohana 22/F	9	11.8
19.	2525/5252	Kanimozhi 33/F	8	11.2
20.	2553/1848	Revathi 44/F	8.8	11

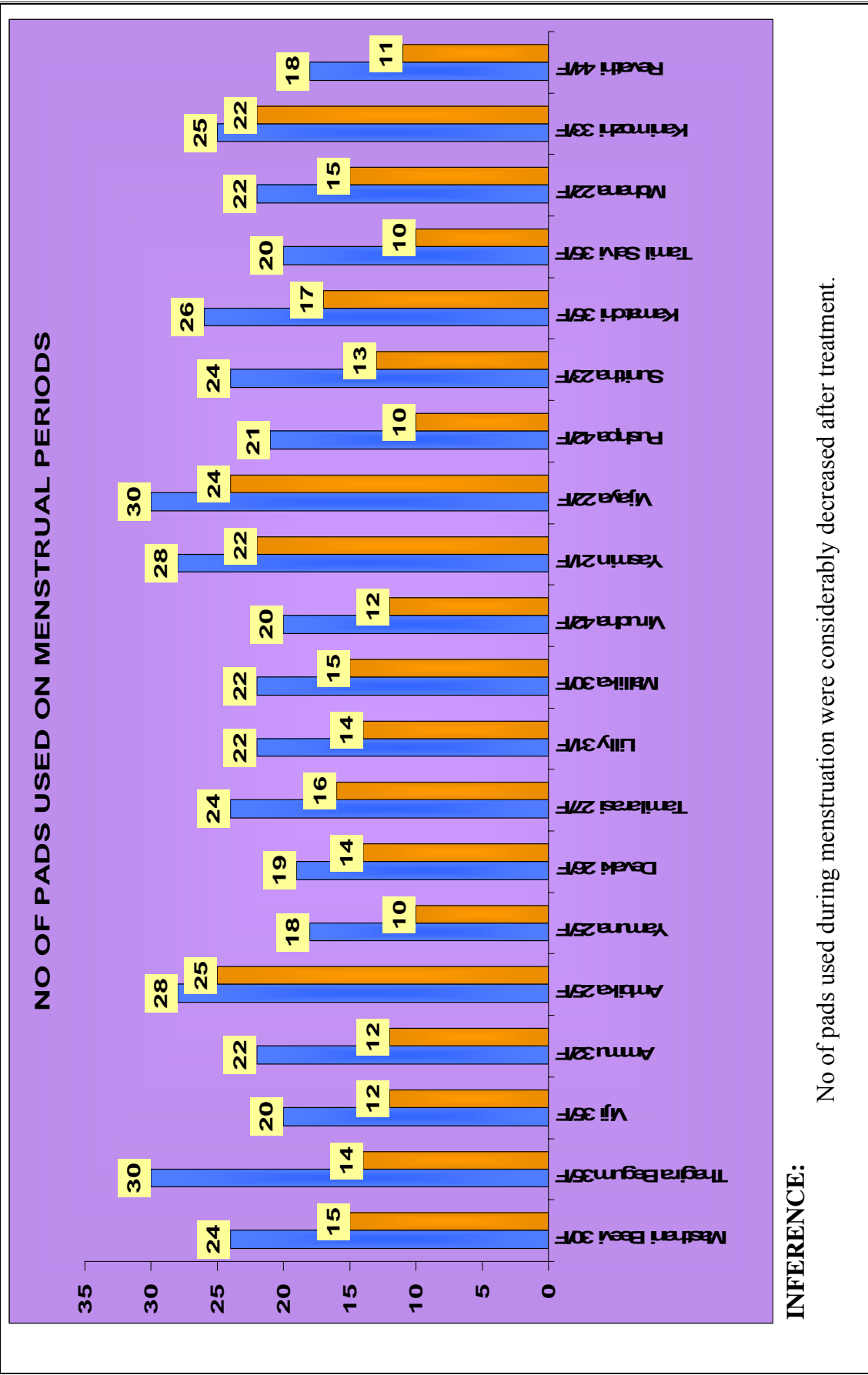
HAEMOGLOBIN LEVELS BEFORE AND AFTER TREATMENT



The above table shows the significant increase in haemoglobin levels after treatment

NUMBER OF PADS USED ON MENSTRUAL PERIODS**TABLE – 20**

S. NO	IP.No	Name	No.of Pads Used	
			Before Treatment	After Treatment
1.	124/2754	Masthani Beevi 30/F	24	15
2.	294/899	Thagira Begum 35/F	30	14
3.	384/5922	Viji 35/F	20	12
4.	738/1061	Ammu 32/F	22	12
5.	873/9099	Ambika 25/F	28	25
6.	992/2233	Yamuna 25/F	18	10
7.	1098/1882	Devaki 26/F	19	14
8.	2640/1444	Tamilarasi 27/F	24	16
9.	2846/2233	Lilly 31/F	22	14
10.	1814/8557	Mallika 30/F	22	15
11.	1884/1272	Virudha 42/F	20	12
12.	1972/1476	Yasmin 21/F	28	22
13.	2048/678	Vijaya 22/F	30	24
14.	2173/8554	Pushpa 42/F	21	10
15.	2260/2160	Sunitha 23/F	24	13
16.	2298/3698	Kamatchi 35/F	26	17
17.	2468/1679	Tamil Selvi 35/F	20	10
18.	2475/2457	Mohana 22/F	22	15
19.	2525/5252	Kanimozhi 33/F	25	22
20.	2553/1848	Revathi 44/F	18	11



DURATION OF MENSTRUAL PERIODS

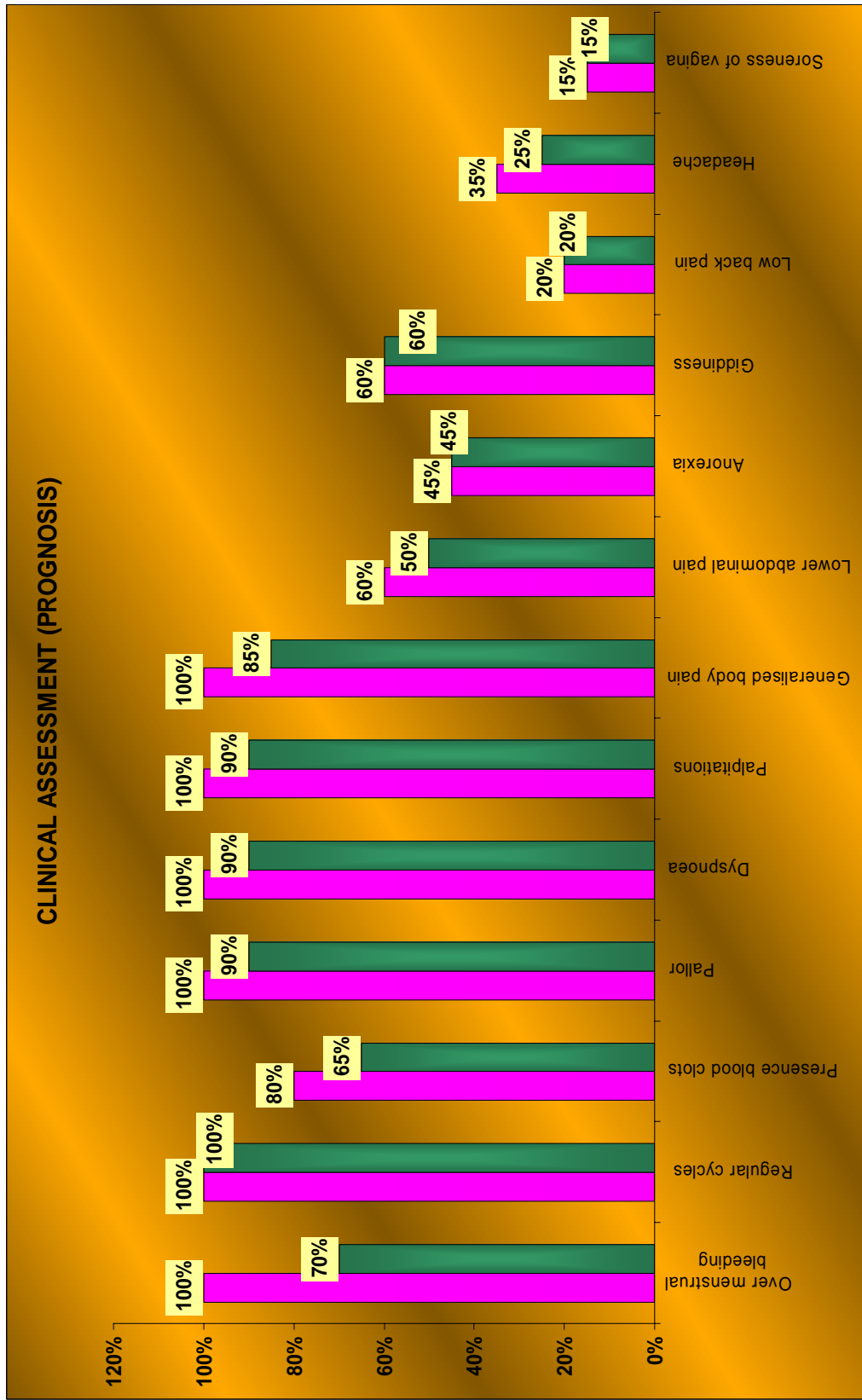
TABLE – 21

S. NO	IP.No	Name	Before Treatment Duration	After Treatment Duration
1.	124/2754	Masthani Beevi 30/F	5-7	4-7
2.	294/899	Thagira Begum 35/F	4-7	3-5
3.	384/5922	Viji 35/F	5-8	4-6
4.	738/1061	Ammu 32/F	5-6	4-5
5.	873/9099	Ambika 25/F	8-10	6-8
6.	992/2233	Yamuna 25/F	4-7	3-5
7.	1098/1882	Devaki 26/F	5-7	3-5
8.	2640/1444	Tamilarasi 27/F	8-9	5-6
9.	2846/2233	Lilly 31/F	5-8	4-6
10.	1814/8557	Mallika 30/F	3-6	3-5
11.	1884/1272	Virudha 42/F	4-6	3-5
12.	1972/1476	Yasmin 21/F	5-7	5-6
13.	2048/678	Vijaya 22/F	5-8	5-6
14.	2173/8554	Pushpa 42/F	3-6	3-4
15.	2260/2160	Sunitha 23/F	6-7	3-6
16.	2298/3698	Kamatchi 35/F	3-7	3-5
17.	2468/1679	Tamil Selvi 35/F	4-6	3-4
18.	2475/2457	Mohana 22/F	3-7	3-4
19.	2525/5252	Kanimozhi 33/F	5-8	5-7
20.	2553/1848	Revathi 44/F	5-7	3-5

CLINICAL ASSESSMENT (PROGNOSIS)

TABLE – 22

SL NO.	Clinical Features	Number of cases		Percentage (%)	
		No.of Cases Suffered	%	No.of Cases Relieved	%
1.	Over menstrual bleeding	20	100	14	70
2.	Regular cycles	20	100	20	100
3.	Presence of blood clots	16	80	13	65
4.	Pallor	20	100	18	90
5.	Dyspnoea	20	100	18	90
6.	Palpitations	20	100	18	90
7.	Generalised body pain	20	100	17	85
8.	Lower abdominal pain	12	60	10	50
9.	Anorexia	9	45	9	45
10.	Giddiness	12	60	12	60
11.	Low back pain	4	20	4	20
12.	Headache	7	35	5	25
13.	Soreness of vagina	3	15	3	15



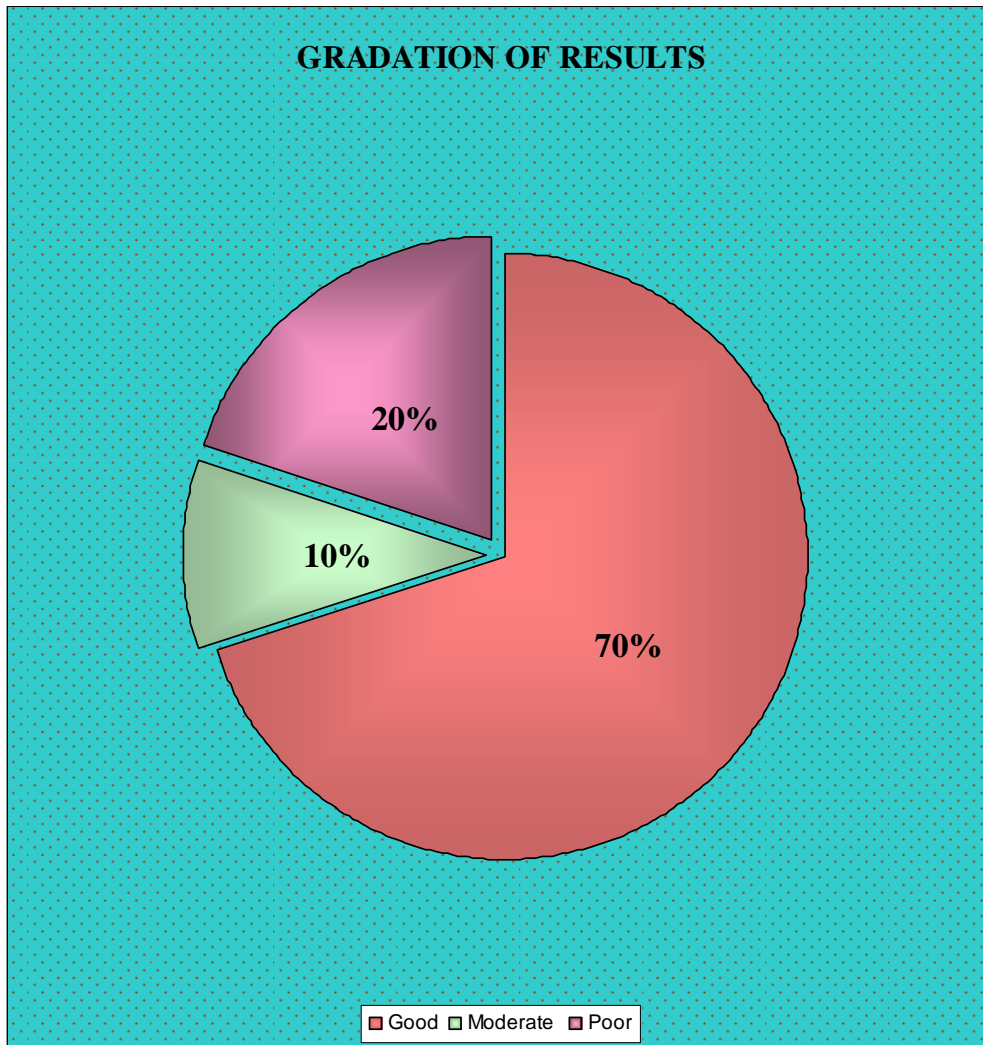
INFERENCE:

- ❖ 100 % patients showed over menstrual bleeding, after treatment 70% were relieved.
- ❖ 100% suffered from anaemia and had pallor, dyspnoea and palpitations. After treatment 90% were cured from anaemia, pallor dyspnoea and palpitations.
- ❖ 80% had blood clots in menstrual bleeding but after treatment 65% were relieved from blood clots.
- ❖ 100% cases had body pain, after treatment 90% got relieved.
- ❖ 60% had lower abdominal pain and giddiness, but after treatment 50% got relieved from lower abdominal pain and 60% from giddiness.
- ❖ 45% had anorexia, after treatment 45% got relieved.
- ❖ 35% had headache, after treatment 25% got relieved.
- ❖ 20% complained of backache, after treatment all got relieved.
- ❖ 15% had soreness of vagina, after treatment all got relieved.
- ❖ 70% of the patients were completely relieved from symptoms and improved. 10% were moderately relieved and 20% were partially relieved.

GRADATION OF RESULTS

TABLE – 24

S. NO	Grade of Results	Number of cases	Percentage (%)
1.	Good	14	70
2.	Moderate	2	10
3.	Poor	4	20



INFERENCE:

The results of clinical improvement was graded as
Good 70%,
Fair 10%,
Poor 20%.

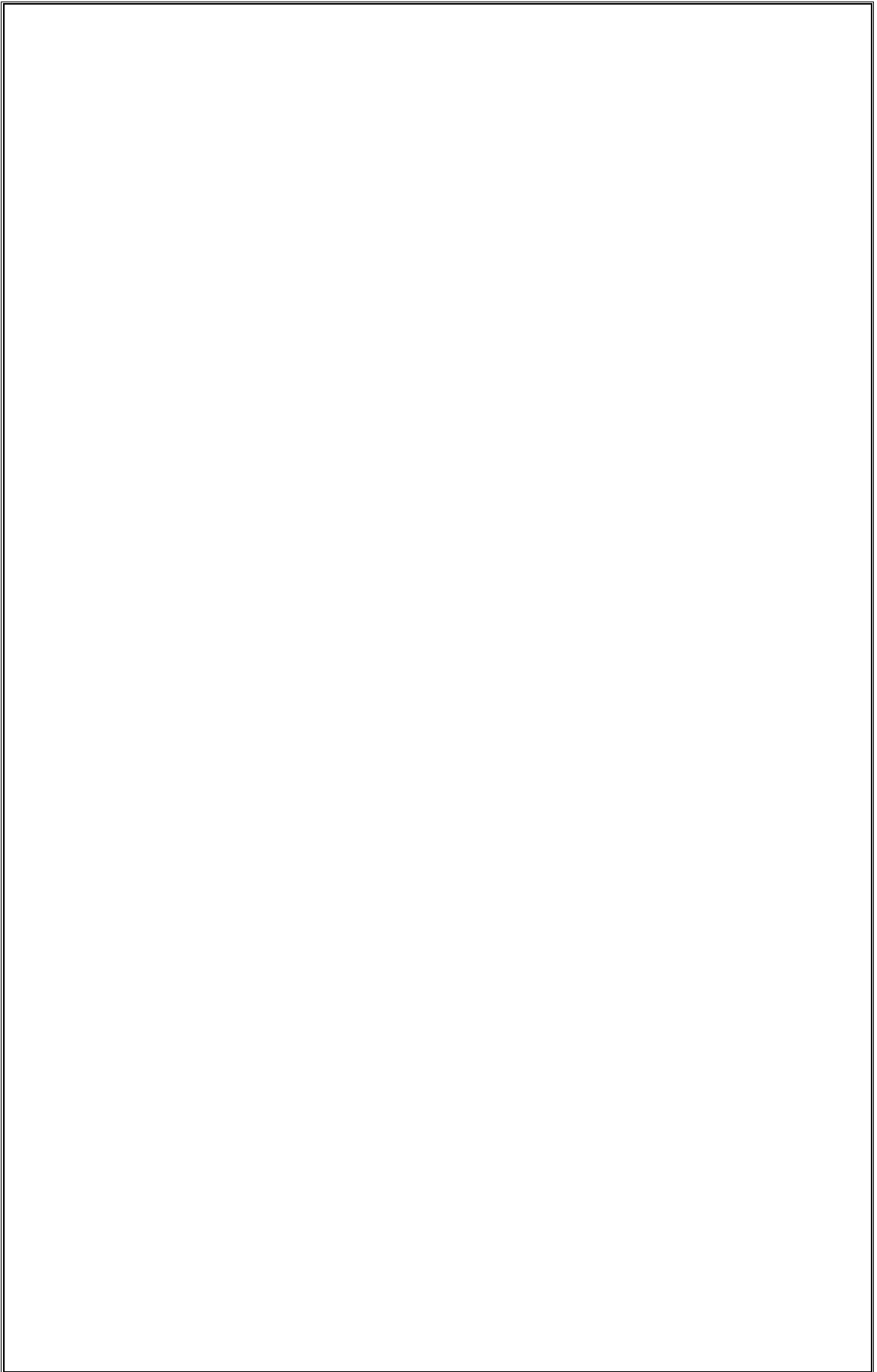
TABLE

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DISCUSSION

Yugimunivar, in his text Yugi Vaidhya Chinthamani has described Pitha Perumpaadu under the classifications of Perumpaadu. Pitha Perumpaadu has been compared with the modern clinical entity Menorrhagia.

Twenty patients were admitted in the Inpatient ward of the Post Graduate Department, Govt Siddha Medical College, Chennai and twenty patients were treatment as Outpatients.

The duration of treatment was fixed as three consecutive menstrual cycles. Clinical assessment was carried out once in a week and pathological assessment was carried out during the menstrual cycle.

The clinical improvement of the patients was completely observed and efficacy of the trial medicines have been studied in this study.

The observation found in the 20 I.P patients were discussed as follows:

1. Age Distribution:

The relative preponderance of the incidence of Pitha Perumpaadu is in the age group of 31-40yrs is 45% and 21-30yrs is 40%. This coincides with the modern aspect that Menorrhagia mostly occurs in the adult period

2. Kaalam Distribution:

55% of the patients belonged to Pitha kaalam and 45% belonged to Vatha kaalam.

3. Religious Distribution:

Among 20 patients 75% were Hindus, 10% were Christians and 15% were Muslims.

4. Diet Distribution:

85% had taken mixed diet and 15% were Vegetarians.

5. Socio- Economic Status:

60% belong to middle income group and 40% belong to lower income group. They had been affected due to nutritional imbalance, modified lifestyle, stress, illhygeine or ignorance of treatment.

6. Marital Status:

85% of the patients were married and 15% were unmarried. The disease is found more in married patients.

7. Thinai Distribution:

Most of the patients 65% belonged to Neithal Thinai, because patients were from in and around Chennai and Chennai belongs to Neithal Nilam. 10% cases were reported from Paalai which is the ideal land for development of Pitha diseases. 15% cases were reported from Marutham and 10% from Kurunji.

8. Paruvakaalam:

40% of patients were noted in Koothirkaalam, 20% in Munpani kaalam, 15% in Pinpanikaalam, 10% each in Kaarkaalam and Elavenil kaalam and 5% in Mudhuvenil kaalam.

Majority of cases were noted in Koothirkaalam tuning with the Siddhar's concept that Pitham get aggravated in Koothirkaalam. Minimum cases were noted in all seasons due to intrinsic and extrinsic factors like diet, stress etc. Aggravation of Vatham and Pitham in particular season may differ.

9. Occupational Status:

Among 20 Inpatients, 40% were housewives, 20% were labourers, 20% were coolies, 10% were fruit vendors and the remaining 10% were servant maids. Irrespective of occupation the disease is found in all people.

10. Duration of Illness:

Duration of illness ranged upto 2 years. 25% came under the duration of upto 3 months, 35% of duration 4-6 months, 25% of duration 7-12 months, 15% of duration 1-2 years. Both chronic and acute onset of illness were noted.

11. Aetiological Factor:

The aetiological factor Iron deficiency Anaemia was noted in all the 20 patients.

12. Associated Pelvic Diseases:

In Ultrasonogram study, normal study was noted on 55% cases. Polycystic ovarian disease in 30%, Fibroid in 10% and Endometrial polyp in 5% of cases.

Polycystic ovarian disease was the major associated disease.

13. Clinical manifestation:

Among 20 Inpatients, the cardinal features like Over menstrual bleeding, regular cycle intervals, Pallor, Dyspnoea, Palpitations and body pain were noted 100%. 80% had bleeding with blood clots, 60% had giddiness and lower abdominal pain, 45% had anorexia, 35% had headache, 20% had low backache and 15% had soreness of vagina.

14. Mukkuttram:**A. Disturbance in Vatham:**

Abaanan, Vyaanan and Praanan were affected 100% Samaanan was affected 45% Affected Abaanan and Vyaanan produced over menstrual bleeding, lower abdominal pain, low back pain, headache and body pain.

Affected Praanan produced dyspnoea and palpitations.

Affected Samaanan produced loss of appetite and got affected as it neutralizes other Vayus.

B. Disturbance in Pitham:

Ranjagapitham, Saadhaga Pitham and Praasagapitham were affected 100% Anarpitham was affected in 45% of cases.

Affected Ranjagapitham produced pallor of skin, lower eyelids, tongue and nails with reduced Haemoglobin.

Affected Saadhagapitham produced general malaise, giddiness and tiredness.

Affected Praasapitham produced pallor of skin.

Affected Anarpitham produced loss of appetite.

C. Disturbance in Kabham:

Avalambagam was affected 70%, Kilethagam was affected 45% and Santhigam was affected 25%

Avalambagam was affected because of low Hb levels.

Affected Kilethagam produced loss of appetite.

Affected Santhigam produced low back pain.

15. Seven Udalthaathukkal:

Saaram, Senneer and Suronitham were affected 100%.

Affected Saaram produced tiredness and lack of briskness of the body.

Affected Senneer produced anaemia.

Affected Suronitham produced excessive menstrual bleeding.

16. Envagai Thervugal:

Naa, Niram and Vizhi were affected 100% in all the cases. Sparisam was affected 50%.

Affected Naa denoted pallor of tongue.

Affected Niram denoted pallor of lower eyelids, skin and nails.

Affected Vizhi denoted pallor of lower eyelids

Affected Sparisam indicated back pain and lower abdominal pain.

Regarding Naadi 40% had Pithvaatham, 30% had Vathapitham and 30% had Pithakabham. This coincide with the Siddhar's concept that Pitham and Vatham Thontha naadi are noted in Perumpaadu.

Neerkuri / Neikuri:

Normal urine colour straw yellow was noted 100% in all cases. A drop of gingelly oil was dropped into the urine and Neikuri is noted. In 65% patients oil spreaded like a ring denoting Pitha Neer and in 35% patients the oil Spreaded like a snake denoting Vatha Neer .

17. Clinical Assessment – Prognosis:

All the patients were treated with trial medicines. The clinical assessment was made by the relief of symptoms after treatment.

Symptoms like loss of appetite, giddiness, headache, body pain, vagina soreness disappeared at the end of the first menstrual cycle. Regarding lower abdominal pain, over bleeding with blood clots, pallor and dyspnoea the response was 50% at the end of the second menstrual cycle and 70% at the end of the third menstrual cycle.

Haemoglobin levels were regularly monitered and anaemia was corrected at the end of the third menstrual cycle.

The Inpatients who were unable to remain in the Inpatients ward for three consecutive menstrual cycles were discharged and treated in the outpatient ward till the completion of the dose regime. During the treatment, the patients were advise to follow good personal hygiene, have a nutritious iron enriched diet and to do simple aasanas and exercises.

18. Gradation of Results:

At the end of the treatment the overall gradation are as follows.

Among 20 Inpatients, 70% were completely relieved (good), 10% moderately relived (fair) and 20% were relieved partially (poor).

Mode of Action of Trial Medicines:

Siddha Aspect:

A medicine can act as Oppurai, Ethirurai or Kalappurai.

Based on Suvai-the trial medicine Sadhurmuga Choornam bears Thuvurppu Suvai which has the astringent property of controlling the bleeding. The deranged Pitham in Perumpaadu was neutralized by Thuvurppu taste.

The trial medicine Soothra Abhayaathy legium has Enippu, Kaarppu Suvai which balances the affected Pitham. Both the medicine balances the affected pitham acting on the principle of ETHIRURAI.

Based on Pirivu-Both the trial medicines after assimilation (Pirivu) gets sweet taste, which will pacify both the vitiated Vatham and Pitham.

Preclinical studies:

Qualitative Analysis:

The trial medicines showed the following constituents.

1. Sadhurmuga Choornam:

Acid Radicals	:	Sulphate, Chloride, Carbonate, Phosphate
Basic Radicals	:	Calcium, Iron (Ferrous), Copper
Chemical Constituents	:	Tannic acid, Reducing Sugar, Alkaloids, Steroids, Proteins, Tannins, Phenols, Flavanoids, Saponins, Amino acids, Glycosides.

2. Soothra Abhayaathy Legium:

Acid Radicals	:	Sulphate, Chloride, Carbonate, Phosphate
Basic Radicals	:	Calcium, Iron (Ferrous), Copper
Chemical Constituents	:	Starch, Tannic acid, Reducing Sugar, Alkaloids, Steroids, Proteins, Tannins, Phenols, Flavanoids, Saponins, Amino acids, Glycosides.

1. **Calcium** constituent, which is necessary for coagulation or arrest of bleeding.

2. **Phosphate** constituent, the actions are closely related to calcium. It acts as a buffer in blood.
3. **Iron** constituent, essential for the synthesis of haemoglobin. Iron was present in ferrous form in the trial medicine. In this form, iron is more stable and readily absorbed from the intestinal lumen. In haemoglobin, iron is present in ferrous form only.
4. **Copper** constituent has chief function in haemopoiesis. Along with iron, it helps in the synthesis of haemoglobin.
5. **Tannic acid** constituent which is used as astringent for controlling over bleeding.

Pharmacological Analysis:

Pharmacological studies of trial medicine Sadhurmuga Chooranam showed styptic activity. Soothra Abhayaathy Legium showed haematinic activity.

Antioxidant property also found when trial medicines were administered in albino rates during 21 days of repeated dosing.

Toxicological studies of trial medicines proved that the medicines did not possess any toxic affect in acute toxicity and repeated dose toxicity.

Overall Results:

Out of the 20 cases,

70% - Showed good results

10% - Fair and

20% - Poor results

Statistical Analysis:

Both the subjective and objective parameters were statistically significant before and after treatment.

The preclinical and clinical studies were highly encouraging. This is only a preliminary approach and the study may be undertaken with the same medicines in large number of patients to assess the further impact of the medicines on Pitha Perumpaadu.

SUMMARY

Nowadays Pitha Perumpaadu has become a common problem among the female society. It limits normal activities in routine life. Menorrhagia usually do not carry severe risks to women's general health but sometimes it requires serious medical sequelae. So I have selected this common ailment which hinders the physical development of women.

This disease is well correlated with Menorrhagia due to the classical features.

Sadhurmuga Choornam and Soothra Abhayaathy Legium were taken as trial medicines for this dissertation work.

The aetiology, pathology, classification, clinical features, diagnosis, complications, treatment, prognosis and prevention of the disease were collected from available literatures both in Siddha system and modern system of medicine.

In this study, 20 patients of different age groups with classical symptoms were selected as Inpatients and another 20 patients were taken as Outpatients. The trial medicines were given to all the selected patients. From the observation and results, it is clear that the disease was common on the following aspects.

- Age occurrence of the disease was seen in all age Groups.
- Majority of the patients belonged in Pitha kaalam.
- Majority of the cases were affected in Koothirkaalam.
- Maximum number of cases were married.
- The disease had been found both in lower and middle income group.
- Duration of illness ranged upto 2 yrs.
- Iron deficiency Anemia was the aetiological factor in all cases. Associated pelvic pathology was ruled out by Ultrasonogram study.
- Alterations in equilibrium of the three Doshas were elicited. In Vatham, Abaanan, Vyaanan and Praanan were completely affected. In Pitham,

Ranjagam, Praasagam and Saathagam were affected in all the cases. In Kabham, Avalambagam was affected more.

- Among seven Udarkattukkal, Saaram, Senneer and Suronitham were affected in all the cases.
- Siddha diagnosis was achieved with the help of Envagai Thervugal. In Envagai Thervugal, Naa, Niram and Vizhi was affected in all the cases.
- In Perumpaadu, the Naadi observed were Pitha Vaatham, Vatha Pitham and Pithakabham.
- Neikuri showed the shapes of ring and snake indicating Pitha and Vatha Neer.
- In laboratory investigations, routine blood and urine analysis, bleeding time and clotting time were seen in all the patients.
- Haemoglobin levels were regularly checked and observed for improvement.
- The efficacy of trial medicines were observed.
- 70% of the patients showed good results and had no side effects or adverse effects after treatment.
- Biochemical analysis showed the presence of acid radicals, basic radicals and phytochemical constituents of trial medicines.
- Pharmacological studies confirmed the Styptic activity of Sadhurmuga Chooranam and Haematinic activity of Soothra Abhayaathy Legium.
- Anemia was corrected within 2-3 menstrual cycles.
- Duration of the menstrual periods and amount of bleeding had decreased and the results were tabulated.

CONCLUSION

- In this study, clinical results were found to be satisfactory in 70% cases.
- The clinical study confirms the efficacy of the trial medicines, in controlling the bleeding and relief from Anaemia.
- Results of the study were highly encouraging.
- Treatment improved the functions of Abaana Vaayu, which regularizes the menstrual cycle.
- No untoward effects were reported during the treatment period.
- The preclinical studies showed significant activity and safety of the medicines.
- Preclinical studies proved the Styptic and haematinic activity of trial medicines.
- Statistical analysis proved significance of clinical improvement with the treatment.
- Siddha way of approach is certainly the best treatment of Pitha Perumpaadu in all aspects, as it could avoid surgical procedure.
- Because of the encouraging results, both preclinically and clinically, it is considered that Pitha Perumpaadu is well controllable alone with Sadhurmauga Choornam and Soothra Abhayaathy Legium.

Table No. 1 Statistical Analyses of Subjective Parameters observed before and after treatment of 20 (n) patients of **PITHA PERUMPAADU**, GSMC, Chennai – 106.

S. No.	Parameters	Percentage Present			Statistical Test Criterion	Probability (P) Value	Statistical Significance of the Difference
		Before R _x	After R _x	Difference			
1.	Over menstrual Bleeding	100.0 ± 26.832	70.0 ± 26.832	30.0 ± 9.328	26.832	P<0.001	*** (Highly Significant)
2.	Presence of blood clots	80.0 ± 35.777	65.0 ± 26.832	15.0 ± 0.982	35.777	P<0.003	*** (Highly Significant)
3.	Pallor	100.0 ± 26.832	70.0 ± 26.832	30.0 ± 9.328	26.832	P<0.001	*** (Highly Significant)
4.	Lower abdominal pain	60.0 ± 26.832	50.0 ± 17.885	10.0 ± 0.321	17.885	P<0.001	*** (Highly Significant)

Table No. 2 Statistical Analyses of Subjective Parameters observed before and after treatment of 20 (n) patients of **PITHA PERUMPAADU**, GSMC, Chennai – 106.

S. No.	Parameter (Unit of Measurement)	Mean Present			Paired – t Value	Probability (P) Value	Statistical Significance of the Difference
		Before R _x	After R _x	Difference			
1.	Hb (g/dl)	9.02 ± 0.359	11.72 ± 0.325	2.52 ± 0.012	0.725	P<0.000	*** (Highly Significant)

n = 20: Values are expressed as mean ± S.D followed by student one sample t-test (***) P<0.001, (**) P<0.003 as compared with that of before and after treatment.

STATISTICAL ANALYSES OF CLINICAL STUDY (BIOSTATISTICS)

Parameters for Analyses

i) Subjective Parameters (Signs and Symptoms)

- Over menstrual Bleeding
- Presence of blood clots
- Pallor
- Lower abdominal pain

ii) Objective Parameter (Laboratory investigations)

- Haemoglobin (g/dl)

The Parameters observed were analysed before and after treatment in 20 numbers of patients.

Methods of Analyses

- Z test for changes in Subjective Parameters. Detail is elaborately explained in Table.1
- Student one sample t-test for changes in Objective Parameter. Detail is explained in Table.2

Results

i) Z-test value for Subjective Parameters were,

- Over menstrual Bleeding $Z = 26.832$ ($P < 0.001$)
- Presence of blood clots $Z = 35.777$ ($P < 0.003$)
- Pallor $Z = 26.832$ ($P < 0.001$)
- Lower abdominal pain $Z = 17.885$ ($P < 0.001$)

ii) Student one sample t-test value for Objective Parameter was,

- Hb (g/dl) $t = 0.725$ ($P < 0.000$)

DURATION OF ILLNESS, TREATMENT DAYS & RESULTS OF 20 IP PATIENTS

Sl. No.	I.P. No.	Name	Age / Sex	Occupation	Duration of Illness	Date of Admission	Date of Discharge	No of days treated in I.P	No of days treated in O.P	Total no of days treated	No of Menstrual Cycles Treated	Medicines	Results
1.	124/2754	Masthani Beevi	30/F	House Wife	1yr 2 months	26-02-07	27-03-07	30	65	95	3	Sadhurmugam Choornam Soothra Avayathi Legyem	Good
2.	294/5922	Thagira Begum	35/F	House Wife	1yr	22-04-07	17-05-07	26	39	65	2		Poor
3.	384/899	Viji	35/F	House Wife	4 months	26-05-07	11-07-07	46	34	80	3		Good
4.	738/1061	Ammu	32/F	House Wife	6 months	07-06-07	12-07-07	36	46	82	3		Good
5.	573/9099	Ambika	25/F	Sales Girl	1yr 6 months	07-07-07	26-07-07	20	57	77	3		Poor
6.	992/2233	Yamuna	25/F	House Wife	10 months	23-07-07	21-08-07	32	51	83	3		Good
7.	1098/1882	Devaki	26/F	House Wife	2 months	08-07-07	03-09-07	24	53	77	3		Good
8.	2640/1444	Tamilarasi	27/F	Coolie	6 months	18-10-07	05-12-07	48	41	89	3		Fair
9.	2846/2233	Lilly	31/F	Labourer	5 months	18-11-07	11-12-07	24	56	80	3		Good
10.	1814/8557	Mallika	30/F	Servant Maid	6 months	19-11-07	15-12-07	27	46	73	3		Good
11.	1884/1272	Virudha	42/F	Coolie	7 months	27-11-07	27-12-07	31	59	90	3		Good
12.	1972/1476	Yasmin	21/F	Labourer	1yr 6 months	11-12-07	31-12-07	20	58	78	3		Poor
13.	2048/678	Vijaya	22/F	Sales Girl	9 months	12-12-07	08-01-08	20	52	80	3		Fair
14.	2173/8554	Pushpa	42/F	Coolie	8 months	18-01-08	28-02-08	42	33	75	3		Good
15.	2260/2160	Sunitha	23/F	Fruit Vendor	3 months	28-01-08	20-02-08	24	65	89	3		Good
16.	2298/3698	Kamatchi	35/F	Fruit Vendor	3 months	01-02-08	10-03-08	38	49	87	3		Good
17.	2468/1679	Tamil Selvi	35/F	Factory Worker	4 months	13-02-08	16-03-08	32	42	74	3		Good
18.	2275/2457	Mohana	22/F	House Wife	3 months	01-03-08	17-03-08	18	43	61	2		Good
19.	2525/5252	Kanimozhi	33/F	Coolie	6 months	03-03-08	25-03-08	23	43	66	2		Poor

20.	2253/1848	Revathi	44/F	House Wife	3 months	16-03-08	10-04-08	26	55	81	3		Good
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HAEMATOLOGICAL & URINE RESULTS OF 20 IP PATIENTS

Sl. No.	I.P. No.	TC Cells/cumm		DC						E S R (mm)				Bleeding Time min' sec''		Clotting Time min' sec''		Urine					
				BT			AT			BT		AT						BT			AT		
		BT	AT	P%	L%	E%	P%	L%	E%	½ hr	1 hr	½ hr	1 hr	BT	AT	BT	AT	Alb	Sug	Dep	Alb	Sug	Dep
1.	124/2754	9,200	10,300	59	35	6	55	39	6	7	15	2	4	2'54''	2'20''	4'48''	5'12''	Nil	Nil	Fec	Nil	Nil	Ocep
2.	294/5922	9,300	10,200	54	35	6	63	31	6	12	20	12	25	2'10''	2'22''	5'49''	5'14''	Nil	Nil	Nil	Nil	Nil	Nil
3.	384/899	9,700	10,200	62	34	4	54	42	4	2	3	5	8	3'10''	2'54''	6'42''	5'40''	Nil	Nil	Ocep	Nil	Nil	Nil
4.	738/1061	9,500	9,700	55	40	5	60	33	7	3	6	6	12	2'12''	2'10''	4'55''	4'17''	Nil	Nil	2-4Ep	Nil	Nil	1-2Ep
5.	573/9099	8,400	9,500	54	38	6	59	33	8	10	20	6	15	3'27''	1'44''	5'48''	4'36''	Nil	Nil	Ocep	Nil	Nil	Nil
6.	992/2233	9,100	9,400	54	39	7	57	38	5	4	8	5	9	1'36''	4'10''	7'2''	6'41''	Nil	Nil	Nil	Nil	Nil	Nil
7.	1098/1882	9,800	10,200	60	34	6	58	38	4	12	20	10	21	3'27''	2'10''	4'52''	5'25''	Nil	Nil	Nil	Nil	Nil	Nil
8.	2640/1444	8,500	9,200	58	37	5	52	44	4	15	30	12	25	2'10''	3'10''	5'24''	4'18''	Nil	Nil	1-2Ep	Nil	Nil	Nil
9.	2846/2233	9,100	9,500	58	39	3	52	40	8	5	10	7	15	3'08''	2'00''	6'24''	5'58''	Nil	Nil	Ocp	Nil	Nil	F-Pus
10.	1814/8557	9,500	9,900	57	38	5	62	32	6	5	12	2	10	2'42''	2'40''	5'44''	5'10''	Nil	Nil	2-4Ep	Nil	Nil	1-2Ep
11.	1884/1272	9,700	10,600	52	41	7	58	38	4	11	20	5	11	1'48''	2'18''	6'24''	6'10''	Nil	Nil	F-Ep	Nil	Nil	Ocpe
12.	1972/1476	9,700	10,200	60	35	5	64	31	5	20	40	10	22	2'40''	1'22''	4'36''	3'50''	Nil	Nil	F-Ep	Nil	Nil	Ocpe
13.	2048/678	9,300	9,600	56	42	2	54	40	6	15	32	14	25	3'36''	2'10''	3'55''	3'10''	Nil	Nil	1-2Ep	Nil	Nil	Nil
14.	2173/8554	9,400	10,300	57	38	5	62	33	5	40	80	6	12	1'10''	2'54''	5'44''	5'10''	Nil	Nil	F-Pus	Nil	Nil	1-2Ep
15.	2260/2160	9,500	10,200	64	31	5	60	34	6	12	25	5	10	1'54''	1'15''	3'24''	3'20''	Nil	Nil	2-4Ep	Nil	Nil	Ocep
16.	2298/3698	9,400	9,700	54	40	6	60	36	4	2	3	5	11	2'10''	1'46''	5'48''	5'16''	Nil	Nil	Ocep	Nil	Nil	Nil
17.	2468/1679	8,500	9,600	63	30	7	58	36	6	2	5	4	8	3'09''	2'04''	5'10''	4'51''	Nil	Nil	Nil	Nil	Nil	Nil
18.	2275/2457	9,400	9,700	57	36	6	58	35	7	12	27	15	30	2'24''	1'40''	6'24''	5'15''	Nil	Nil	F-Ep	Nil	Nil	1-2Ep
19.	2525/5252	8,200	9,400	54	41	5	60	36	4	44	80	12	25	2'54''	1'49''	5'40''	4'39''	Nil	Nil	1-2Ep	Nil	Nil	Nil
20.	2253/1848	9,400	10,400	60	36	4	57	37	6	15	28	12	20	2'55''	1'16''	6'10''	5'39''	Nil	Nil	2-4Ep	Nil	Nil	Nil

DURATION OF ILLNESS, TREATMENT DAYS & RESULTS OF 20 OP PATIENTS

Sl. No.	O.P. No.	Name	Age / Sex	Occupation	Duration of Illness	Date of first visit	Date of last visit	Total no of days treated	No of Menstrual Cycles Treated	Medicines	Results
1.	4487	Selvi	33/F	House Wife	6months	22-01-07	26-03-07	64	2	Sadhurmugam Choornam Soothra Avayathi Legyem	Good
2.	5650	Mahalekshmi	43/F	House Wife	1yr 6months	13-02-07	22-05-07	99	3		Good
3.	6304	Mahalekshmi	37/F	House Wife	8 months	27-02-07	30-04-07	63	2		Good
4.	7796	Vinuja	19/F	College student	2 yrs	09-03-07	16-07-07	128	4		Good
5.	8356	Tamil thara	38/F	House Wife	2 yrs	24-04-07	12-06-07	60	2		Poor
6.	8860	Revathi	22/F	Computer operator	2 yrs	26-06-07	04-09-07	72	3		Good
7.	9468	Rani	39/F	Tailor	6 months	01-08-07	16-10-07	77	3		Good
8.	11	Parameshwari	32/F	House Wife	4 months	23-10-07	31-01-08	100	3		Fair
9.	146	Kaliammal	44/F	House Wife	2 yrs	12-11-07	06-02-08	87	3		Good
10.	360	Samundeswari	30/F	House Wife	6 month	24-11-07	05-02-08	74	3		Good
11.	436	Jemila	35/F	House Wife	6 month	24-11-07	12-02-08	81	3		Good
12	1005	Amudha	41/F	House Wife	1yr	26-11-07	24-02-08	91	3		Good
13.	1156	Faridha	37/F	Working woman	3 months	26-11-07	20-02-08	87	3		Good
14.	2049	Pushpa	40/F	Labourer	4 months	26-11-07	16-02-08	83	3		Good
15.	4338	Jeyanthi	40/F	House cock	2 yrs	05-12-07	12-02-08	70	3		Good
16.	6649	Vijayalakshmi	30/F	House Wife	5 months	11-12-07	28-02-08	80	3		Good
17.	8746	Sri devi	30/F	Beautician	9 months	17-12-07	12-02-08	58	2		Fair
18.	8829	Amudha	40/F	Lic Agent	1yr 6 months	10-01-08	04-04-08	84	3		Good
19.	9042	Amsa	45/F	House Wife	4 months	11-01-08	04-03-08	54	2		Poor
20.	9942	Vedha valli	44/F	House Wife	6 months	08-04-08	20-05-08	43	2		Good

BLOOD AND URINE INVESTIGATIONS OF 20 OP PATIENTS

Sl. No	O.P. No.	TC Cells/cumm		DC						E S R (mm)				Hb (gms)		Bleeding Time min' sec''		Clotting Time min' sec''		Urine					
				BT			AT			BT		AT								BT			AT		
		BT	AT	P %	L %	E %	P %	L %	E %	½ hr	1 hr	½ hr	1 hr	BT	AT	BT	AT	BT	AT	Alb	Sug	Dep	Alb	Sug	Dep
1.	4487	9,500	9,800	60	34	6	56	39	5	12	25	8	15	9	11.2	1'56''	2'40''	3'49''	4'10''	Nil	Nil	F-Pus	Nil	Nil	F-Pus
2.	5650	9,200	9,800	56	36	4	59	38	3	22	40	11	17	8.5	10	3'29''	2'41''	5'31''	5'21''	Nil	Nil	F-Epi	Nil	Nil	2-3Epi
3.	6304	9,400	9,900	62	38	3	60	34	6	15	32	5	10	9	10.5	3'16''	2'49''	6'40''	6'12''	Nil	Nil	Nil	Nil	Nil	Nil
4.	7796	9,100	9,800	57	38	5	62	35	3	11	20	6	12	7.7	11	4'12''	3'27''	6'20''	4'47''	Nil	Nil	3-4Ep	Nil	Nil	F-Epi
5.	8356	9,300	9,900	58	38	4	62	34	4	22	44	10	18	7.1	9.5	2'30''	2'38''	4'10''	4'15''	Nil	Nil	1-2Pu	Nil	Nil	Nil
6.	8860	9,400	10,100	61	35	4	55	39	6	11	22	7	14	8	10.6	2'44''	2'00''	5'17''	5'14''	Nil	Nil	F-Epi	Nil	Nil	1-2Epi
7.	9468	9,200	9,800	59	34	7	61	36	3	5	10	8	16	10	12	1'42''	2'50''	6'30''	5'20''	Nil	Nil	3-24Epi	Nil	Nil	F-Epi
8.	11	9,400	9,900	58	35	7	54	40	6	12	25	5	10	10	12.5	2'32''	2'16''	5'48''	5'10''	Nil	Nil	F-Pus	Nil	Nil	Nil
9.	146	8,500	9,400	63	31	6	59	33	8	15	32	20	44	9	12	3'16''	2'44''	6'08''	5'40''	Nil	Nil	Nil	Nil	Nil	OccPus
10.	360	10,200	10,600	63	31	6	60	35	5	5	12	12	20	10.5	12.5	2'55''	2'15''	5'20''	4'40''	Nil	Nil	1-2Pus	Nil	Nil	F-Pus
11.	436	9,200	9,900	52	39	9	44	50	6	2	8	6	12	10.5	12.3	3'54''	3'16''	6'44''	6'18''	Nil	Nil	F-Pus	Nil	Nil	F-Epi
12.	1005	9,000	9,500	58	36	6	60	35	5	20	42	10	20	8.5	10.5	1'24''	1'36''	4'10''	4'36''	Nil	Nil	OccPu	Nil	Nil	1-2Epi
13.	1156	9,400	10,200	43	50	7	62	34	4	15	30	11	20	9.5	12	3'21''	2'58''	5'40''	5'14''	Nil	Nil	OccEp	Nil	Nil	Occpus
14.	2049	9,200	9,700	63	30	7	58	34	8	12	25	6	12	8	10	2'24''	2'10''	4'40''	4'12''	Nil	Nil	F-Pus	Nil	Nil	OccEpi
15.	4338	9,100	9,800	54	41	5	60	36	4	18	32	7	15	9	11	3'19''	3'14''	7'10''	6'47''	Nil	Nil	Nil	Nil	Nil	2-4Epi
16.	6649	8,100	9,200	52	44	4	58	38	4	32	60	10	20	8	10.5	2'40''	2'19''	6'19''	6'25''	Nil	Nil	Nil	Nil	Nil	2-4Pus
17.	8746	9,200	9,700	57	38	5	54	42	6	12	20	8	15	10.5	12	1'20''	1'18''	4'32''	4'12''	Nil	Nil	OccEp	Nil	Nil	Nil
18.	8829	8,700	9,300	54	41	5	57	37	6	11	20	5	11	8	10.5	3'10''	3'24''	6'52''	6'10''	Nil	Nil	1-2Epi	Nil	Nil	OccPus
19.	9042	9,700	10,200	52	42	6	65	33	3	11	25	5	10	10	11.5	1'48''	1'40''	6'02''	6'10''	Nil	Nil	Nil	Nil	Nil	Nil
20.	9942	9,800	10,100	59	35	6	64	32	4	40	82	8	16	10	11.8	2'32''	2'10''	4'05''	4'22''	Nil	Nil	1-2Pus	Nil	Nil	Nil