A STUDY ON

SOOTHAGA VAAYU

the dissertation Submitted by

Reg.no .32101102

under the Guidance of

Prof.Dr. K.KANAKAVALLI M.D(S)

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CERTIFICATE

This is to certify that this dissertation work on **"SOOTHAGA VAAYU"** has been carried out by **Dr.K.DHANALAKSHMI** during the year 2010-2013 in the Post Graduate Department of Maruthuvam, Government Siddha Medical College, Chennai-600106 under my guidance and supervision in partial fulfillment of regulation laid by **The Tamilnadu Dr. M.G.R Medical University, Chennai** for the final **M.D (siddha) Branch I- MARUTHUVAM** examination to be held in **April 2013**.

This dissertation work is not reprinted or reproduced from the previous dissertation work.

GUIDE:

Prof.Dr.K.KANAKAVALLI MD(S)

Post graduate Department,
Branch –I Maruthuvam,
Govt siddha Medical College,
Chennai-600106.

Principal
Govt siddha Medical College,
Chennai - 600106.

H.O.D:

Post graduate Department,

INTRODUCTION

Siddha system of medicine is an earliest Indian system of medicine and it provides efficient service to people. Aim of the system is to keep the body and mind in a good condition.Most of the current modern scientists says about the aetiology of the diseases as incoherent life style. The siddha system of medicine has a specific character having specially that it not only cures the disease but also prevent the disease

The drugs in siddha are classified into Thavaram(herbal origin), Thathu (metal and mineral origin) and Jeevam (animal origin).

Any change in the cosmos is always contemplated in the human body. Both are formed the basic five elements(Pancha boodhangal) i.e.,

- Mann(earth),
- Neer(water),
- Thee(fire),
- Vali(air)
- vin(space).

Hence, siddhar's Sattamuni has stated that,

"அண்டத்தில் உள்ளதே பிண்டம்
பிண்டத்தில் உள்ளதே அண்டம்"

These five basic elements combine to form a three thathus Vali,Azal and Iyam.

- Vali-Air+space
- Azal-Fire
- Iyam- Earth+Water

"மிகினும் குறையினும் நோய் செய்யும் நூலோர்
வளிமுதலா எண்ணிய முன்று"

-திருக்குறள்

When the natural harmony of the three thathus becomes altered, the resulting inbalance causes various diseases. **Soothagavayu is caused by imbalance of Vali and Azal**.

Many siddhars like THIRUMOOLAR, YUGIMUNI, AGASTHIAR and DHARVANTHRI has given special importance to female health and various gynecological problems like irregular menstruation, amenorrhoea, dysmenorrhoea, infertility etc.

In the recent days life style modification and diet changes are the major causes for diseases.

By following the life signs of Siddhars we can prevent, cure and promote a healthy life.

"மறுப்ப துடல்நோய் மருந்தென லாகும்
மறுப்ப துளநோய் மருந்தெனச் சாலும்
மறுப்ப தினிநோய் வாரா திருக்க
மறுப்ப சாவை மருந்தெனலாகும்."

_திருமூலர் திருமந்திரம்.

In siddha SOOTHAGAVAAYU which has various symptoms like Irregular menstruation or amenorrhoea, lower abdominal pain and head ache.

The clinical features of Soothaga Vaayu may be correlated with PCOS (Polycystic Ovarian Syndrome) in modern aspect since it is one of the most common endocrine disorders .PCOS produces symptoms in approximately 7-10% of female of reproductive age(15-45 yrs).Almost 75% of women with irregular periods suffer from PCOS,50% of women with PCOS are obese.

Nowadays people expects a strong relief without any side effects for the disease. So i believed that a **herbomineral** preparation gives the best solution.

So I preferred to select **Soothagavayu** as my dissertation topic with **Soothagathai Udaikkum Kasayam** and **Maeni Lavana Chooranam**. I will put my efforts as much as possible to give the best solution.

AIM AND OBJECTIVE

AIM OF THE STUDY:

The **SOOTHAGA VAAYU(POLY CYSTIC OVARIAN SYNDROME)** results in irregular menstruation, anovulation and infertility. The aim of my dissertation work is to regulate the menstrual cycle and to restore ovulation with the two siddha drugs **SOOTHAGATHAI UDAIKKUM KASAYAM** and **MAENI LAVANA CHOORANAM.**

OBJECTIVE OF THE STUDY:

- To study the clinical course of the disease with observation on **aetiology, pathology, diagnosis, differential diagnosis, prognosis, complication and treatment by siddha aspect.**
- To screen the clinical methods of diagnosis by our siddhars and to know how the disease manifests due to deranged **mukkutram, poripulankal, ezhu udazh thathukal and envagai thervugal.**
- To have an idea about the incidence of the disease with **age, occupation, economic status, habits, hereditary and clinical conditions.**
- To have detailed clinical investigations.
- To have a clinical trial on the disease **"SOOTHAGA VAAYU"** with siddha medicines **"SOOTHAGATHAI UDAIKKUM KASAYAM"** and **"MAENI LAVANA CHOORANAM".**

- To evaluate the
- ✓ **Chemical (Qualitative)**
- ✓ **Pharmacological**(Ovulation Induced Activity),
- ✓ **Toxicological** (acute & sub acute),
- ✓ **statisticals** of trial medicines.
- To handle the modern parameters to confirm the diagnosis and prognosis of the disease.

SIDDHA ASPECT

மாதவிடாயின் பெயர்:

"மாதவிடாய் பேர்தனையே வகுக்கக் கேளு
மாதந்த வெள்ளமாஞ் சென்னீராகு

விளங்கியதோர் மாதவிடாய்ப் பேருமாமே."

-போகர் நிகண்டு 1200
Page No 101

- மாதந்த வெள்ளம்
- சென்னீர்
- சுரோணிதம்
- இரத்தம்
- நாரிமருந்து
- தூய்மை
- சக்தி நாதம்

என்பன மாதவிடாயின் பெயர்களாகும்.

மாதவிடாயின் இயல்பு:

"திங்களுறு மங்கையர்கள் கெற்பாசயமதை தாங்கியிரு சிவிகையுண்டு
சிவிகையிரு பக்கமும் வீசியே நிற்குமதினின்றொரு குழல் நரம்பு
பங்கமறவேயெழும் அடிவயிறு யோனியும் சுற்றிப் பிணைந்து கொண்டு
பகருமதிலொரு முனை இரத்தாசயமதைக் கவ்விக் குவிந்திருக்கும்
இங்கிதமதாகவே மறுமுனையது அரிவையர் கெற்பாசயம் புகுந்து
இனிதாயரவினுட வாயளவாகவே மூவிரலசைந்து நிற்கும்

மங்களமதாயிந்த நாதக்குழல் வழி ரத்தாசயத்தினின்று
மறவகலவே காரிரத்தம் சுரந்தினி கெற்பாசயத்திலே தான்
நிதிமுமிது தவறாது ஓரே துளிவிழும் ஆறஞ்சதாம் நாளிலே
நேசமொடு குழல்வழி உருகியது வெளியிலே பாயுது யோனிவழியாய்
பதமாகவே சுகதேகிய துவாகிலோ பூத்த முதல் மூன்று நாளும்
பகருதிற் மோராற் கழஞ்சு நிறை பாயுமே"

- அரிவையர் சிந்தாமணி

The physiology of Women's menstrual cycle is illustrated in the Siddha literature magnificently as before modern technologies had been developed. The uterus of women is attached to the ovaries with fimbria on either side through the fallopian tube. The cycle for healthy women takes place with an interval of 30 days. Endometrial shedding takes place for three days. The amount of blood lost in one cycle is calculated in the very old period itself as 32 ml for normal women. (6 kazhanju (6 x 5.2) = 32 ml)

சூதகவாயு [SOOTHAGA VAAYU]

வேறு பெயர்கள்:[SYNONYMS]

- சூசிகா வாயு
- இருது நீர்கட்டு

-Shambasivam Pillai
Page No 352&372

இயல்பு : [DEFINITION]

கருக்குழியில் வாயும் அக்கினியும் சேருவதால் மாதவிடாய் திரண்டு, கருக்குழி தூர்ந்து, அடிவயிற்றில் வலி கண்டு, உடம்பும் வயிறும் பருக்கும் ஓர் சூதக நோய்.

-Shambasivam Pillai
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நோய் காரணங்கள் : [AETIOLOGY OF KARPA ROGANGAL]

"வஞ்சனை தன்னினாலும் மருந்தீடு தன்னினாலும்
மொஞ்சிடு சரீரவேட்கை யுறுதிசெய் தண்டிப்பாலும்
அஞ்சலாம் பிள்ளைப் பேறிலடங்கிய இரத்தத்தாலும்
மிஞ்சிய வாயுவாலுங் கருப்பநோய் மேவுமென்னே"

- தன்வந்திரி வைத்தியம்
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- வஞ்சனை
- மருந்தீடு
- அதிசரீரவெப்பம்
- பிள்ளைப்பேறில் தங்கிய குருதி
- அதிகவாயு

ஆகியவற்றால் கருப்பநோய் உண்டாகும்.

"மேகமதினால் சூட்டினால் இதமான வாயுவால்
கிருமியின் ஏதுவால் பூத்தபின் கணவனோடே
சேருவதினாலேயும் கடுநடைகளாலும் சுமடு வெயில் தாக்குவதினால்
விதமான நாதமது கூடும் குறைந்திடும் கெற்பமில்லாகும்"

- அரிவையர் சிந்தாமணி

- மேக நோய்
- மிகுந்த உடற்சூடு
- வாயு
- கிருமி
- பூத்தபின் கணவனோடு புணர்தல்
- கடுநடை
- வெயில்

ஆகிய காரணத்தால் சூதகம் குறைந்து அல்லது அதிகமாகி கெற்பத்தை அழிக்கும்.

" சுழலாமல் பெண்களுக்கு கெற்ப நோய்தான்
சூழ்ந்துவந்த விந்துவகை யழிந்த பாவம்
மஞ்சாமற் பாலகனை கொன்றபாவம்
குழுவியிளம் பிஞ்சுபூப்பறித்த பாவம்
கோவினங்கள் மருகும்பால் குடித்தபாவம்

விளைவான விளம்பயிரை யழித்தபாவம்

மேதினியில் மலடான விந்தைதானே.”

-Agathiyamunivar kanmakandam 300 page 36

சூதகவாயு இயல்பு: [CLINICAL FEATURES]

கேளுமே சூதகத்தில் லக்கினி வாயு

கெடுத்துவிடு மாதவிடாய் கட்டிபோகும்

ஆளுமே கருக்குழியுந்த் தூந்துதேகம்

அப்பனே யுதிரமது அடிமூலத்தில்

நீளுமே சூதகத்தில் வாய்வுதோன்றி

நேரான அடிவயிறு வலிப்புகாணும்

பாளுமே தலைவலிக்கும் வயிறுளைக்கும்

பக்குவமாய் மருந்துண்ணத் தீருந்தானே.

-Aathmaratchamirtham ennum

vaithiyasara sangiragam.

Page no:55

- சூதகத்தில் வாயும் அக்கினியும் சேர்ந்து மாதவிடாய் கட்டிக் கருக்குழி தூர்ந்து சூதவாயு தோன்றிச் சூதகம் மாறும் போது அடிவயிறு வலிக்கும்
- சூதகம் தடுத்துக் காணும்
- தலைவலிக்கும்
- உடலும் பெருத்திருக்கும்

“தானென்ற கெற்பத்தோடு தரித்திடு கோரைக்கட்டில்

வானென்ற வித்துபோலே வாயுவும் உருளும்பாரு

ஊனென்ற பசிதான் போகும் முளைத்ததுதான்

இரைச்சல் உண்டாம்

மானென்ற கழிச்சல் மீளும் வரும் சூதகவாயுவாமே.”

-Agasthiyar vaithiya kaaviyam 1500.

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“சித்தான கர்ப்பத்தில் சேர்ந்திடும் இரத்தந்தான்

வத்தாம் உருண்டு வாயுபோல் ஓடிடும்

உற்ற பசிபோகும் உழன்றே இரைந்திடும்

வற்றாக் கழிச்சலாம் வன்சூதக வாயுவே.”

-Thirumoolar karukkidai vaithiyam-600.

Page no:29

- பசியின்மை
- வயிறு இரைச்சல்
- கழிச்சல்

“கண்டுபார் சூதகத்தி லுதிரம் போகா

காலோடு கைமேலும் கடுத்துக் குத்தி

செண்டுபார் வயிற்றிலே தோஷந்தங்கி

திறட்சி குன்மவாயுவொடு சூலை யாச்சு

ஆண்டுபார் சூதகவாயு வாச்சு

அபானமாங் கருக்குழி யிலுதிரங் கட்டி

உண்டுபார் உதிரத்தில் வாய்வு கூடி

உள்ளங்கால் நகக்கண் குதலாச்சே.”

-Birammamuni vaithiya soothiram 390.

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- கைக்கால் வலி
- குன்மம்
- சூலை
- மாதவிடாய் கட்டி கொள்ளும்
- உள்ளங்கால் நகக்கண்ணில் குத்தல்

“தானான சூதகத்தின் வாய்வின் தன்மை

தானே அக்கினி வாயு சூதகத்தில் தங்கி

மானே மாதவிடாய் கட்டிக்கொள்ளும்

மருவு சூதக நாளில் வாய்வுண்டாம்

தானாரே அடிவயிறு புண்போல் நோகும்

தலைவலியுண்டாம் வயிற்றில் நோவுண்டாகும்

ஆனாலும் வயிறுடலும் தடித்திருக்கும்

அறிகுவாய் சூதகத்தின் வாய்வு தானே.”

-Arivaiyar sinthamani.

- மாதவிடாய் கட்டி கொள்ளும்
- அடிவயிற்று வலி
- தலைவலி
- உடல் பெருத்திருக்கும்

“பாதமொடு சூதகவாயுவது தன்மைகேள்

மாதவிடாயது குறையுமே

புகழுரிய வயிறு கனமாகியதி வேதனை

அடிவயிறு புண்போல் நோவாம்

போதமுறு சென்னிவலி உச்சியதிலே குத்து

இரு கொங்கையது யுளையுமே

மோதியதி தாயிரு கைகால் கடுக்குமே

கால் மண்ணையது யுளையுமே

முதிய நாவானது வழுவழுப்பாயிடும்

அன்னம் குறைந்து வருமே

நிதமுறு மேனியது விளறுமதி சோபமாய்

சொற்பனம் அதிகரிக்கும்.”

-Arivaiyar sinthamani.

- மாதவிடாய் குறையும்
- வயிற்று வலி
- தலை வலி
- மார்பு வலி
- கைக்கால் வலி
- நா வழுவழுப்பு
- பசியின்மை
- அதிதூக்கம்

OTHER TYPES OF KARPA NOIGAL SIMILAR TO SOOTHAGAVAAYU

KARPA VAAYU:

"பொருமி ரத்தந்தனை மறித்துப்போத மிகவும் வலியுண்டாங்

குருதிசேரா வயிறுவலிபோங் கொள்ளுங் கர்ப்பந்தனையழிக்கும்

வருடியிடுப்புக் குடைந்துளையு மலத்தை மிகவுமிறுக்கி நிற்கும்

பெருகப் பணைக்குங் குவிமுலையாய் பேசங் கெர்ப்பவாயுவிதே."

-Agasthiyar aayulvetham 1200.

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- மாதவிடாயில் குருதிப்போக்கு குறைதல்
- வயிற்று வலி
- கர்ப்பத்தை அழிக்கும்
- இடுப்பு வலி
- மலக்கட்டு

KARPA VIPPURUTHI:

"கூறிடவே கெற்ப்பவிற் புருதிதானும்

குருதிபோல் வயிறினில் சூதங்கட்டும்

மாறவே தலைவலிக்கும் வீட்டுப்பக்கம்

வயிற்றுவலி யிருதுடையு முளையுமேதான்

சீறவே புழுத்திரண்டு மலமிருக்கும்

சிசுகெர்ப்பந்த் தரியாது வுடலுளைக்கும்

ஆறவே யிக்குணங்கள் தானறிந்து

அப்பனே மருந்துண்ணச் சித்தியாமே.”

-Aathmaratcahamirthmenum vaithiya sara sangiragam.

Page no:49

- சூதககட்டு
- தலைவலி
- வயிற்றுவலி
- இடுப்புவலி
- மலக்கட்டு
- கர்ப்பம் தரியாது
- உடல்வலி

KARPA SURONITHAM:

“திரண்டு புரண்டு கீழ்வயிற்றில் திங்கள் முழுக்கில்வலியுண்டாகும்

மருண்டு குருதி குறுகிவரும் வாய்னீரூறு மயங்கிவருந்

திரண்டு சிலநாட் சிக்கிநிற்கும் திறமாங்க் கருவை யழிப்பிக்கு

முருண்ட சிலநாட் சிக்கிநிற்கும் திரமாங் கருவை யழிப்பிக்கு

முருண்ட கர்ப்பச் சுரோணிதமென் ருரைக்குங்ணங்கண்டறிவீரே.”

-Dhanvanthiri vaithiyam.Page No 187

- சூதகவலி & குருதி குறுகி வரும்
- வாய் நீரூறல்
- மயக்கம்
- ஒழுங்கற்ற மாதவிடாய்
- கருவை அழிக்கும்

SOOTHAGA KIRANI:

“சூதகமாம் போதெல்லாம் வலித்திரத்தம்

வீழ்வதற்கும் சொலு நாக்குட்

பேதகமாய்க் கெடுதப்பி வலிக்கினும்

சூதகக் கிராணி என்றுபேராம்.”

-Sarabenthirar vaithiyamuraigal.

Page No 245

- சூதகவலி
- ஒழுங்கற்ற மாதவிடாய்

MUKKUTRAIYAL

Tri dosha is otherwise called as muppini as they remain as doshas and form as the causative factor for the appearance of disease. This is only a part of the panjabootha thathuvam and forms the humoural pathology in siddha system of medicine similar to hormones in modern physiology.

A right understanding of tri dosha theory in all its varied aspects is necessary for a rational diagnosis and effective treatment.

"வாதமாய் படைத்து பித்த வன்னியாய் காத்துச் சேட்ப
சீதமாய் துடைத்துப் பாராந் தேகத்திற்குடியா மைந்து
பூதவிந்தியாமைவர் பூசை கெண்டவர்பால் விந்து
நாதமாங் கிருட்டிண மூர்த்தி நமக் கென்றும் துணையாவாரே"

- தேரையர் மருத்துவ பாரதம்
(நோய் நாடல் நோய்முதனாடல் திரட்டு பாகம் 1 பக்க எண். 97)

Panchaboothams are manifested in the body as three vital forces.

- Vaatham
- Pittham
- Kabham

TRI DOSHAS	SEATS	PROPERTIES	FUNCTIONS
1. VATHAM	Below the naval, urinary bladder, intestine, pelvis, umbilical cord, thigh, bone, skin, nerve endings, joints, musculature, hair root	Dryness, lightness, clearness, coolness, mobile formless.	Stimulation, respiration, thinking, sensory functions, co-ordination of the physical constituents, reflex actions.
2. PITHAM	Between the heart and naval, sweat, lymph, blood, stomach, urinary bladder, heart, saliva, eye, and skin.	Dry, cold, light, subtle, keen, soft, liquid, bitter.	Body temperature, digestion of food, vision, sweat.
3. KABHAM	Above the heart, stomach, fat, sperm, uvula, bone marrow, blood, nose, nerves, eyes, joints.	Heavy, cold, sweet, stable and slimy.	It gives strength of joints, shiny appearance of skin, moistens food, cools the eye, softness, firmness.

Vatham:

It is said to be first originated from the natural element air and then with the combination of the other two elements, heat and water developed as vatha, and involution of typical type of synthetic chemical changes occur before it is

represented in the human body as a humour of vatha dosha. This is classified into ten varieties.

TYPES OF VATHAM	FUNCTIONS	IN SOOTHAGAVAAYU
1. Piraanan	It is mainly responsible for respiration and it is necessary for proper digestion and utilisation of food materials.	Normal
2.Abaanan	This is responsible for all downward movements such as passing urine, stools, semen, menstrual flow etc.	Irregular menstruation, constipation.
3.Viyanan	This is responsible for sense of touch, extension and flexion of the part of the body and distribution of the nutrients to various part of the body.	Low back pain, lower abdominal pain.
4.Uthaanan	Responsible for all upward visceral movements such as nausea, vomiting etc.,	Normal
5.Samaanan	This aids in proper digestion and it controls the other types of vaayu.	Normal
6.Naagan	Helps in opening and closing of the eyelids.	Normal
7.Koorman	Responsible for vision, lacrimation and yawing.	Normal
8.Kirugaran	Induces appetite, salivation, all secretions in the body including nasal secretions and sneezing.	Normal
9.Thevathathan	Induces and stimulates a person to become alert, get anger, to quarrel, to sleep.	Normal
10.Dhananjeyan	Produces bloating of the body after death. It escapes on the third day after death bursting out of the cranium.	_

Pitham:

This is said to be originated first from the natural element of heat and then with the combination of other two elements viz. air and water, developed as pitha and after the involution of synthetic chemical changes it is represented in the human body as a humour of pitha dosha. This is also sub –divided into five types.

TYPES OF PITHAM	FUNCTIONS	IN SOOTHAGAVAAYU
1.Analagam	It promotes appetite and helps indigestion.	Normal
2.Ranjagam	It is responsible for the colour and contents of blood.	Normal
3.Praasagam	It gives complexion to the skin.	Normal
4.Saathagam	It controls the whole body and is held responsible for fulfilling a purpose.	Lack of regular menstruation.
5.Aalosagam	It is responsible for the perception of vision.	Normal

Kabham:

Kabham is said to be originated first from the natural element namely water and then with the combination of other two elements air and heat, it develops as kapha and after the involution of synthetic chemical changes it is represented in the human body as humour in kabha dosha. This kabha dosha is said to possess the destruction power. This is of its coldness which when markedly increased over laps other two doshas vatha and pitha which are responsible for the respiration, circulation of blood and maintain of head and remains as the signs of life with the result death occur.

TYPES OF KABHAM	FUNCTIONS	IN SOOTHAGAVAAYU
1.Avalambagam	Lies in respiratory organ, controls the heart and other kabhams.	Normal
2.Kilethagam	Lies in stomach, makes the food moist, soft and helps indigestion.	Normal
3.Pothagam	Responsible for the sensory perception of taste.	Normal
4.Tharpagam	Present in the head and responsible for coolness of both eyes.	Normal
5.Santhigam	Responsible for lubrication and the free movements of the joints.	Low back pain.

Generally tri dosha occupy Agni mandalam, Surya mandalam and Santhra mandalam respectively. Kabha is anabolic and vatha, pitha is catabolic properties. The tri dosha theory takes into consideration the principles of biological laws, the physiological workings, the chemical process and thathwic experiences which are so fundamental and the physical basis, all of which are effecting in a synthetic way the workings and activities of the human body. It is a pardonable temptation to presume that we may be right in calling this wonderful conception of the siddhas as the laws of vatha pitha and kabha, just as the law of Gravitation is an external principle that governs the universe.

UDAL THATHUKKAL

The saptha thadu constitutes the structure of the human body and its functions. Hence this may be compared to anatomy and physiology of modern system, along with the logic and philosophy in general. In modern medicine the human body is said to be constituted with the cells, tissues, muscles, tendons, fat, organs, bones, skin, net work of nerves, blood vessels, fluids like blood and hormones.

SAPTHA THATHUKKAL	FUNCTIONS	IN SOOTHAGA VAAYU
1. Saaram	It is responsible for the growth & development. It keeps in good sprit and it nourishes the blood.	Tiredness
2. Seneer	Blood imparts colour to the body & nourishes the muscle responsible for the ability, intellect of the individual.	Hormonal imbalance.
3. Oon	It gives shape to the body according to the requirement for the physical activity, nourishes fat & give plumpness.	Cyst
4. Kozhupu	It helps lubrication of different organs.	Low back pain, obesity.
5. Enbu	Supports and responsible for posture and movements of the body.	Normal
6. Moolai	It fills the bony cavity and gives nourishment.	Normal
7. Suronitham	It is responsible for the reproduction.	Irregular menstruation.

DIAGNOSIS OF SOOTHAGAVAAYU BASED ON SIDDHA SYSTEM

According to siddha system the diagnosis of a disease is reached by the method **Envagai Thervu or Piniarimuraimai**

“தரணியுள்ள வியாதி தனையஷ்டாங் கத்தால்

தானறிய வேண்டுமது ஏதென்னில்

திரணியதோர் நாடிகண்கள் சத்தத்தோடு

தேகத்தின் துபரிசம் வானம் நாக்கு

இரணமலம் இவைகளெட்டும் இதம்படவே

தான்பார்த்துக் குறிப்புங் கண்டு

பரனருளாற் பெரியோர்கட் பாதம் போற்றிப்

பண்புதவறாமற் பண்டிதஞ் செய்வீரே”

-அகஸ்த்தியர் குணவாகட நாடி நூல்.
(நோய் நாடல் நோய் முதல் நாடல் Part I)
பக்க எண்:136

The Envagai Thervu based is on

- ✓ Poriyal arithal
- ✓ Pulanaal arithal
- ✓ Vinathal

1. Pori- sensory organs

- Nose
- Tongue
- Eye
- Skin
- Ear

2. Pulan – 5 senses

- Odour
- Taste
- Vision
- Touch
- Sound

3. Vinathal- interrogation

Envagai Thervu:

"நாடிப்பரிசம் நாநிறம் மொழிவிழி
மலம் மூத்திரவியை மருத்துவராயுதம்"

"மெய்க்குறி நிறந்தோ விழிநாவிருமலம் கைக்குறி"

- Theraiyar

(Noi Nadal Noi Mudhal Nadal Part I)

Page No:270

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

Naadi:

"நாடி மூன்றையும் நாடிடுங் காலை
ந்டுவிரல் நாடியே கணிப்பான்
நற்றவர்க்குருவென நவிலு மறையே".

"மூன்றிலொன் றுயர்ந்ததை முன்ன ரறிந்து
முந்தியதனை யொழித்திடு மருந்திடு
தணியும் நோயின் தந்திரமிதுவே
பேணிக் கணித்திடின் பிறவாய் பின் குணம்".

(Noi Nadal Noi Mudhal Nadal Part I)

Page No: 145

From these stanzas it is very clearly understood that the diagnosis based on Naadi will bring out the best results.

Pulse diagnosis is the confirmative diagnosis. Normally the pulse is recorded in an radial artery in the right hand for the male and left hand for the female by keeping the ring finger, the middle finger, and the index finger on it

after gently scrubbing the area. It is one unit in vatha as felt by the ring finger, and a half unit in pitha as felt by the middle finger and one fourth unit in kapha as felt by the index finger. The different disease could easily be diagnoses with the aid of the pulse.

"கரிமுகனடியை வாழ்த்தி கைதனில் நாடி பார்க்கில்
பெருவிரல் குலத்திற் பிடித்தடி நடுவே தொட்டால்
ஒரு விரலோடில் வாதம் உயர் நடுவிரலிற் பித்தந்
திருவிரல் மூன்றிலோடிற் சேத்தும நாடியாமே."

-Agasthiyar Naadi shasthiram
(Noi Naadal Noi Mudhal Nadal Part I
Page No 91)

வாத நாடி:

"வாதமெனும் நாடியது தோன்றில்
சீதமந்தமொடு வயிறு பொருமல் **திரட்சி வாய்வு**
சீதமுறுங் கிராணி மகோதரம் நீராமை
திரள்வாய்வு சூலை வலிகடுப்புத் தீரை
நீதமுறுங் கிருமிகுன்மம் அண்டவாதம்
நிலையும் நீர்க் கிரிச்சரங்கள் தந்துமேகம்
பேதகமா முதரப்பிணி மூலரோகம்
பேசவெகு பிணிகளுமே பொருள தாமே."

-சதக நாடி
நோய் நாடல் நோய்முதல் நாடல் திரட்டு.
பாகம்:1, பக்க எண்: 173

“மாதர் கைபிடித்த போது வந்திடும் வாதநாடி

தீதுறவெடித்து பாய்ந்து சிதறியே சிலம்பினின்றாற்

பேதைதன் வயிற்றின் உள்ளே பெருகு சுரோணிதமே தங்கி

வாதகள் பண்ண மாதவிடாய்காலம் வருத்தம் செய்யும்

இடுப்போடு கடுத்து நொந்து இடைவிடாக் குத்தலுண்டாய்

தடுத்திடா **கர்ப்பந்தன்னை** தங்கிடா வண்ணம் செய்யும்.”

-பதினென் சித்தர்கள் நாடி சாஸ்திரம்

“மாதர்கைபிடித்த போதவந்திடும் நாடி மூன்றும்
சேதமாயிற்று நின்றசேரவே பதிந்து நிற்கில்
ஓதமே சூதகத்தில் ஒங்கிய வாய்வே நின்று
பேதையாய் வாதைபன்னி பிணிகளை விளைவிக்குந்தானே”

- பதினென் சித்தர்கள் நாடி சாஸ்திரம்.

ENVAGAI THERVU	**CHARACTER**	**IN SOOTHAGA VAAYU**
1.Naadi		Vatha naadi
2.Naa	✓ Colour ✓ Coated ✓ Taste	Constipation is one of the symptoms of the soothagavaayu. Therefore tongue is coated and pale
3.Niram	Skin colour	Hyper pigmentation in cubital fossa, armpits, neck, thigh, etc[acanthosis nigricans]
4.Mozhi	Articulation and speech	No abnormality in speech. Sama oli
5.Vizhi	Niram (pallor, icterus)	No abnormality
6.Sparisam	• Touch • Pain • Temperature	Lower abdominal pain

7.Malam	Niram- colour Irugal, Ilagal- consistency Manam – odour	Constipation
8.Motthiram	Niram - colour Manam-smell Nurai -forth Eadai-specific gravity Enjal - deposit	No abnormality

Neerkuri :

“அருந்துமாறிதமும் அவிரோதமதாய்

அஃகல் அலர்தல் அகாலவூண் தவிர்ந்தழற்

குற்றளவருந்தி உறங்கி வைகறை

ஆடிக்கலசத் தாவியே காதுபெய்

தொருமுகூர்த்தக் கலைக்குட்படு நீரின்

நிறக்குறி நெய்க்குறி நிருமித்தல் கடனே.”

(Noi Naadal Noi Mudhal Nadal Part I

Page No 282)

This stanza explains the rules for the collection of urine for neerkuri and neikuri.

Neikuri :

“ஐக்குறி கொடுவட வானிழ லமாந்தோர்

கைக்குறி தெரித்த நங்கடவுளைத் துதித்தே

மெய்க்குறி நிறந்தொணி விழிநா இருமயம்

கைக்குறி முழுவதூவங் கற்றார் தம்மினும்

பொய்க்குறி மெய்க்குறி புகலுமெவர்க்கு

நெய்குறியதனை இந்நீனியத் துரைப்பாம்."

(Noi Naadal Noi Mudhal Nadal Part I

Page No 297)

The urine is kept on the kidney tray in sunlight, on a non windy condition, should be examined by dropping a drop of gingelly oil gently, with a stick. If the oil spreads like snake, it indicates Vatha, a ring indicates Pitha, and floats like a pearl in kapha.

"அரவென நீண்டது வாத நீர்"

In **soothagavaayu** when a drop of oil is put in the patient's freshly collected urine the oil drop spread like a snake which indicates **vatha neer**.

The eight stools of diagnosis are used not only for that purpose, but also to study the prognosis. The urine examination is widely used to study the prognosis. If the oil drop for the urine examination spreads in the shape of rice pot, a dwarf, betel leaf, horse, the prognosis is good. But if it spreads like a bird, dog, lion, pig, monkey, scorpion, cat, human being, the prognosis is bad. If the drop spreads rapidly the prognosis is bad. If the drop spreads slowly the prognosis is good and the disease is easily curable.

MODERN ASPECT

FEMALE REPRODUCTIVE SYTEM:

The main functions of female reproductive system are

- Production of sex hormones
- Production of functioning gamates [ova]
- Support & protection of developing embryo

The female reproductive system consists of internal and external genitalia.

EXTERNAL GENETALIA

- The external female genitalia are referred to as vulva. It consists of labia majora and labia minora, mons pubis, clitoris, opening of the urethra, vaginal vestibule, vestibular bulbs, and glands.
- The vestibule is the space into which the vagina and urethra open. The urethra opens just anterior to the vagina.
- The vestibule is bordered by a pair of thin, longitudinal skin folds called the labia minora.
- Lateral to the labia minora two prominent rounded folds of skin called the labia majora.
- The two labia majora unite anteriorly in an elevation of tissue over the pubic symphysis called the mons pubis. The lateral surface of the labia majora and the surface of the mons pubis are covered with coarse hair.
- The medial surface of the labia majora are covered with numerous sebaceous and sweat glands. The space between the labia majora is called the pudendal cleft.

- A small erectile structure iscalled the clitoris is located in the anterior margin of the vestibule. The two labia minora unite over the clitoris to form a fold of skin called the prepuce.

INTERNAL GENITALIA

The internal reproductive organs situated in the pelvis between the bladder and rectum. They are held in space within the pelvis by a group of ligaments. The most conspicuous is the broad ligament which spreads out on both sides of the uterus and to which the ovaries and uterine tubes attach.

The internal genitalia includes

- VAGINA
- UTERUS
- FALLAPIAN TUBES
- OVARIES

VAGINA

- The vagina is a canal that cervix (the lower part of uterus) to the outside of the body. It also is known as the birth canal.
- It is a fibro muscular tube of about **10cm long** extending from the uterus to outside of the body.
- It is female organ of copulation and allows menstrual flow and child birth. In young females it is covered by a thin mucous membrane called hymen.

UTERUS

- The uterus is a hollow, pear-shaped organ which is divided into parts namely Cervix, which is the lower part that opens into the vagina, and the main body of the uterus, called the corpus.
- The uterine wall is composed of **three layers,**
- Outer serous layer or **perimetrium,**
- Middle muscular layer or **myometrium,**
- Innermost **endometrium.**
- The endometrium consists of simple columanar epithelial cells with underlying connective tissue layer. The superficial part of endometrium is sloughed down during menstruation.

FALLAPIAN TUBES

There are two uterine tubes also called **uterine tubes** or **oviducts.** One uterine tube is associated with each ovary. The uterine tubes extend from the ovaries to the uterus. They open pear the ovary to receive the oocyte and the opening is surrounded by long thin processes called fimbriae. As soon as oocyte is ovulated, it comes into contact with the surface of the fimbriae and the cilia on the fimbrial surface sweep the oocyte into the uterine tube. Fertilization usually occurs in the uterine tube near the ovary.

OVARIES

- The two ovaries are small oval shaped organs attached to ligaments that suspend them in the pelvic cavity and from the ligament of the uterus.
- The suspensory ligament extends from each ovary to the lateral body wall and the ovarian ligament attaches the ovary to the uterus. The ovarian

vessels and nerves traverse the suspensory ligament and enter the ovary through the menovarium.

- A layer of visceral peritoneum called tunica albuginea covers the ovary. The outer cortex of the ovary is made up of dense connective tissue containing ovarian follicles. Each of the ovarian follicles contains an oocyte the female germ cell. The inner medulla made of loose connective tissue is highly vascularised.

HORMONAL INTERACTIONS IN THE REPRODUCTIVE FUNCTIONS

Neuroendocrinology with vast hormonal interactions is responsible for menstrual cycle and reproductive functions in women. A normal menstrual cycle depends on cyclical ovarian steroid secretions which in turn are controlled by the pituitary and the hypothalamus and to same extend by the thyroid and adrenal glands. It is therefore essential to understand the hypothalamic-pituitary-ovarian axis in normal women.

The following hormones play the major role,

- Gonadotropin releasing hormone(GnRH)- hypothalamus
- Follicle stimulating hormone(FSH)- anterior pituitary
- Luteinising hormone(LH)- anterior pituitary
- Oestrogen- ovary
- Progesterone-ovary
- Inhibin- ovary
- Testosterone- ovary

GONADOTROPIN RELESING HORMONE (GnRH)

- GnRH is secreted by the hypothalamus which modulates the neural control of FSH and LH by the anterior pituitary.
- GnRH is released in a pulsatile manner and the pulsatility and amplitude of its release varies with various phases of the menstrual cycle.
- In preovulatory phase it pulses every 60mins but slows down in leuteal phase to one in 3 hours. GnRH is continuous in males but pulsatile in female in females.

- The hypothalamus is controlled by higher cortical centres especially temporal lobe. Emotional upsets stimulate or depress the H-P-O axis and disturb the menstrual cycle.

ANTERIOR PITUITARY HORMONES

FOLLICLE STIMULATING HORMONES (FSH):

- FSH controls the ripening of the primordial follicles and in combination with the luteinizing hormone activates the secretion of oestrogen.
- Its activity starts as menstruation is ceasing, reaches the peak by 7^{th} day and then declines to disappear around 18^{th} day. Another small peak occurs in premenstrual phase.
- Low FSH causes defective follicluogenesis and short or defective corpus luteal phase.

LUTEINIZING HORMONE:

- In combination with FSH it activates the secretion of oestrogen, brings about maturation of the ovum and causes ovulation.
- LH stimulates the completion of the reduction division of the oocyte. Following ovulation, it produces luteinisation of the granulose and the theca cells and initiates progesterone secretion. The LH surge precedes ovulation by 24 to 36 hours.

OESTROGEN:

- The main sources of oestrogen are the theca end granulose cells of the graffian follicles and corpus luteum, while the adrenal cortex is the secondary source.
- Its level increase 6 to 7 days before ovulation and reaches the peak 2 days before ovulation and then declines.
- It increase uterine vascularise and regenerate the endometrium after menstruation and is responsible for the proliferative hyperplasia of the endometrium.

PROGESTERONE:

- The corpus luteum is the main source of progesterone. The level rises after ovulation and reaches peak at mid luteal phase. With the degeneration of the corpus luteum, its level falls and brings about menstruation.
- In an anovulatory cycle, progesterone is absent or negligible amount and the menstruation is brought by the fall in oestrogen level.
- If pregnancy occurs the corpus luteum continues to enlarge and secrete progesterone. The high level of the hormone prevents menstruation and leads to amenorrhoea of pregnancy.

INHIBIN:

- Inhibin is a peptide secreted by the graffin follicle and suppress pituitary FSH. In normal folliculogenesis FSH and LH initiate the secretion of oestrogen by the graffian follicles. Oestrogen is responsible for the secretion of inhibin in the graffian follicles, which in turn suppress FSH but stimulates LH.

- In poly cystic ovarian disease, there is increased secretion of inhibin. This causes a low FSH and LH secretion by pituitary resulting in anovulation.

TESTOSTERONE:

- The ovarian stromal cells secrete androgenic products, namely Testosterone, Dehydroepiandrosterone (DHEA) and Androstenedione.
- Androstenedione gets converted to oestrogen in the peripheral fat. They increase in ovarian stroma is responsible for the rise in these hormones and development of hirsutism.

FEMALE MENSTRUAL CYCLE

- Menstruation (Greek Word, men - month) is monthly uterine bleeding outflowing through vagina onto vulva for 4-5 days every 28 days during reproductive life of a women from menarche to menopause. Menses are normal uterine function whereby endometrium prepares to receive pregnancy.

Bleeding comes from oestrogen progesterone primed endometrium. Woman gets 13 menses in a year and around 400 menses in her reproductive life.

The menstrual cycle of 28 days starts on day of onset of menstruation (day 1) and ends at day 28 on start of next mens.

Menstruation signals that fertilization and embedding of fertilised ovum have not occurred on the preceding menstual cycle. Anovular menstruation is cyclical monthly bleeding from only oestrogen primed endometrium. This occurs for a few years after onset of menstruation (menarche) and before final cessation of menstruation (menopause).

- Day 1:
    - Menstruation
        - Estrogen—low
        - Progesterone—low
        - FSH—moderate
        - LH—low
        - Uterus— (functional layer of the uterus) are sloughing off
- Day 7
    - Secondary Follicle Development
        - One of the primary follicles becomes secondary follicle. This is the only egg now being development. The secondary follicle has a space developing (calledantrum)
        - Estrogen—High
        - Progesterone—Low
        - FSH—low (because of negative feedback loop)
        - LH—low
        - Uterus—the functional starts to build up
- Day 14
    - Ovulation
        - Estrogen—Very High
        - LH—Very High (because hypothalamus is releasing GnRh)
        - Progesterone—High
        - FSH—low
        - The secondary follicle is now Graphian follicle (it's very big)
        - Remants in the ovary become the corpus luteum
        - Corpus Luteum—makes progesterone
            - Progesterone maintains uterine lining

- Day 28
    - Egg is not fertilized
        - Corpus Luteum degenerates
        - Corpus Luteum becomes Corpus Albacans (like scar tissue)
        - Corpus Albacans do not make progesterone
        - Estrogen---Decrease (women are more likely to be moody now)
        - Progesterone—Decrease after corpus luteum degenerates
        - Uterus—signals start of menstruation

POLY CYSTIC OVARIAN SYNDROME

HISTORY:

- In 1935 –Stein & Leventhal first described poly cystic ovarian syndrome.
- In late 1960 and early 1970 deranged hypothalamic- pituitary -axis is described.
- In 1980 late complications related to insulin resistance.
- By 1980 the use of ultra sound scans, the characterised poly cystic appearance was recognized.

PREVALENCE:

- 75% of hirsute women with normal menses but anovulatory cycles.
- 40% of hirsute women with normal ovulatory cycles(mild form of Pcos)
- 20% of normal women have mild form of pcos.
- 4-7% 0f female in reproductive age has clinically evident pcos.

NOMENCLATURE:

- Poly cystic ovary disease
- Stein- Leventhal syndrome
- Functional ovarian hyperandrogenism
- Ovarian hyperthecosis
- Sclero cystic ovary syndrome

DEFINITION:

The two definitions are commonly used,

Definition 1: (1990) if a female patient has all the following,

- Oligomenorrhoea
- Signs of androgen excess
- Other entities causing poly cystic ovaries are excluded

Definition 2: (2003) Rotterdam indicated pcos to be present if 2 out of 3 criteria are met

- Oligomenorrhoea
- Anovulation
- Poly cystic ovaries(ultra sound)
- Other endocrine disorders are excluded.

AETIO PATHOGENESIS:

There is disagreement and uncertainty as to what causes polycystic ovarian disease. Polycystic ovaries and polycystic ovary syndrome have been associated with one or more of these factors:

- Genetic predisposition.
- Insulin resistance or hyperinsulinism (high blood levels of insulin).
- Obesity.
- Hyperandrogenism (excessive production of male hormones).
- Abnormality of the hypothalamic-pituitary-gonadal axis (organ/hormonal disorder).
- Environmental chemical pollution (hormonal disruptors)
- Food adulterantion (excitatory amino acids, for example)
- Chronic inflammation.

Some of these causal factors may also be consequences of polycystic ovary disease. In other words, we have an amazingly complex network of interacting variables, each of which influences the other. Polycystic ovarian syndrome is not a simple disease with a single cause.

PATHOGENISIS:

- Over secretion of LHRH in hypothalamus causes increased secretion of the LH by the pituitary gland. The LH stimulates the ovarian stroma to secrete androstenedine which is converted to estrone in the fatty tissue.
- The excess of estrone suppress the secretion of FSH and sensitizes the pituitary to LHRH, increasing the secretion of LH.
- Inhibin F – a poly peptide secreted by the granulosa cells in the ovaries may reduce further the secretion of FSH.
- The increase in the ratio of LH and FSH in the plasma is the characterised of pcod. The imbalances between the LH &FSH become self perpetuating.

- Androstenedione is also converted to testosterone but the concentration of testosterone in the plasma usually remains in high normal range.
- The secretion of oestrogen by ovaries is reduced.
- Obesity common in the patients with the endocrine imbalance because the adipose tissue possesses aromatase enzyme that converts androstenedione to estrone and testosterone to estradiol.
- Excess of adipose tissue creates both excess androgens (responsible for hirsutism and virilisation) and excess oestrogen (inhibits FSH by negative feedback).
- Hyper insulinaemia increase GnRH pulse frequency, LH over FSH dominance and increased ovarian androgen production. The elevated insulin levels also act on liver to inhibit production of sex hormone binding (SHBH) which leads to an increase in free testosterone.
- Insulin resistance is a common finding among patients of normal weight as well as those overweight patients.
- Insulin like growth factor 1 binding protein is reduced which leads to increased circulating insulin like growth factor 1 enhancing ovarian androgen production.
- Some women may also have increased adrenal androgenic production.
- All these leads to the decreased follicular maturation and anovulation which is the most common cause of infertility.

SIGNS AND SYMPTOMS:

Polycystic ovarian syndrome presents a complex and baffling array of symptoms, consisting of some combination of the following symptoms that vary with each individual:

- Multiple ovarian cysts
- Irregular or absent menses
- Infertility
- Acne
- Obesity or inability to lose weight
- Excessive body or facial hair (hirsutism)
- Insulin resistance and possibly diabetes
- Thinning of scalp hair
- Velvety, hyperpigmented skin folds (acanthosis nigricans)
- High blood pressure
- Polycystic ovaries that is 2-5 times larger than healthy ovaries.
- Sleep apnea
- Disordered immune system
- Mood disorders, including anxiety and depression
- Appetite disorder
- High blood fats (cholesterol and triglycerides)
- Increased probability of cardiovascular disease or diabetes
- Multiple hormone imbalances, commonly including:
- Androgens (testosterone)
- Estrogens
- progesterone
- Prolactin

- FSH (follicle stimulating hormone)
- LH (luteinizing hormone)
- Cortisol
- Insulin
- Thyroid hormone

COMPLICATIONS

Women with PCOS are at risk for the following,

- **Endomentrial hyperplasia and endometrial carcinoma**

Possibliy due to over accumulation of the uterine lining and also lack of progesterone resulting in prolonged stimulation of uterine cells by estrogen and also may be due to obesity, hyper insulinaemia and hyper androgenism.

- **Hyper Insulinaemia**

High fastingf and post prandial insulin level

Peripheral insulin resistance.

- **Type 2 diabetes mellitus**
- **Dyslipidaemia**

Disorder of lipid metabolism,cholesterol and triglycerides.PCOS patients show decreased removal of atherosclerosis inducing remnants.

- **Cerebro and cardio vascular diseases**
  - ✓ Hypertension

- ✓ Endothelial dysfunction and impaired fibrinolysis (Circulating plasminogen activating factors levels) associated with the risk for vascular lesions like ischaemic heart disease and stroke.

- **Infertility**

The chronic elevation of insulin levels and enhanced ovarian sensitivity to insulin combined with elevated LH concentration results in ovarianthecal hyperplasia, increased androgen secretion arrested follicular development anovulation resulting in menstrual disturbance and infertility.

- **Miscarriage**

This may be due to lack of progestertrone

- **Acanthosis nigricans**

Patches of darkened skin under the arms, in the groin area and on the back of the neck

- **Auto immune thyroiditis**

DIAGNOSIS:

The diagnosis is made using the Rotterdam criteria, even when the syndrome is associated with a wide range of symptoms.

STANDARED DIAGNOSTIC ASSESSMENTS:

History taking:

- Specifically for menstrual pattern, obesity, hirsutism and absence of breast discharge.
- These four questions can diagnosis PCOS with a sensitivity of 77.1% and specificity of 93.8%.

Gynaecological ultrasonography:

- Looking for peripherally placed small ovarian follicles of size 5-7 mm giving the appearance of string of pearls and increased size of the ovaries that is 1.5 to 3 times larger than the normal.

Laparoscopic examination:

- This reveals a thickened smooth pearl white outer surface of the ovary.

COMMEN ASSESSMENT FOR ASSOCIATED CONDITIONS OR RISKS:

- Fasting blood glucose and lipid profile.
- 2 hour oral glucose tolerance test (GTT) in patients with risk factor (obesity, family history, H/o gestational diabetes) and may indicate impaired GTT in 15%- 30% women with PCOS.
- Frank diabetes can be seen in 65%-68% of women with this condition.
- Insulin resistance can be observed in both normal weight and overweight patients.
- Fasting insulin level to predict the response to medication.

THE EXCLUSION OF OTHER DISORDERS:

- Prolactin to rule out hyper prolactinaemia.
- TSH to rule out Hypothyroidism
- 17-hydroxy progesterone to rule out congenital Adrenal hyperplasia.

DIFFERENTIAL DIAGNOSIS:

Other causes of irregular or absent menstruation and hirsutism are,

- Adrenal hyperplasia
- Cushing’s syndrome
- Hyper prolactinaemia
- Androgen secreting neoplasm’s
- Other pituitary and adrenal disorder
- Other insulin resistant situations such as acromegaly.

TRIAL MEDICINES

PURGATION :

AGASTHIYAR KUZHAMBU-100mg with Milagu (Piper Nigram) and Chukku (Zingiber officinale) mixed powder at early morning for 3 days.

Reference book: Siddha vaithiya thiratu, Page No 172

TRIAL DRUG- 1: SOOTHAGATHAI UDAIKKUM KASAYAM

Reference book: Sigicha rathana deebam, Page No 96

தேவையான சரக்குகள்:

- ஓமம்
- சதகுப்பை
- மூங்கிலிலை
- மாவிலிங்கம் பட்டை
- பறங்கிச் சக்கை
- சுக்கு
- திப்பிலி
- சித்திர மூலவேர்
- சித்திர மூலவேர் பட்டை
- கருஞ்சீரகம்

வகைக்கு ஒரு வராகனெடை

செய்முறை:

மேற்கண்ட சரக்குகளை நறுக்கி 1/2 படி சலம் விட்டு அரைகால்படியாக சுண்டக்காய்ச்சிக் கொள்ளவும்.

அளவு:

150ml தினம் ஒரு வேளை, 3 நாட்கள்

தீரும் பிணி:

மாதவிலக்கு ஒழுங்காக வரும்

TRIAL DRUG-2: MAENI LAVANA CHOORANAM

Reference book:Kannusamy parambarai vaithiyam, Page No 116

தேவையான சரக்குகள்:

சுக்கு - 10 பலம்

இந்துப்பு - 10 பலம்

சோற்றுப்பு - 10 பலம்

பெருங்காயம் - 5 பலம்

ஓமம் - 10 பலம்

செய்முறை:

ஒரு சட்டியில் பெருஞ்சுக்கு துண்டுகளை போட்டு மிதக்க குப்பைமேனி இலைச்சாறு விட்டு ஊற வைக்கவும். மறுநாள் காலையில் முன்விட்ட சாற்றை வடித்துவிட்டு முன்போல் புதிய குப்பைமேனி இலைச்சாறு மூழ்கவிட்டு வைக்கவும். இவ்வாறு 18 நாள் செய்து 19வது நாள் அச்சுக்குத் துண்டுகளை இரண்டு, மூன்று நாள் நிழலில் காயவைத்துப் பின்பு வெயிலில் இரண்டொரு நாள் காயவிட்டுப் பத்திரப்படுத்துக.

அப்பால் சோற்றுப்பையும் இந்துப்பையும் கல்வத்தில் போட்டுக் குப்பைமேனி இலைச்சாறு விட்டு குழம்பு பதமாக அரைத்து வைத்துக் கொள்ளவும். ஒரு குடைக்கம்பியை ஒருபுறம் ஊசிபோல் தோய்த்து அதனில் இரண்டு மூன்று சுக்குத்துண்டுகளை குத்தி அவற்றிற்கு முன்பு சித்தப்படுத்திய உப்புக் குழம்பைத் தழும்பப் பூசி கரிநெருப்பனலில் வாட்டவும். உப்பு சிடுசிடுப்புக் காணும்போது சுக்குத் துண்டுகளைக் கம்பியை விட்டு நீக்கி ஒருபுறம் வைத்துக் கொள்க.

இப்படியே எல்லாச் சுக்குதுண்டுகளையும் கம்பியில் செருகி மேலே தழும்ப உப்புக் குழம்பை அப்பி நெருப்பில் வாட்டி எடுத்துக் கொள்ளவும். இதற்கு மேல் ஓமத்தை பொன்மேனியாக இளஞ்சூட்டில் வறுத்துப் பெருங்காயத்தை வாசனை கிளம்பச் சுட்டு எடுத்தும் ஆறவிட்டு முன் முடித்த சுக்குதுண்டுகளுடன் கூட்டி இடித்து சீலையில் அரிந்து வைத்துக் கொள்க.

அளவு:

- திரிகடிப்பிரமாணம் - 1 கிராம் [காலை, மாலை]
- சிறிது தண்ணீர் விழுங்க செய்க

தீரும்பிணிகள்:

- எத்தகைய கொடிய வயிற்றுவலி
- குன்மம்
- சூதகவாயு

உணவு:

எளிதில் ஜீரணிக்ககூடிய இலகு போஜனம், மோர்சாதம்

LITERATURE REVIEW OF TRIAL MEDICINES

PROPERTIES OF MEDICINES:

The drugs used in siddha medicine were identified by five properties. They are Suvai (Taste), Gunam(Character), Veeriyam(Potency), Pirivu(Class), Mahimai(Action). All these five properties are based on the elements (Panchaboothas) that are present in that drug.

SUVAI:

The basic taste are six namely Inippu(sweet), Pulippu(sour), Uppu(saline), Kaippu(bitter), Karppu(pungent), Thuvarppu(astringent). Each taste is the combination of any two boothas of the panja boothas.

GUNAM:

Every drug has few of the following ten pairs of gunas based on the panjaboothas present in the drug. The paired gunas are,

Heavy & light, Cold & hot, Oily & dry, Mild & keen, Compact& mobile, Soft& hard,

Clean& slimy, Smooth& rough, Minute & gross, Solid &liquid.

VEERIYAM:

Veeriya of a drug is classified into two, namely heat (veppam) and cold (Thappam) based on the presence of the bootha fire in that drug. The drugs which have predominant fire bootha usually have the salt, sour, punjent tastes. So, the drugs with these tastes are hot and vehement. Others are cold and slow in action.

PIRIVU:

A class of a drug is based on the taste of the drug after the metabolism of the particular drug acted upon by the digestive fire. It is after-taste which either nourishes a particular physical and life constituents or destroys them. The sweet and the saline substance after metabolism become sweet. The sour is sour, while the astringent, punjent, and bitter become punjent.

MAHIMAI:

Every drug has got a specific action which is independent of the above four features, and that individual action is called mahimai.

CONCEPTS OF NATPU (synergetic) AND PAGAI (antagonist)

CHARAKKU:

When compound medicines are prepared, the physician should know about the group of drugs which should be added together. This also helps in the process of purification of raw drugs. Two drugs which have a combined, synergetic action is a natpu charakku, and two drugs which have conflicting properties is a pagai charkku. This is also based on the boothas that are present in the drug.

TRIAL DRUG: 1 SOOTHAGATHAI UDAIKKUM KASAYAM

INGREDIENTS:

OOMAM

CHATHAKUPPAI

CHUKKU

THIPPILI

KARUNJEERAGAM

SITHIRA MOOLA VAER

SITHIRA MOOLA VAERPATTAI

PARANGI SAKKAI

MAAVILANGA PATTAI

MOONGILILAI

PROPERTIES

OOMAM

BOT NAME: Carum Capticum

FAMILY : Apiaceae

SUVAI : Karppu

THANMAI : Veppam

PIRIVU : Karppu

PART : Dried Fruits

ACTIONS and USES :

- **Emmenagogue**
- **Laxative**
- Anti inflammatory
- Carminative
- **Anti Spasmodic**
- Anti-diuretic
- Hypotensive
- **Abdominal Pain**
- **Abdominal Tumours**

CHATHAKUPPAI

BOT. NAME: Anethum graveolens

FAMILY: umbelliferae

SUVAI: Inippu, karppu

THANMAI: veppam

PIRIVU: karppu

PART: Seeds

“வாதமொடு சூதிகா வாதம் சிரசு நோய்

மோதுசெவி நோய்கப நோய்மூடுசுரம்-ஓதுகின்ற

மூலக் கடுப்பு முதிர்பினசம் போகும்

ஞாலச் சதகுப்பை நாடு.”

-Gunapaadam-moligai vaguppu.

Page no:422

ACTIONS AND USES:

- **Anti-spasmodic**
- **Emmenogogue**
- Anti Inflammatory
- Cardiotonic
- Expectorant
- Galactogogue
- **Amenorrhoea**
- **Dysmenorrhoea**
- **Pain in abdomen**

CHUKKU

BOT. NAME: Zingiber officinale

FAMILY: Zingiberaceae

SUVAI: Kerppu

THANMAI: veppam

PIRIVU: karppu

PART: Rhizome

ACTIONS AND USES:

- Carminative
- **Laxative**
- **Anti vaatha**
- Anti Inflammatory
- Anodyne
- **Cholesterol lowering**
- **Hypoglycaemic**

THIPPILI

BOT. NAME: Piper longam

FAMILY: Piperaceae

SUVAI: Karppu, kaippu

THANMAI: veppam

PIRIVU: karppu

PART: Dried fruits

ACTIONS AND USES:

- Carminative
- **Laxative**
- Anti Inflammatory
- Expectorant
- Aphrodisiac
- Anti-oxidant

KARUNJEERAGAM

BOT. NAME: Nigella sativa

FAMILY: Ranunculaceae

SUVAI: kaippu

THANMAI: veppam

PIRIVU: karppu

PART: Seeds

ACTIONS AND USES:

- **Emmenagogue**
- **Anti-spasmodic**
- **Anti-tumour**
- Carminative
- Anthelmintic
- Diuretic
- Anti-oxidant
- Analgesic
- Galactogogue
- Hypotensive

SITHIRAMOOLA VAER & VAERPATTAI

BOT. NAME: Plumbago zeylanica

FAMILY: Plumbaginaceae

SUVAI: karppu,

THANMAI: veppam

PIRIVU: karppu

PART: Root & Root bark

ACTIONS AND USES:

- Stimulate CNS
- Skin disease
- Gonorrhoea
- **Regulate menstrual disorder**
- Syphilis
- Tuberculosis
- Rheumatic pain

PARANGI SAKKAI

BOT NAME : Smilax China

FAMILY :Lilliaceae

SUVAI : Enippu

THANMAI : Thatpam

PIRIVU : Enippu

PART : Pattai

ACTIONS AND USES :

- **Anti Vadha**
- Anti Syphilitic
- Anti inflammatory
- Aphrodisac
- **Laxative**

- Anodyne
- Neuralgia

MAAVILANGA PATTAI

BOT NAME : Crataeva Magna

FAMILY : Ranunculaceae

SUVAI : Kaippu

THANMAI : Veppam

PIRIVU : Karppu

PART : Pattai

ACTIONS AND USES :

- **Anti Vadha**
- Anti inflammatory
- **Laxative**
- Carminative
- Anthelmintic
- Diuretic
- Renal Calculai

MOONGILILAI

BOT NAME : Bambusa Arundinaceae

FAMILY : Poaceae

SUVAI : Thuvarppu

THANMAI : Veppam

PIRIVU : Karpu

PART : Leaf

GUNAM :

“சூதக வாய்வினது சோணிதந்தங் காதுவரு

மாதே! சுரந்தணியும் வாதம்போம்பூ-பூதரமேல்

ஒங்கி வளர்ந்திழையு மோங்கலெனு மூங்கிலுக்கு

வாங்குஞ்சு வாசம்போம் வாழ்த்து. ”

-Agasthiyar Gunavagadam

Gunapadamooligai Page No 783

ACTIONS AND USES :

- **Emmenagaogue**
- **Anti Pitha**
- Anthelmintic
- **Antispasmodin**
- **Amenorrhoea**
- **Dysmenorrhoea**
- Gonorrhoea
- **Lumbago**

TRIAL DRUG-2: MAENI LAVANA CHOORANAM

CHUKKU

BOT. NAME: Zingiber officinale

FAMILY: Zingiberaceae

SUVAI: Kerppu

THANMAI: veppam

PIRIVU: karppu

PART: Rhizome

ACTIONS AND USES:

- Carminative
- **Laxative**
- **Anti vaadha**
- Anti Inflammatory
- Anodyne
- **Cholesterol lowering**
- **Hypoglycaemic**

OOMAM

BOT NAME: Carum Capticum

FAMILY : Apiaceae

SUVAI : Karppu

THANMAI : Veppam

PIRIVU : Karppu

PART : Dried Fruits

ACTIONS and USES :

- **Emmenagogue**
- **Laxative**
- Anti inflammatory
- Carminative
- **Anti Spasmodic**
- Anti-diuretic
- Hypotensive
- **Abdominal Pain**
- **Abdominal Tumours**

PERUNGAYAM

BOT NAME: Ferrula asafetida

FAMILY : Apiaceae

SUVAI : Kaippu

THANMAI : Veppam

PIRIVU : Karppu

PART : Oleo gum resin

GUNAM:

“உந்து கெர்ப்பந்தின் வித்திரஞ் சூலைச்சூர்
உதிரப்பூச்சி சிலேத்துமத்துறும் வலி
வந்த்மெய்க்கடுப் போடினவ முற்றுமே
மாயுநாறுநந் காயாங் கிடைக்கினே.”

-Gunapadam Mooligai

Page No 710

ACTIONS and USES :

- **Emmenagaogue**
- **Anti Vadha**
- **Anti Spasmodic**
- **Laxative**
- Anti inflammatory
- Carminative
- Anthelmintic
- Diuretic
- **Anti Diabetic**
- Anti Coagulant
- Nervinetonic

INDHUPPU

Other Name: Rock Salt or Nacl impura

ACTIONS and USES :

- Carminative
- **Emetic**
- **Laxative**
- Cathartic
- **Abdominal disorders**

SOTRUPPU

Other Name: Table Salt or Nacl

ACTIONS and USES :

- **Laxative**
- **Emetic**
- Anti Septic
- Anthelmintic
- Anti periodic
- **Prevent Glandular enlargement**

KUPPAIMAENI

BOT NAME: Acalupha Indica

FAMILY : Euphorbiaceae

SUVAI : Kaippu,Karppu

THANMAI : Veppam

PIRIVU : Karppu

PART : Leaf

ACTIONS and USES :

- **Emmenagaogue**
- Anthelmintic
- Diuretic

MATERIALS AND METHODS

(PROTOCOL)

STUDY DESIGN:

The clinical open trial on Soothaga vayu was conducted at the OPD section of POST GRADUATE – POTHU MARUTHUVAM department attached to ARIGNAR ANNA HOSPITAL OF INDIAN MEDICINE, CHENNAI-106, during the period 2011-2013.

SAMPLE SIZE:

20 Female patients in the age group 15-35

SELECTION CRITERIA:

Patients with the following criteria are included in the study.

- Irregular menstruation
- Amenorrhoea
- Oligomenorrhoea
- Dysmenorrhoea
- Infertility
- Constipation
- Poly cystic ovary in ultra sound

EXCLUSION CRITERIA:

Patients with following criteria are excluded from the study,

- Hypothyroidism
- Peptic ulcer
- Diabetes mellitus
- Hypertension
- Patients with positive Gravindex test.

WITHDRAWAL CRITERIA:

- Patients who have not completed the trial period are withdrawn from the study.

EVALUATION OF CLINICAL PARAMETERS:

Patients are clinically evaluated by the following parameters,

HISTROY TAKING

Age, occupation, socio economic status, complains and its duration, menstrual history, marital history, family history, previous illness, personal habits were recorded in the case sheet for every patient at the time of first visit to the OP.

INVESTIGATIONS:

All patients were subjected to the laboratory investigations before and after the treatment.

Blood:

Complete haemogram, Bl. Sugar(F), Sr. cholesterol, TSH.

Urine:

Albumin, Sugar, Deposits, Gravindex test.

USG:

- Whole abdomen and pelvis.
- Follicular study

CLINICAL DIAGNOSIS BASED ON SIDDHA SYSTEM:

The parameters used to diagnosis soothaga vayu based on siddha system.

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

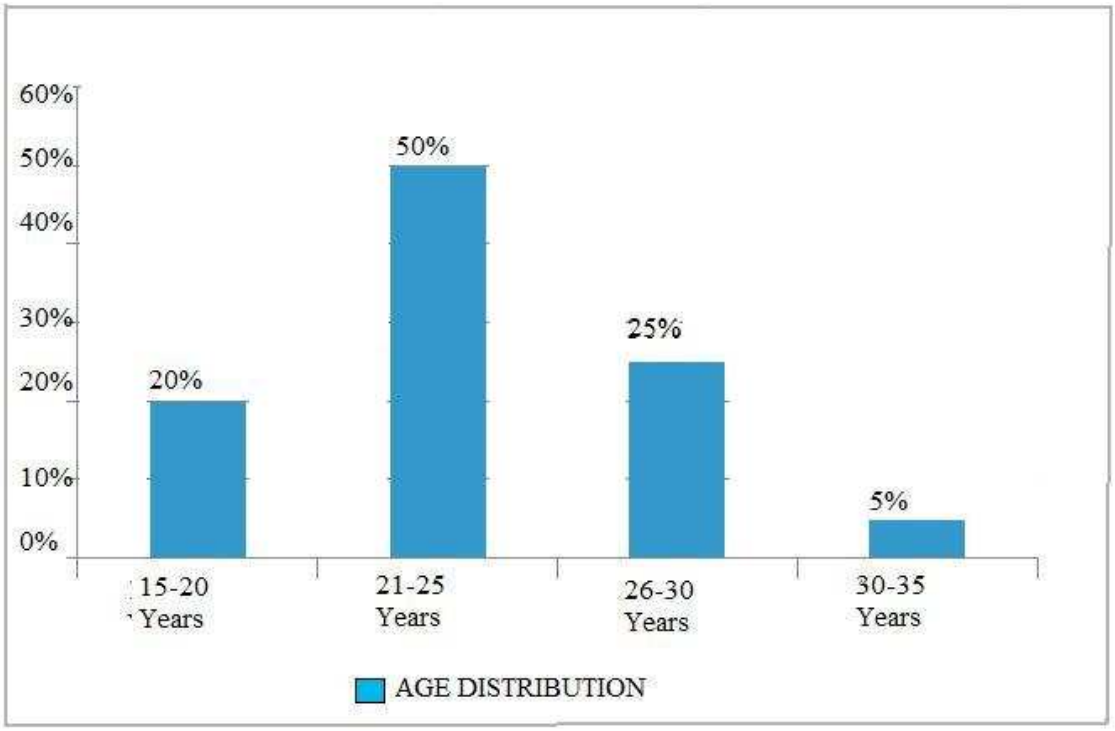
RESULT AND OBSERVATION

A total number of 20 patients included in the study with signs and symptoms of soothaga vaayu were observed. The observations were tabulated regarding the following features.

- AGE DISTRIBUTION
- DISTRIBUTION OF KAALAM
- OCCUPATION
- SOCIO ECONOMIC STATUS
- DIET HABITS
- FAMILY HISTROY
- MARITAL STATUS
- DISTRIBUTION OF THINAI
- PARUVAKAALAM
- DISTRIBUTION OF VAATHAM
- DISTRIBUTION OF PITHAM
- DISTRIBUTION OF KABHAM
- EZHU UDAL THATHUKKAL
- ENVAGAI THERVUGAL
- NEIKURI
- CLINICAL MANIFESTATIONS
- RESULT

AGE DISTRIBUTION

Age (years)	No. of cases	Percentage
15- 20 years	4	20%
21- 25 years	10	50%
26- 30 years	5	25%
31- 35 years	1	5%

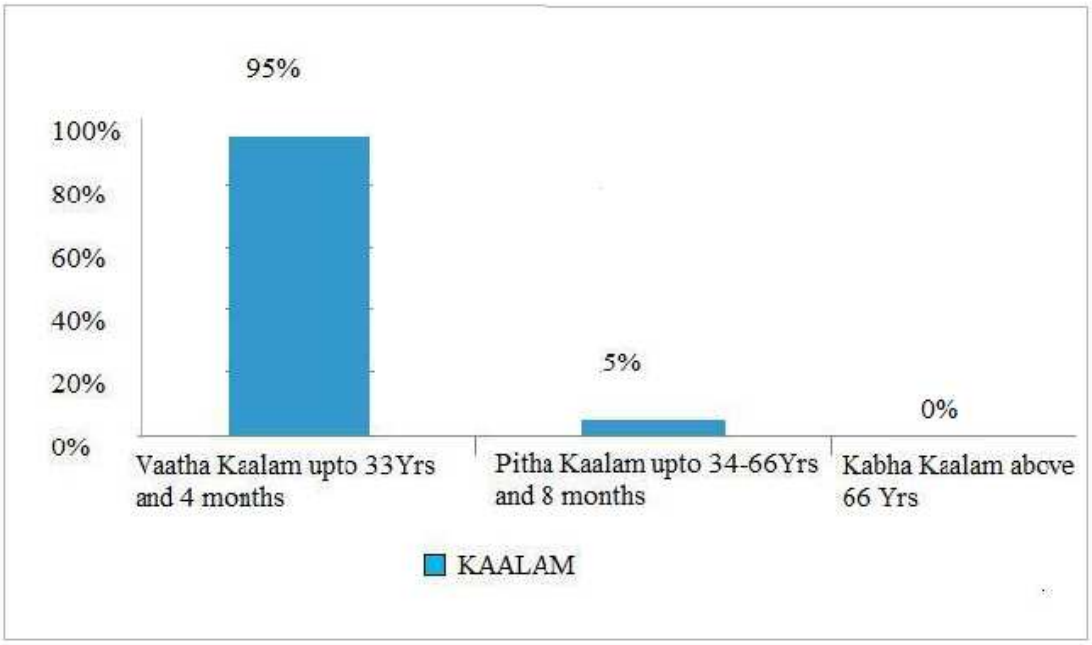


Inference:

20% of patients were in the age group 15-20, 50% of patients were in the age group of 21-25, 25% patients were in the age group 26-30, 5% of patients were in the age group 31- 35.

DISTRIBUTION OF KAALAM

Kaalam	No. of cases	Percentage
Vaatha kaalam upto 33yrs and 4months	19	95%
Pitha kaalam upto 34-66yrs and 8months	1	5%
Kabha kaalam above 66yrs	0	0%

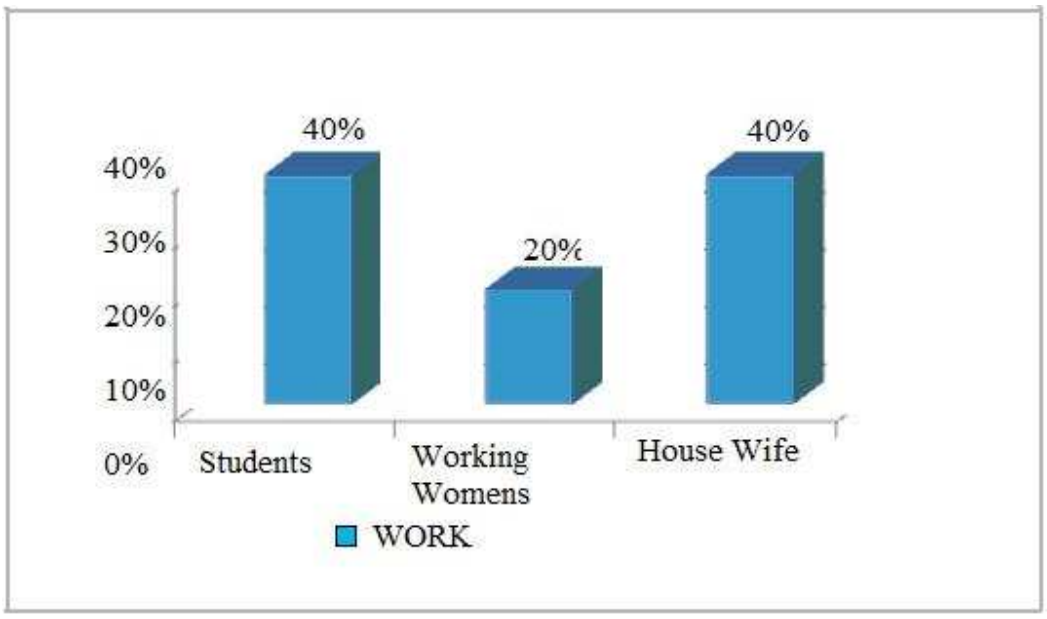


Inference:

95% of patients were in vatha kaalam and 5% of patients were in pitha kaalam.

OCCUPATION

Work	No. of cases	Percentage
Student	8	40%
Working womens	4	20%
House wife	8	40%

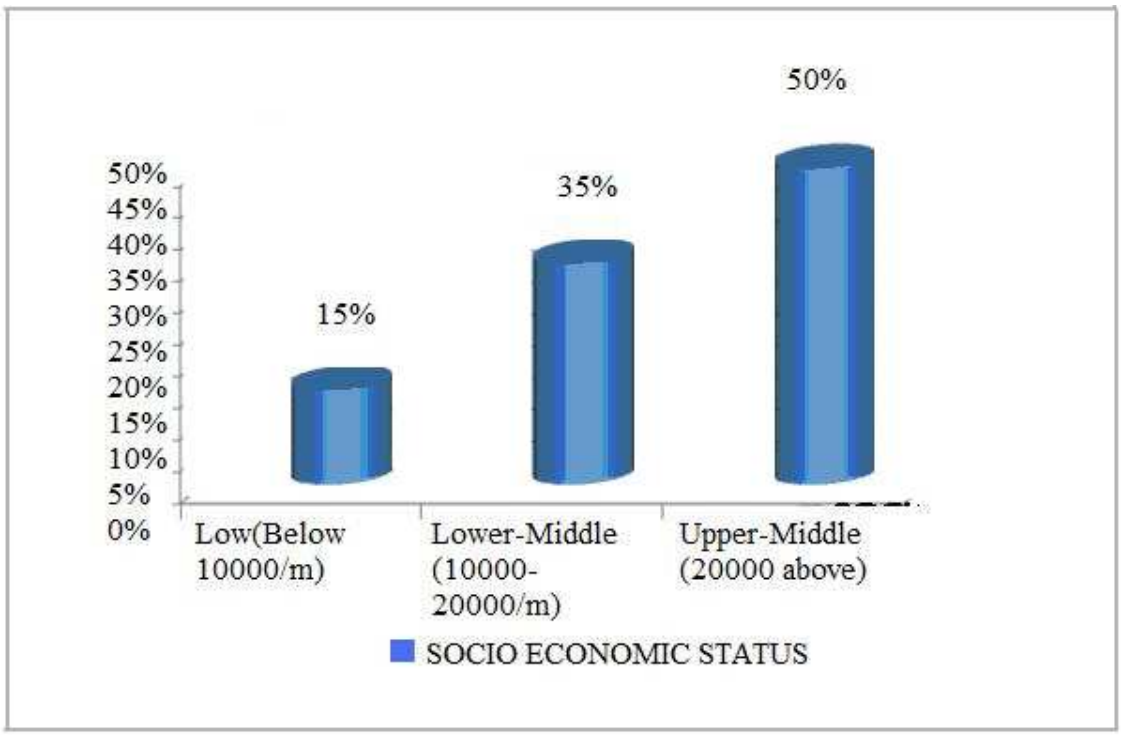


Inference:

40% patients were students and another 20% were working women and remaining 40% patients were house wife.

SOCIO ECONOMIC STATUS

SOCIOECONOMIC STATUS	No. of cases	Percentage
Low(below 10000/m)	3	15%
Lower- middle(10000-20000/m)	7	35%
Upper – Middle(20000 above)	10	50%

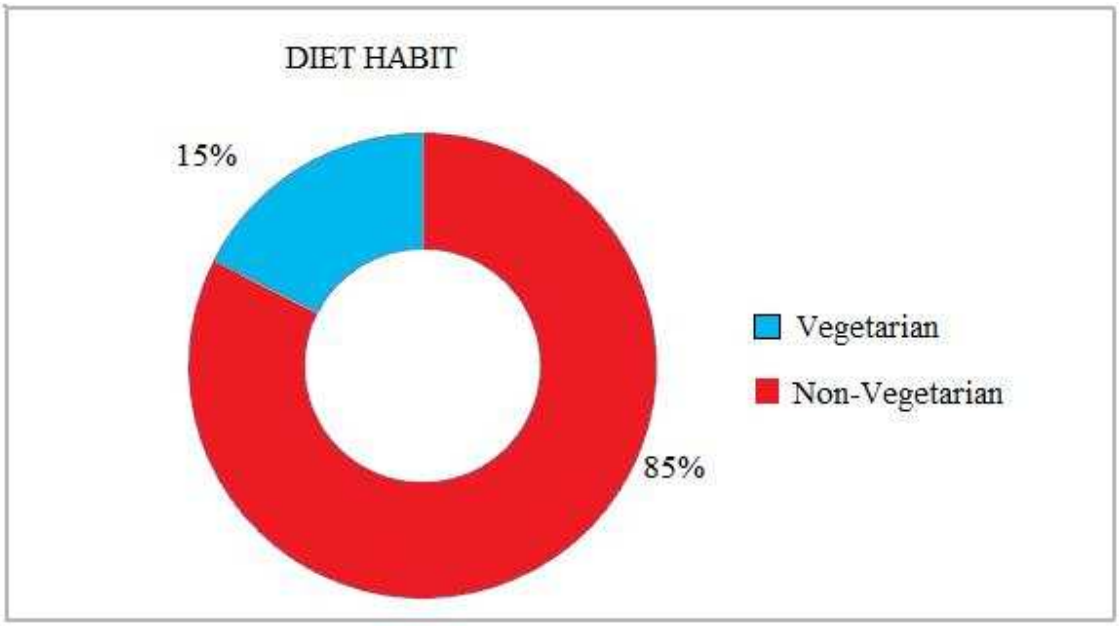


Inference:

50% 0f patients belonging to upper middle class, 35% of patients belonging to lower middle, 15% of patients belonging to below 10000/m.

DIET HABITS

Diet	No. of cases	Percentage
Vegetarian	3	15%
Non - vegetarian	17	85%

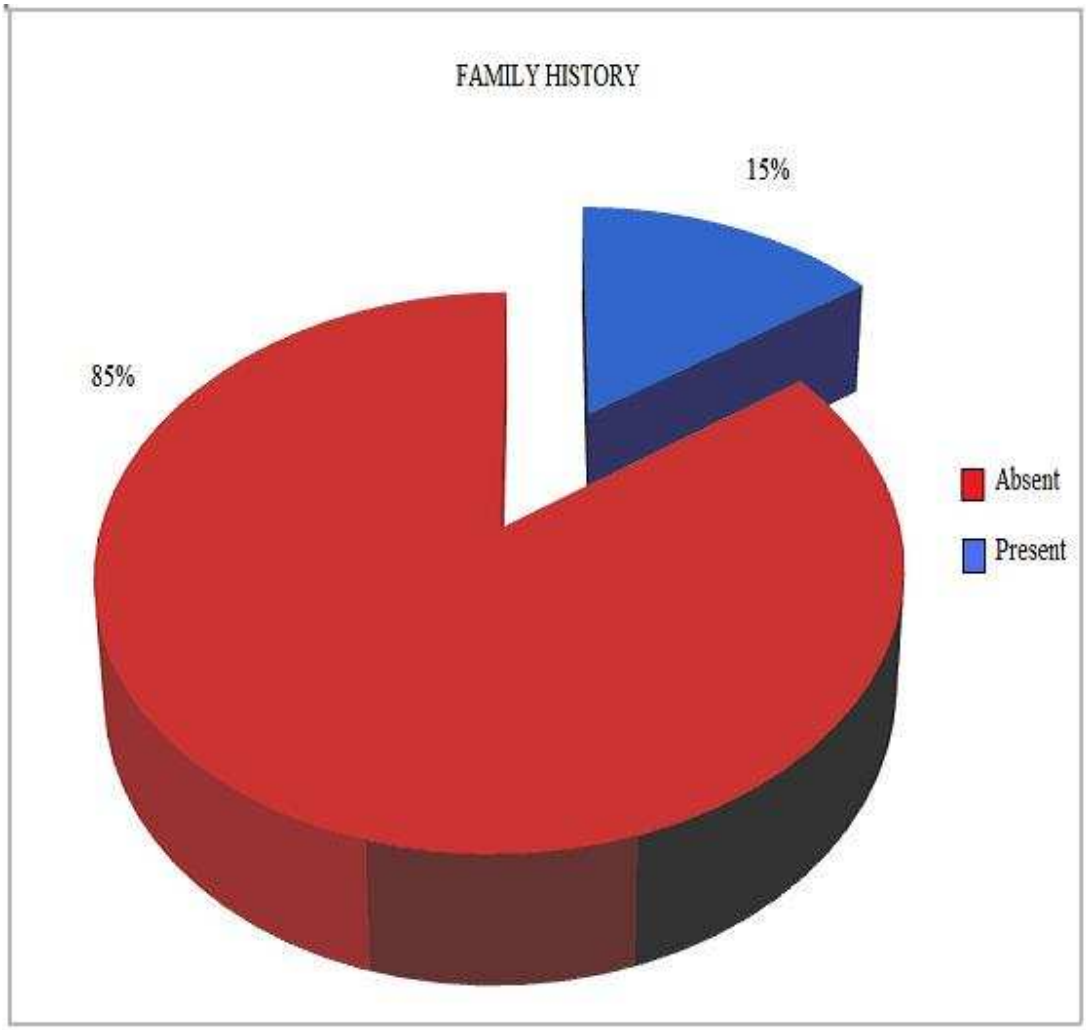


Inference:

85% of patients were non- vegetarian and 15% of patients were vegetarian.

FAMILY HISTROY

Family histroy	No. of cases	Percentage
Present	3	15%
Absent	17	85%

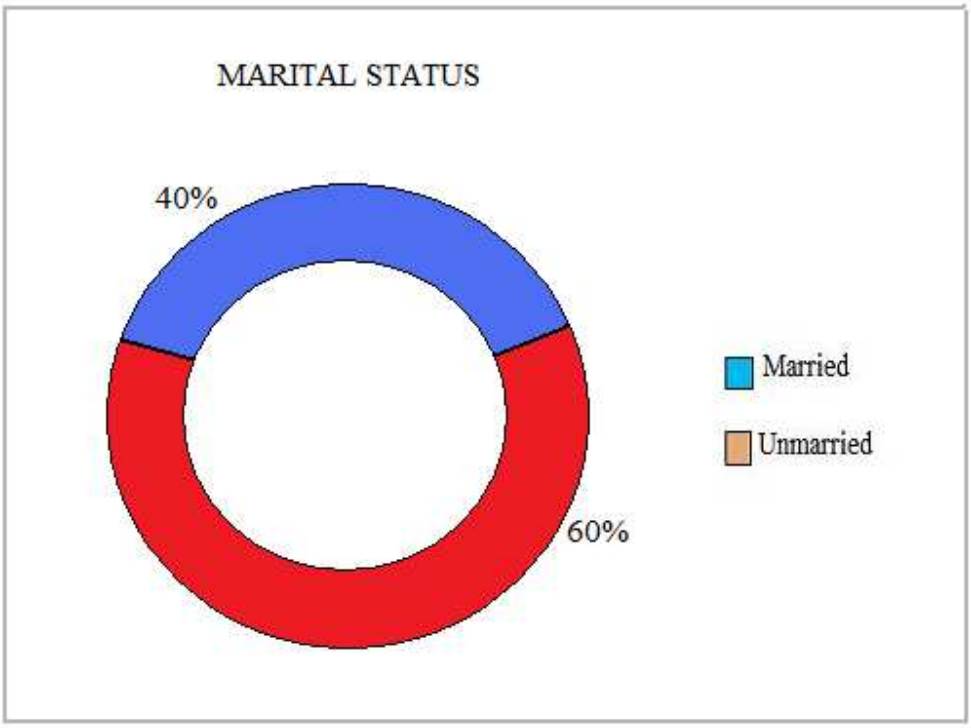


Inference:

Family history of soothaga vaayu was present in 15% of patients and absent in 85% of patients.

MARITAL STATUS

Marital status	No. of cases	Percentage
Married	8	40%
Unmarried	12	60%

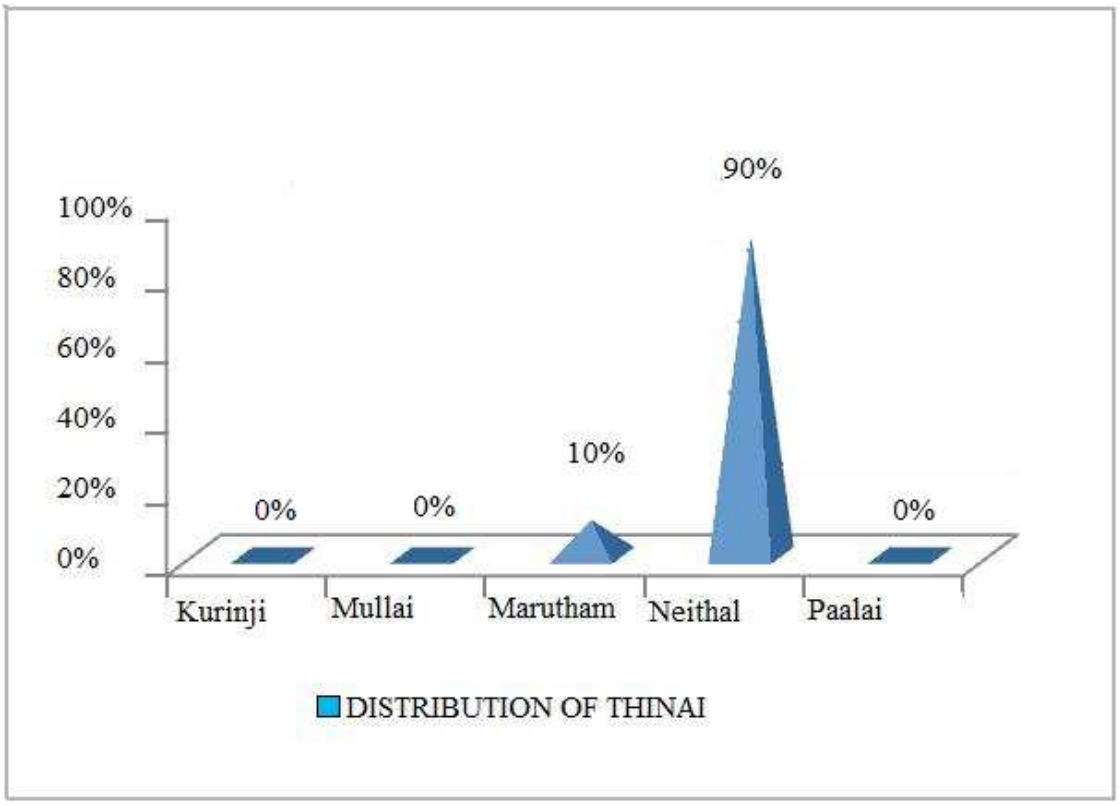


Inference:

40% were married and 60% were unmarried.

DISTRIBUTION OF THINAI

THINAI	NO. OF CASES	PERCENTAGE
Kurinji	0	0%
Mullai	0	0%
Marutham	2	10%
Neithal	18	90%
Paalai	0	0%

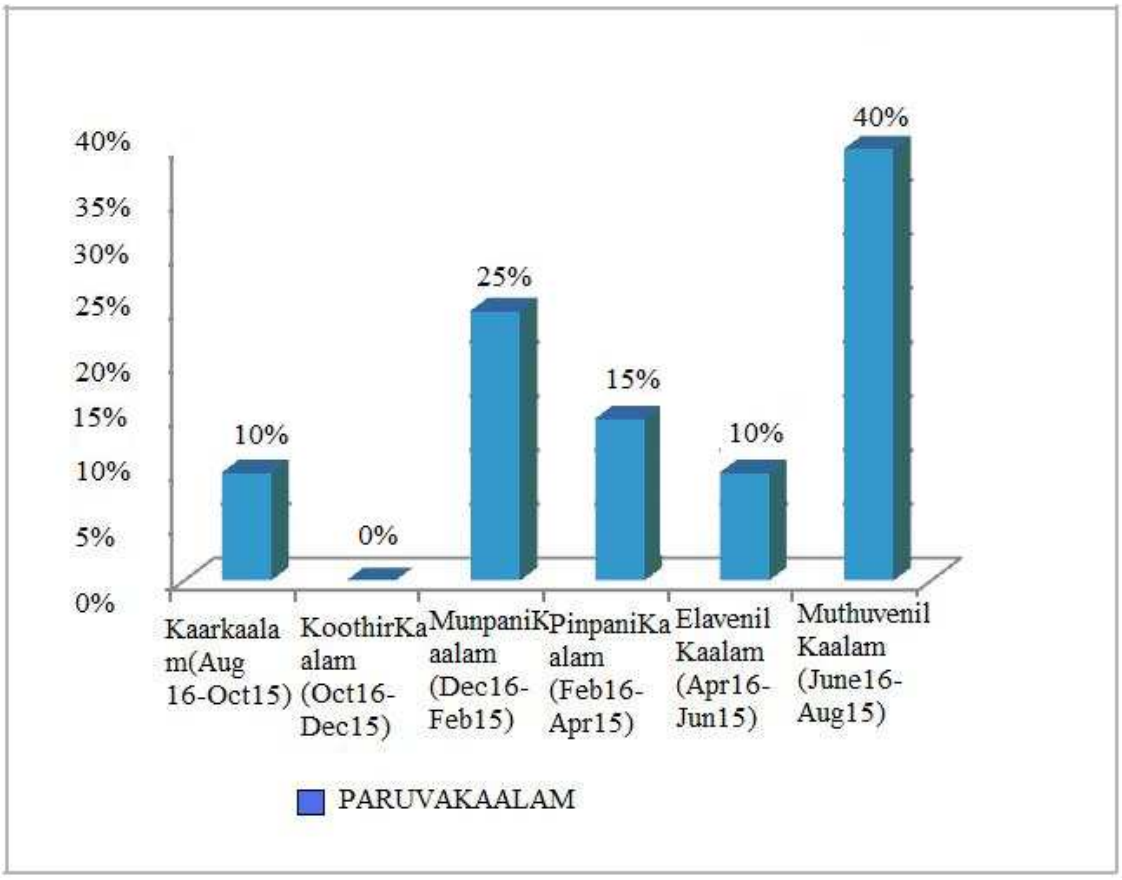


Inference:

Neithal 90% , Marutham 10%

PARUVAKAALAM

Kaalam	No. of cases	Percentage
Kaar kaalam (Aug16-Oct15)	2	10%
Koothir kaalam (Oct16-Dec15)	0	0%
Munpani kaalam (Dec16-Feb15)	5	25%
Pinpani kaalam (Feb16- Apr15)	3	15%
Elavenil kaalam (Apr16-June15)	2	10%
Muthuvenil (June16-Aug15)	8	40%

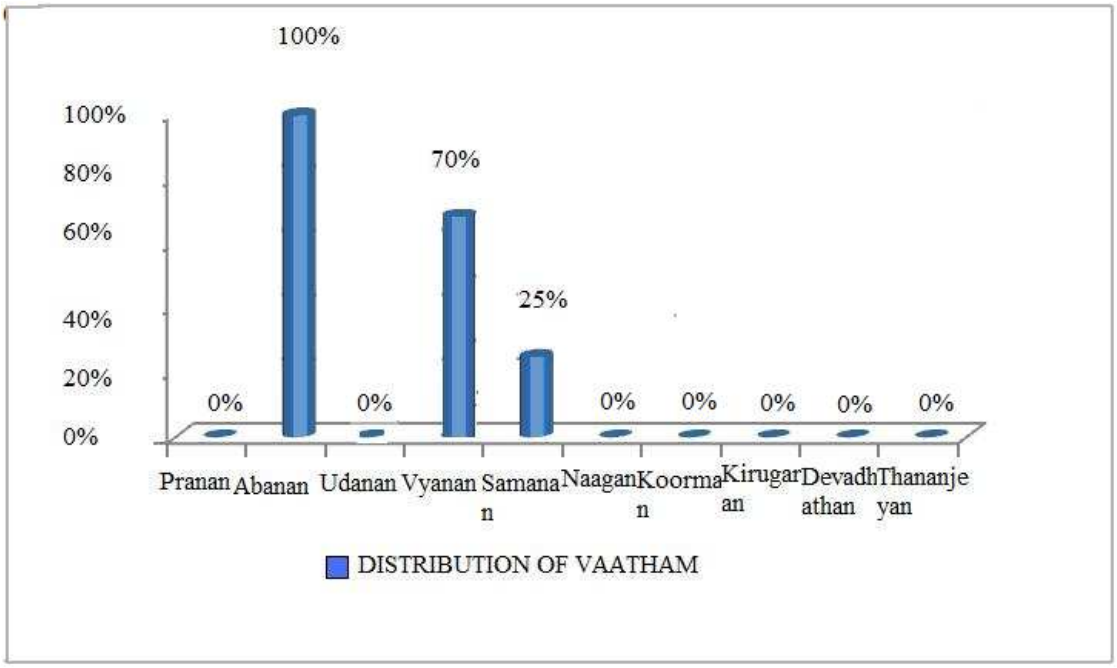


Inference:

10% patients were repoted in kaar kaalam, 0% patients were reported in koothir kaalam, 25% patients were reported in munpani kaalam, 15% patients were reported in pinpani kaalam, 10% patients were reported in elavenil kaalam and 40% patients were reported muthuvenil kaalam.

DISTRIBUTION OF VAATHAM

Vaatham	No. of cases	Percentage
Pranan	0	0%
Abanan	20	100%
Udanan	0	0%
Vyanan	14	70%
Samanan	5	25%
Naagan	0	0%
Koorman	0	0%
Kirugaran	0	0%
Devadhathan	0	0%
Thananjeyan	-	-

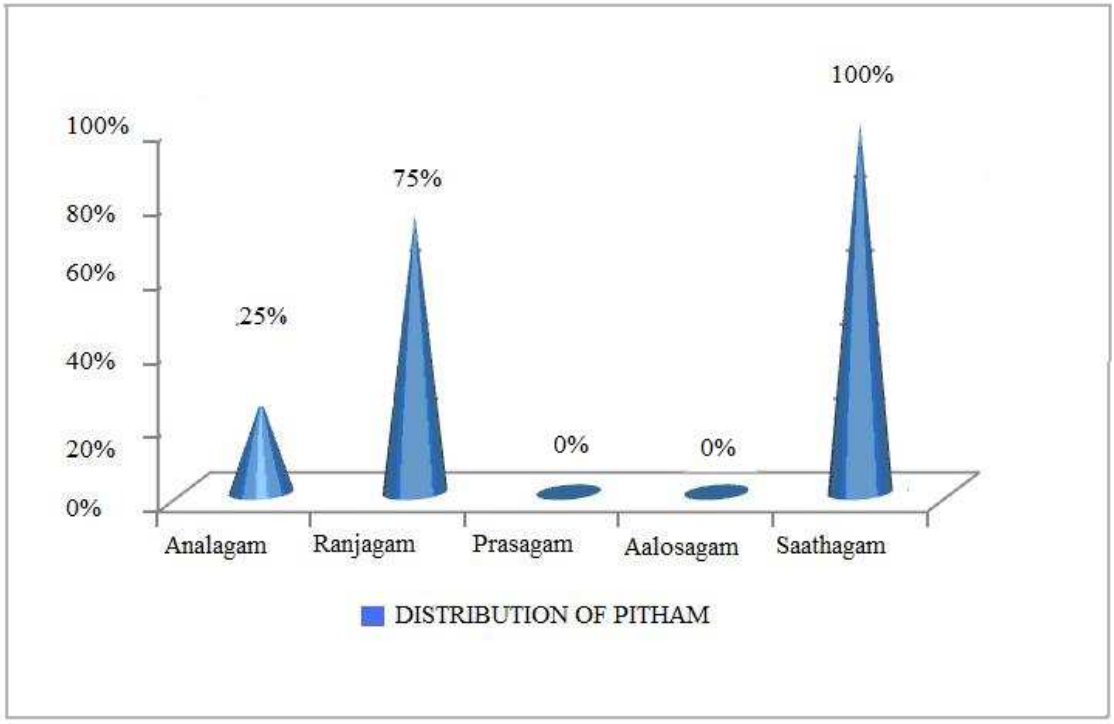


Inference:

Abanan affected in 100%, vyanan affected 70%, samanan affected 25%.

DISTRIBUTION OF PITHAM

Pitham	No. of cases	Percentage
Analagam	5	25%
Ranjagam	15	75%
Prasagam	0	0%
Aalosagam	0	0%
Saathagam	20	100%

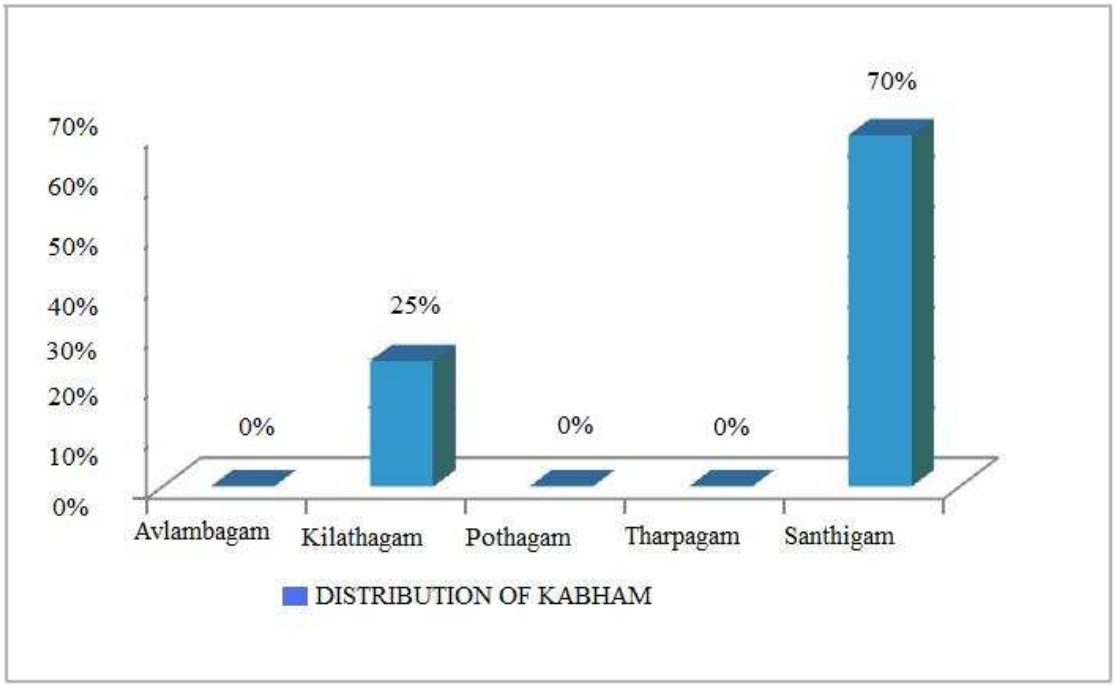


Inference:

Analagam affected 25%, Ranjagam affected 75%, Prasagam affected 0%, and Saathagam affected 100%.

DISTRIBUTION OF KABHAM

Kabham	No. of cases	Percentage
Avlambagam	0	0%
Kilethagam	5	25%
Pothagam	0	0%
Tharpagam	0	0%
Santhigam	14	70%

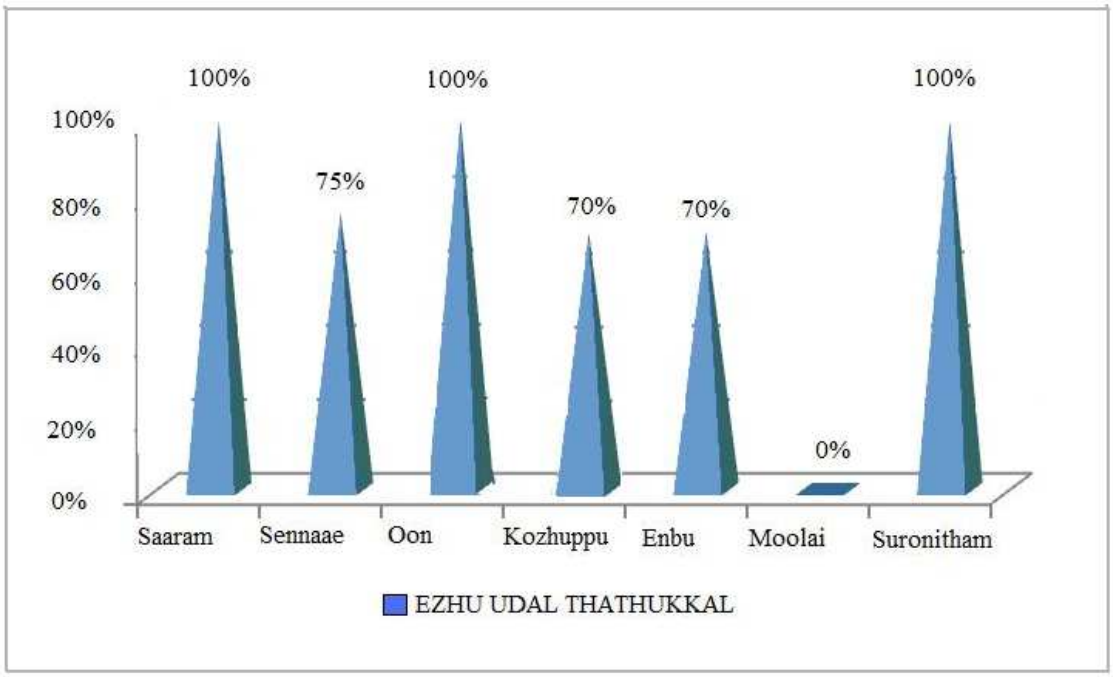


Inference:

Santhigam affected in 70% of cases and kilethagam affected in 25%.

EZHU UDAL THATHUKKAL

Thathukkal	No. of cases	Percentage
Saaram	20	100%
Senneer	15	75%
Oon	20	100%
Kozhuppu	14	70%
Enbu	14	70%
Moolai	0	0%
Suronitham	20	100%

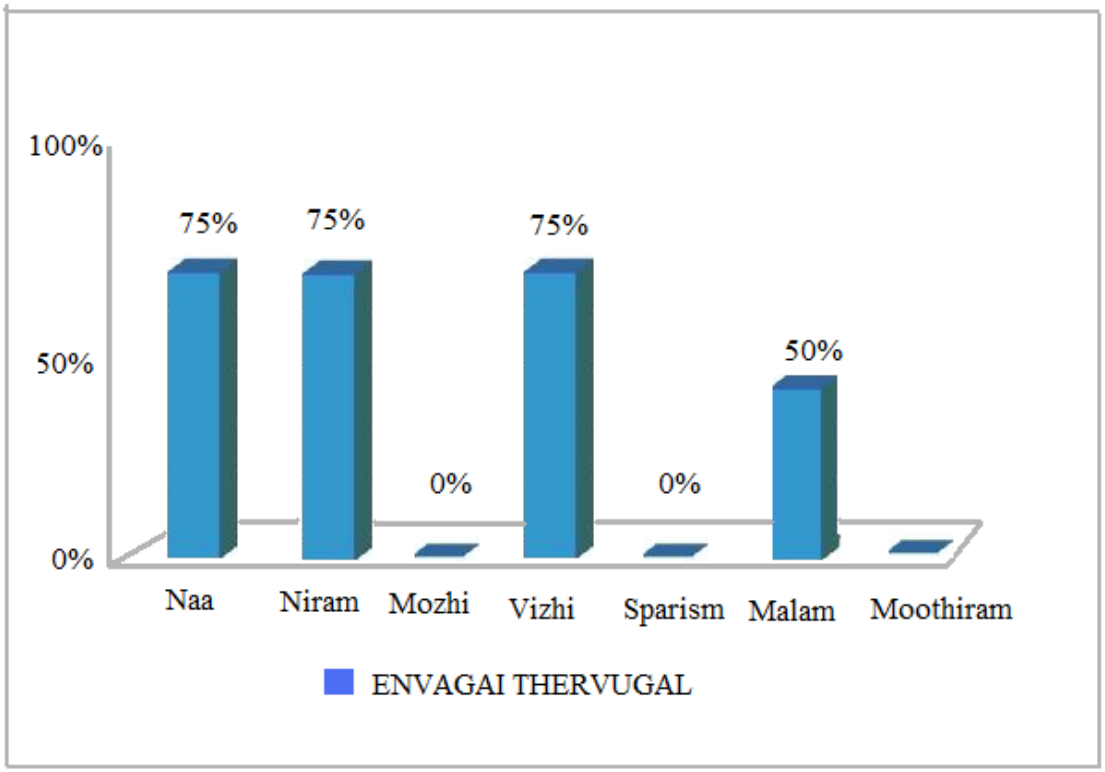


Inference:

Saaram affected in 100% patients, Senneer affected in 75%, Oon affected in 45%, kozhuppu and enbu affected in 70%, Suronitham affected in 100%.

ENVAGAI THERVUGAL

THERVUGAL	NO. OF CASES	PERCENTAGE
Naa	15	75%
Niram	15	75%
Mozhi	0	0%
Vizhi	15	75%
Sparisam	0	0%
Malam	10	50%
Moothiram	0	0%

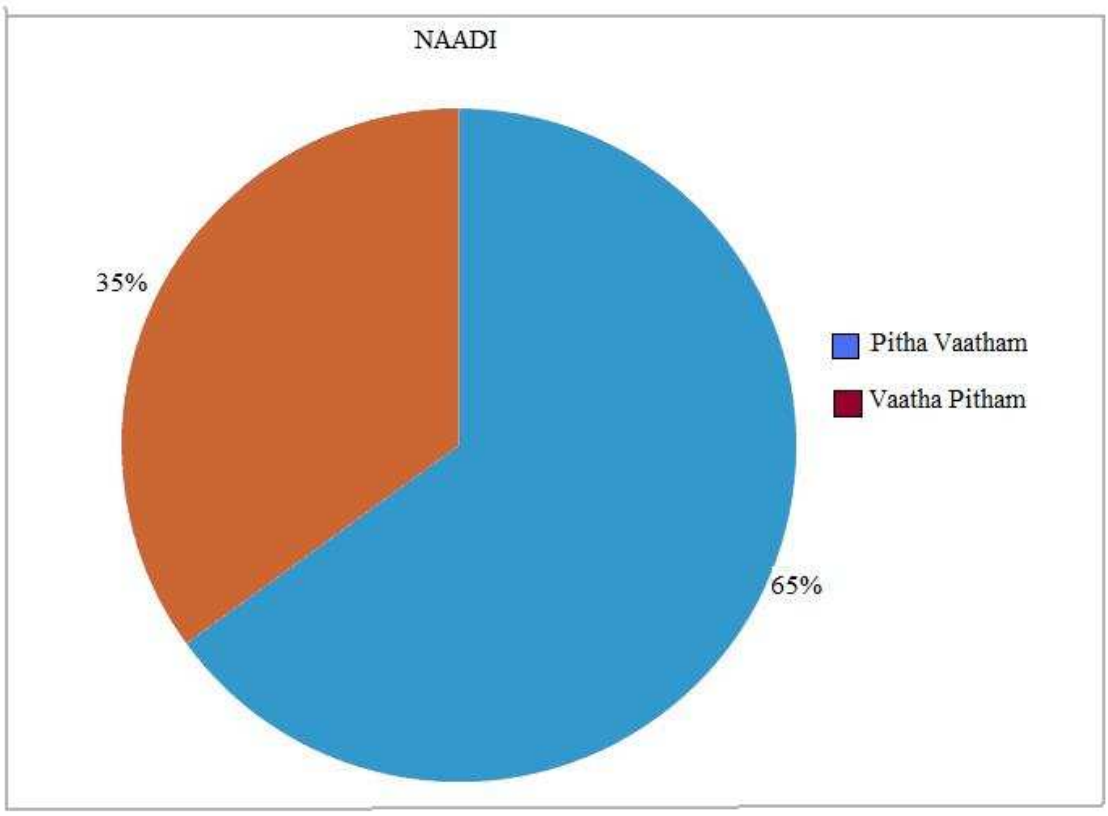


Inference:

Naa affected in 75%,Niram affected in 75%, Vizhi affected in 75%, and Malam affected in 50% of cases.

NAADI

NAADI	NO. OF CASES	PERCENTAGE
Pitha vaatham	13	65%
Vaatha pitham	7	35%

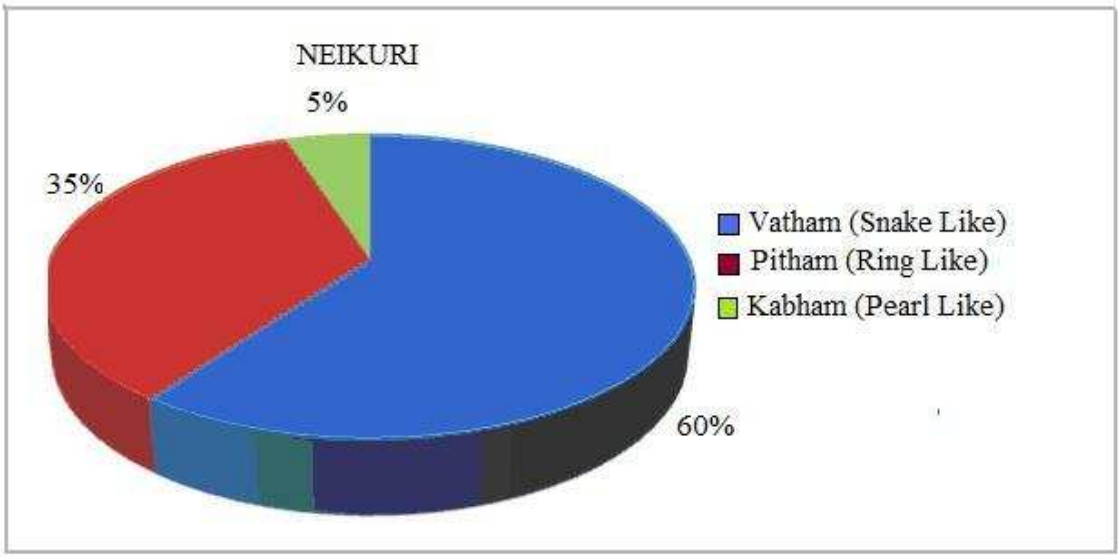


Inference:

65% of cases had pitha vatham, 35% of cases had vaatha pitham.

NEIKURI

NEIKURI	NO. OF CASES	PERCENTAGE
Vatham (Snake like)	12	60%
Pitham (Ring like)	7	35%
Kabham (Pearl like)	1	5%

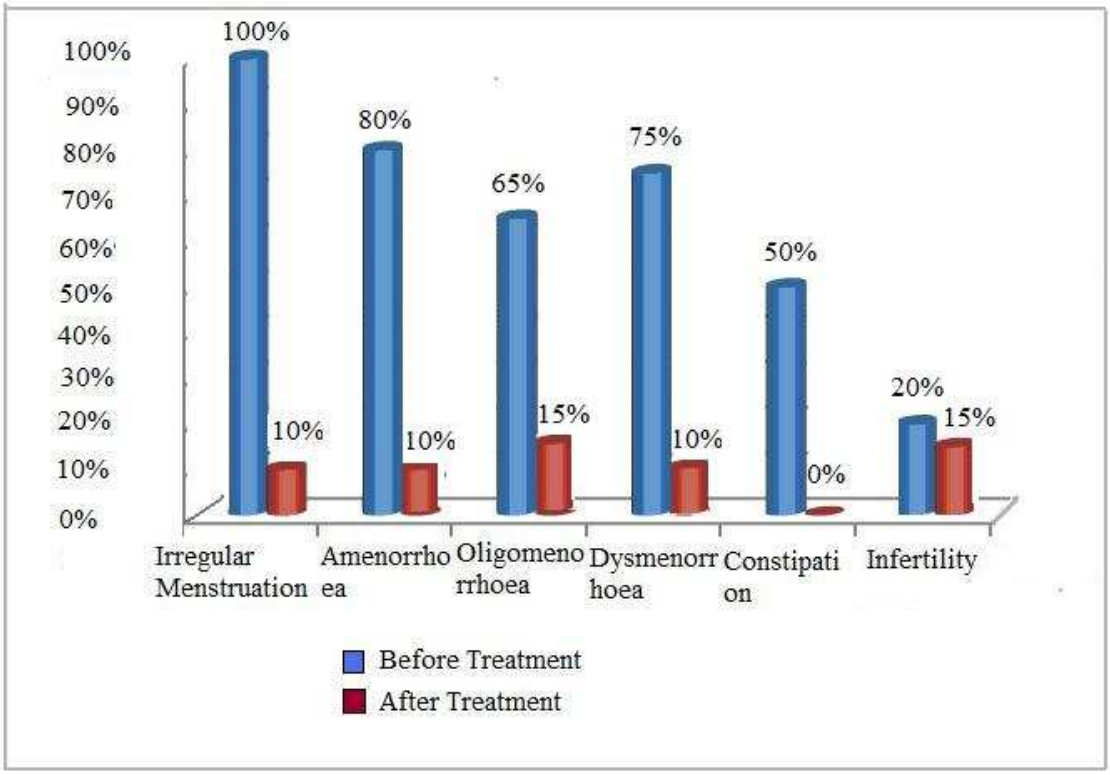


Inference:

60% of patients had Vatha neer neikuri, 35% of patients had pitha neer neikuri and 5% of patients had Kabha neer neikuri.

CLINICAL MANIFESTATIONS

S.NO	SIGNS & SYMPTOMS	Before Treatment		After Treatment	
		NO. OF CASES	PERCENTAGE	NO. OF CASES	PERCENTAGE
1.	Irregular menstruation	20	100%	2	10%
2.	Amenorrhoea	16	80%	2	10%
3	oligomenorrhoea	13	65%	3	15%
4.	Dysmenorrhoea	14	75%	2	10%
5.	Constipation	10	50%	0	0%
6.	Infertility	4	20%	3	15%

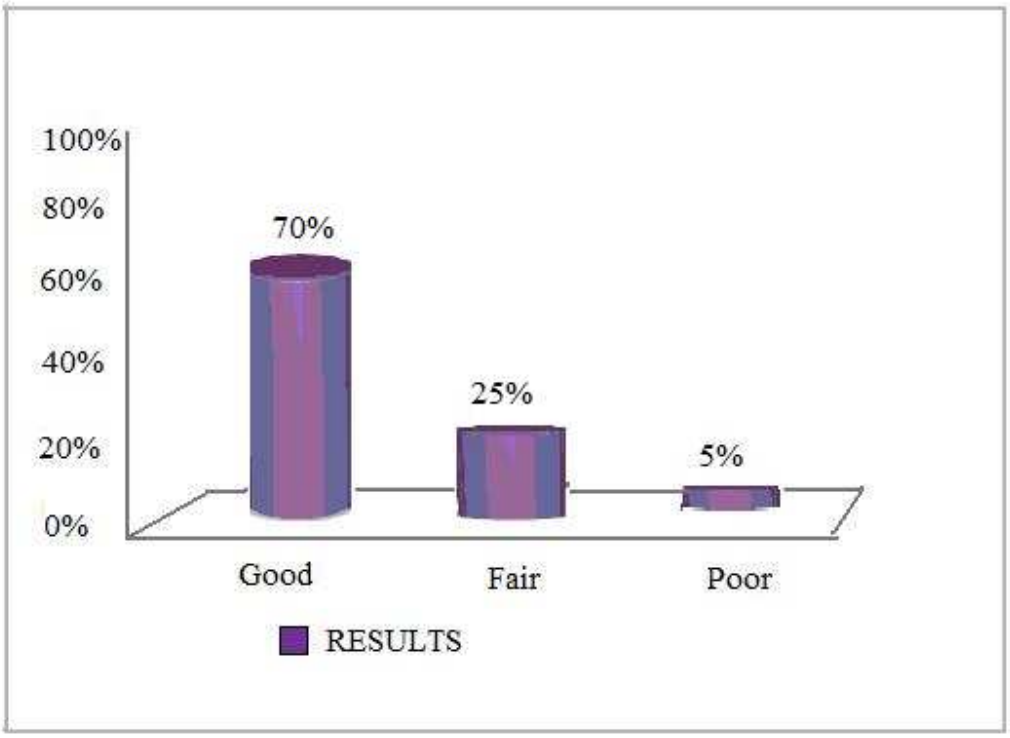


Inference:

90% patients were relived from irregular menstruation, and the patients were relived from amenorrhoea are 70% oligomenorrhoea are 50%, dysmenorrhoea are 65%, and all patents are relived from constipation, 5% are conceived.

RESULT

Result	No of cases	Percentage
Good	14	70%
Fair	5	25%
Poor	1	5%



Inference:

Results obtained were

- 70% cases good result
- 25% cases fair result
- 5% cases poor result

DISCUSSION

'Soothaga vaayu' which is compared with irregular menstruation due to poly cystic ovarian disease) is a common disease pertaining to the ovary. It is the most common cause for infertility. Nowadays large population of women in their reproductive age are affected by soothaga vayu. But there is no complete and satisfactory relief from their symptoms by other system of medicine.

Hence 20 female patients with soothaga vaayu were selected and the patients were examined based on both siddha and as well as modern aspects and all the necessary investigations were made during the history taking.

Trial medicines administered were,

1. **SOOTHAGATHAI UDAIKKUM KASAYAM**- 150ml OD at Morning for 3 days before food.

2. **MAENI LAVANA CHOORANAM** - 1gm BD with Water after food.

The above medicines were administrated for course of 3 months.

All the 20 patients were clinically improved. Let me take out these results on each category to arrive a better conclusion.

Age and kaalam distribution:

In this study the incidence is more in the age group 21-25 years (50%), 26-30 years (25%), 31-35 years (5%), 15-20 years (20%) are affected.

Majority of the patients were reported in their vatha kaalam(95%). Soothaga vaayu which is resulting from the deranged vatha kutram has high incidence in the vatha kaalam.

Occupation:

Student and house wife were equally affected (40%) and working women were affected (20%)

Socio economic status:

Women from upper socio economic status (50%) were more affected than the middle (35%) and lower economic status (15%)

Diet habits:

85% of patients were non vegetarian and only 15% were vegetarian.

Family history:

There is a family history of soothaga vaayu i.e. either the patients mother or sister is affected by the same problem. 15% of patients are having the family history.

Marital status:

40% of patients were married and 60% patients were unmarried.

Distribution of Thinai:

Most of the patients were reported during Neithal (90%) and Marutham (10%),.

Paruvakaalam:

Most of the Patients were reported during the Muthuvenil (40%), Munpani Kaalam (25%) and in Pinpani Kaalam (15%)

Clinical manifestations of soothaga vaayu:

All patients have irregular menstruation (100%), 80% have amenorrhoea, 75% have dysmenorrhoea, 65% have oligomenorrhoea, 50% have constipation, 20% have infertility.

Mukkutram:

Vaatham:

- In all the patients (100%) Abanan was affected resulting in irregular menstruation, constipation and some patient causes inability to conceive.
- In 70% of patients Vyanan was affected producing low back pain and lower abdominal pain.
- In 25% of patients Samanan was affected resulting in loss of appetite.

Pitham:

- In all 100% of patients Sathaga pitham was affected causing irregular menstruation, absence of menstruation and inability to conceive.
- In 75% patients Ranjagam was affected causing pallor of lower eyelids, tongue.
- Analagam was affected in 25% of patients causing loss of appetite.

Kabham:

- Santhigam was affected in 70% of patients resulting in low back pain and lower abdominal pain.

- Kilethagam was affected in 25% of patients resulting in loss of appetite.
- Therefore soothaga vayu results from the deranged vatham and pitham which affected the uterus resulting in irregular menstruation.

Ezhu Udal thathukkal:

- In 100% of patients Saaram and Suronitham affected causing tiredness and irregular menstruation.
- Senner was affected in 75% of patients producing pallor and eyelids.
- Oon was affected in 100% because of Cyst presence.
- Kozhuppu was affected in 70% of patients resulting low back pain
- Enbu was affected in 70% of patients resulting low back pain.

Envagaii thervugal:

- In 75% of patients Naa, Niram and Vizhli were affected depicting anaemic status of the patients.
- Malam was affected in 50% due to constipation.

Naadi:

65% of patients had Pitha vatha naadi and 35% of patients had Vatha pitha naadi.

Nei kuri:

60% patients had Vatha neer, 35% patients had pitha neer and 5% had kabha neer.

Ultra sound scan:

USG-Pelvis was taken before treatment for all patients for confirmation of PCOD. 18 patients had bilateral ploy cystic ovaries, 2 patients had unilateral poly cystic ovaries and follicular study was done for infertility.

Results after treatment:

90% patients were relived from irregular menstruation, and the patients were relived from amenorrhoea are 70% oligomenorrhoea are 50%, dysmenorrhoea are 65%, and all patents are relived from constipation, 5% are conceived.

Trial medicines:

- Before administering the trial medicines all the patients were given Agasthiyar kulambu -100mg OD at early morning with Chukku and millagu mixed power neutralizes the vatha kutram.
- Soothagathai Udaikkum Kasayam with Kaippu (Vali+Vinn) taste regulates body secretions, eliminates excess fat and also eliminates accumulated fluid in the tissue
- Maeni Lavana Chooranam with Uppu (Neer+Thee) taste regulates Laxative and prevents the glandular enlargement
- Therefore the trial medicines will neutralizes the vatha kutram through Oppurai.

Chemical Analysis:

Qulitative Analysis:

The sodium carbonate extract of the medicines were tested for Acid radicals, Basic radicals and miscellaneous compounds.

The results show the Soothagathai Udaikkum Kasayam contains Chloride, Calcium, Potassium, Reducing Sugar, Protein.

Toxicological studies:

- Acute and sub acute toxicity studies were conducted on experimental rats.
- At the end of the toxicity studies the animals were sacrificed and the haematological parameters, liver function test, renal function test and histo pathology of vital organs like liver, lungs, spleen, and kidney were carried out.

- Their results show the Soothagathai Udaikkum Kasayam no signs of toxicity in female rats.

Pharmacological studies:

Soothagathai Udaikkum Kasayam in exhibited Ovulation induced activity in invitro method.

Statistical analysis:

- In both subjective and objective parameters were statistically significant.
- Out of 20 cases 70% had good result, 25% had fair result and 5% had poor result.

The statistical analysis of the results obtained from the clinical study was very much encouraging.

SUMMARY

The results obtained from the studies are summarized below:

- ♣ High incidence of cases was noted in the age group 21-25 years (50%) from upper middle socio economic group (50%) in their vatha kaalam (95%).
- ♣ 85% of patients are Non vegetarian with 55% of patients with normal physical built.
- ♣ Majority of patients belong to Neithal thinai (90%) and in Muthuvenil kaalam(40%).
- ♣ In observing the Mukkutram, Abana vayu and sathaga pitham were affected in all patients indicating derangement of vatham and pitham.
- ♣ In Ezhu udal thathukkal, Saaram and Suronitham are affected in all patients.
- ♣ In Envagai thervugal Naa, Niram, Vizhi and Malam were affected in majority of patients.
- ♣ Most of patients had pitha vatha naadi.
- ♣ In soothaga vaayu all patients had irregular menstruation,75% had Dysmenorrhoea, 65% had Oligomenorrhoea and 50% patients had constipation.
- ♣ The trial medicines having kaippu and Uppu taste neutralizes the deranged vayu and pitham based on oppurai.
- ♣ The ingredients of the trial drugs have Emmenagogue, Anti-vatha, Anti-pitha, Anti-Spasmodic, Anti-Tumour, Laxative,Carminative, hypolipidimic and Anti-diabetic action.
- ♣ The pre clinical studies show that the medicines were safe with no signs of Toxicity and significant Ovulation Induced activity.

- ♣ The clinical trial shows that there is significant improvement in the clinical manifestations of Soothaga vaayu.
- ♣ There is 75% relief from amenorrhoea, oligomenorrhoea, dysmenorrhoea constipation and 90% relief from irregular menstruation.
- ♣ 5% of patients conceived during the course of the treatment.
- ♣ The pre clinical and clinical data's were analysed statistically and observed that they are significant in relieving the symptoms with P value <0.05
- ♣ Also the trial drugs are affordable to all the patients.

CONCLUSION

- **SOOTHAGA VAAYU(PCOS)** is primarily due to the derangement of vatham and pitham.
- The trial medicine Soothagathai Udaikkum Kasayam and Maeni Lavana Chooranam predominating with kaippu and karppu taste respectively neutralizes the vatham and pitham.
- The trial medicines regularise the irregular menstruation, induces the ovulation and regulate hormonal imbalance. Therefore the trial medicines are beneficial in treating irregular menstruation and infertility due to anovulation.
- From the pre-clinical, pharmacological studies it is evident that the trial medicines were significant Ovulation Induced activity.
- Toxicity(Acute/Sub-Acute) study reliveded Soothagathai Udaikkum Kasayam had no signs of Toxicity
- No contra indications were reported during the course of the treatment.
- The trial medicines gave maximum relief from the symptoms of Soothaga vaayu.
- The trial drugs are easily preparable and affordable.
- Therefore I conclude that the Trial Medicines are best solution for SOOTHAGA VAAYU (PCOS).

ANNEXURE –I

CHEMICAL ANALYSIS OF TRIAL MEDICINES

Preparation of Sodium Carbonate extract: 2 gm of the sample is mixed 5 gm of Sodium carbonate and taken in a 100 ml beaker and 20 ml of distilled water is added. The solution is boiled for 10 minutes, cooled and then filtered. The filtrate is called sodium carbonate extract.

S.No.	Experiment	Drug1	
		Observation	**Inferance**
1	Test for Acid Radicals		
a.	**Test for Sulphate** 2 ml of the above prepared extract is taken in a test tube. To this add 2ml of 4% Ammonium oxalate solution.	Absence of White Precipitate	Absent
b.	2ml of extract is added with 2ml of dilute hydrochloric acid until the effervescence ceases off. Then 2ml barium chloride solution is added.	Absence of White Precipitate	Absent
2.	**Test for Chloride:** 2ml of extract is added with dilute nitric acid till the effervescence ceases. Then 2ml of silver nitrate solution is added.	white precipitate is obtained	Present

3.	**Test for Phosphate** 2ml of the extract is treated with 2 ml of Ammonium molybdate solution and 2ml of concentrated nitric acid.	Yellow Precipitate is obtained.	Present
4.	**Test for Carbonate:** 2ml of the extract is treated with 2ml of magnesium sulphate solution.	Absence of white precipitate	Absent
5.	**Test for Sulphide:** 1 gm of the substance is treated with 2ml of concentrated Hydrochloric acid	Absence of Rotten egg smelling	Absent
6.	**Test for Nitrate:** 1gm of the substance is heated with copper turnings and concentrated sulphuric acid and viewed the test tube vertically down.	Absence of reddish brown gas.	Absent
7. a.	**Test for Fluoride and oxalate** 2ml of the extract is added with 2ml of dilute acetic acid and 2ml of calcium chloride solution and heated.	Absence of white precipitate	Absent
b.	5 drops of clear solution is added with 2ml of dilute sulphuric acid and slightly warmed to this, 1 ml of dilute potassium permanganate solution is added.	Absence of KMNO4 solution discolourisation.	Absent

8.	**Test for Nitrite** 3 drops of the extract is placed on a filter paper. On that, 2 drops a Acetic Acid and 2 drops of Benzidine solution is placed.	Absence of yellowish red colour	Absent
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	Absent
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	Absent
11a	**Test for Copper** One pinch of substance is made into paste with concentrated Hydrochloric acid in a watch glass and introduced into the non luminous part of the flame.	Absence of Bluish green coloured flame.	Absent
b.	2ml of the extract is added with excess of Ammonia solution	Absence of deep blue	Absent
12.	**Test for Aluminium** To the 2 ml of extract. Sodium	Absence of White	Absent

	Hydroxide solution is added in drops to excess.	precipitate.	
13a	**Test for Iron** To the 2 ml of extract, 2 ml of Ammonium Thiocyanate solution is added.	Absence of Blood red colour	Absent
b.	To the 2 ml of extract, 2 ml of Ammonium Thiocyanate solution and 2 ml of concentrated Nitric Acid is added.	Absence of Blood red colour	Absent
14.	**Test for Zinc** To the 2 ml of extract Sodium Hydroxide solution is added in drops to excess.	Absence of White precipitate	Absent
15.	**Test for Calcium** 2 ml of the extract is added with 2 ml of 4% Ammonium Oxalate solution.	White precipitate obtained.	Present
16.	**Test for Magnesium** 2ml of extract, Sodium Hydroxide solution is added in drops to excess.	Absence of White precipitate.	Absent
17.	**Test for Ammonium** 2 ml of extract few ml of Nessler's Reagent and excess of Sodium Hydroxide solution are added.	Absence of Reddish brown precipitate	Absent
18.	**Test for Potassium** A pinch of substance is treated with 2 ml of Sodium Nitrite	Yellow precipitate	Present

	solution and then treated with 2 ml of Cobal Nitrate in 30% glacial Acetic acid.	is obtained	
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 colour flame	Absent
20.	**Test for Mercury** 2 ml of the extract is treatedwith 2 ml of Sodium Hydroxide solution.	Absence of yellow precipitate	Absent
21.	**Test for Arsenic** 2 ml of extract is treated with 2 ml of silver Nitrate solution	Absence of Yellow precipitate.	Absent
22.	**Test for Starch** 2ml of extract is treated with weak iodine solution	Absence of Bluecolour	Absent
23.	**Test of reducing Sugar** 5ml of Benedicts qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 10 drops of the extract and again boiled for 2 minutes. The colour changes are noted.	Green colour is obtained.	Present
24.	**Test of the alkaliods** 2ml of the extract is treated with 2ml of potassium lodide	Absence of red colour	absent

	solution		
25.	**Test for Proteins** 2ml of the solution and 2ml of 5% sodium hydroxide mixed and add 2 drops of copper sulphate solution.	Violet colour formed	Present

RESULTS:

The given sample contains.

Drug : Soothagathai Udaikkum Kasayam

Calcium, Chloride, potassium, reducing sugar and protein.

ANNEXURE –II
ACUTE AND SUB ACUTE TOXICITY STUDY ON

SOOTHAGATHAI UDAIKKUM KASAYAM IN RODENTS

Animals

Mice of either sex weighing 25-30g and rats weighing 110-140g were obtained from the animal house of Vels University. The animals were used with the approval of the Institute animal ethics committee and obtained from Vels University, Chennai. They were fed with a balanced standard pellet diet and maintained under standard laboratory conditions, providing 24-28^{0}C temperature, standard light cycle (12 h light, 12 h dark) and water ad libitum. Animals were kept in cages with raised floors of wide mesh to prevent coprophagy. Animal welfare guidelines were observed during the maintenance period and experimentation. The rats were randomly assigned to control and different treatment groups, six animals per group. The animals were acclimatized for one week under laboratory conditions.

ACUTE TOXICITY STUDY-OECD 425 GUIDELINES

Acute oral toxicity test for the Soothagathai Udaikkum Kasayam was carried out as per OECD Guidelines 425. As with other sequential test designs, care was taken to ensure that animals are available in the appropriate size and age range for the entire study. The test substance is administered in a single dose by gavage using a stomach tube or a suitable intubation cannula. The fasted body weight of each animal is determined and the dose is calculated according to the body weight. After the substance has been administered, food was withheld for a further 2 hours in mice. The animals were observed continuously for the first 4 h and then each hour for the next 24 h and at 6 hourly intervals for the following 48 h after administering of the test drug, to observe any death or changes in general

behaviour and other physiological activities. Single animals are dosed in sequence usually at 48 h intervals. However,

the time interval between dosing is determined by the onset, duration, and severity of toxic signs. Treatment of an animal at the next dose was delayed until one is confident of survival of the previously dosed animal.

Observation of toxicity signs: General behavior, respiratory pattern, cardiovascular signs, motor activities, reflexes, change in skin and fur, mortality and the body weight changes were monitored daily. The time of onset, intensity, and duration of these signs, if any, was recorded.

SUB-ACUTE TOXICITY

In a 28-days sub acute toxicity study, twenty four either sex rats were divided into four groups of 6 rats each. Group I that served as normal control was administered with distilled water (p.o.) while groups II, III and IV were administered daily with the Soothagathai Udaikkum Kasayam (p.o.) for 28 days at a dose of 2.5, 5.0 and 10.0 ml/kg respectively. The animals were then observed daily for gross behavioural changes and any other signs of subacute toxicity. The weight of each rat was recorded on day 0 and weekly throughout the course of the study, food and water consumption per rat was calculated. At the end of the 28 days they were fasted overnight, each animal was anaesthetized with diethylether, following which they were then dissected and blood samples were obtained by cardiac puncture into heparinised tubes. The blood sample collected from each rat was centrifuged with 3000 X g at 4^{o}C for 10 min to separate the serum and used for the biochemical assays.

Hematological and blood biochemical analyses:

At the end of the study, all animals were kept fasted for 16-18h and then anesthetized with anesthetic ether on the 28^{th} day. Blood samples for hematological and blood chemical analyses were taken from retro orbital vein. Heparinized blood samples were taken for determining complete blood count

(white blood cell count, differential white blood cell count, platelet count, red blood cell count, hematocrit, and hemoglobin) by semiautomated hematology analyzer. The serum from non-heparinized blood was carefully collected for blood chemistry and enzyme analysis (glucose, creatinine, total protein, albumin, total and direct bilirubins, serum glutamate-oxaloacetate transaminase (SGOT), serum glutamate pyruvate transaminase (SGPT), and alkaline phosphatase (ALP)) were automatically determined using autoanalyzer.

Necropsy:

All rats were sacrificed after the blood collection. The positions, shapes, sizes and colors of internal organs were evaluated. The Spleen, Testes, Pancrea, Lung, Liver, Brain, Heart, Stomach, Intestine, Bone, Ovary, and Kidney tissues were excised from all rats to visually detect gross lesions, and weighed to determine relative organs' weights and preserved in 10% neutral formalin for histopathological assessment. The tissues were embedded in paraffin, and then sectioned, stained with haematoxylin and eosin and were examined microscopically.

Statistical analysis

Values were represented as mean ± SEM. Data were analysed using one-way analysis of variance (ANOVA) test using GraphPad Instat-V3 software. $P<0.05$ were considered significant.

RESULTS

1) All the animals from control and all the treated dose groups up to 10ml/kg survived throughout the dosing period of 28 days.

2) No signs of major or significant intoxication were observed in animals from lower to higher dose groups during the dosing period of 28 days.

3) Animals from all the treated dose groups exhibited comparable body weight gain with that of controls throughout the dosing period of 28 days. 4) Food consumption of control and treated animals was found to be comparable throughout the dosing period of 28days.

5) Ophthalmoscopic examination, conducted prior to and at the end of dosing period on animals from control and all the treated dose groups did not reveal any abnormality.

6) Haematological analysis conducted at the end of the dosing period on day 28, revealed no significant abnormalities attributable to the treatment.

7) Biochemical analysis conducted at the end of the dosing period on day 28, revealed no remarkable abnormalities attributable to the treatment.

8) Functional observation tests conducted at termination revealed no abnormalities.

9) Urine analysis, conducted at the end of the dosing period in week 4, revealed no abnormality attributable to the treatment.

10) Organ weight data of animals sacrificed at the end of the dosing period was found to be comparable with that of respective controls.

11) Gross pathological examination did not reveal any abnormality.

12) Histopathological examination did not reveal any abnormality.

CONCLUSION

Based on these findings, no toxic effect was observed upto 10ml/kg of Soothagathai Udaikkum Kasayam via oral route over a period of 28 days. So, it can be concluded that the Soothagathai Udaikkum Kasayam can be prescribed for therapeutic use in human with the dosage recommendations of upto 10ml/kg. body weight p.o.

Table 1: Dose finding experiment and its behavioral Signs of Toxicity

No	Dose ml/kg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	**5**	+	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	**10**	+	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-

1. Alertness 2. Aggressiveness 3. Pile erection 4. Grooming 5. Gripping 6. Touch Response 7. Decreased Motor Activity 8. Tremors 9. Convulsions 10. Muscle Spasm 11. Catatonia 12. Muscle relaxant 13. Hypnosis 14. Analgesia 15.Lacrimation 16. Exophthalmos 17. Diarrhoea 18. Writhing 19. Respiration 20. Mortality

Table 2. Body weight of albino rats exposed to Soothagathai Udaikkum Kasayam for 28days.

Dose (ml/kg/day)	1) Days				
	1	**7**	**14**	**21**	**28**
Control	110.45±4.05	112.15±5.05	114.48±4.20	117.25±5.21	120.40±5.92
2.5	112.00±3.31	117.20±5.10	120.10±5.12	124.26±5.05	126.15±6.00
5	115.24±4.44	119.15±4.12	123.08±4.10	126.10±6.44	129.30±5.14
10	110.12±5.20	112.24±5.30	114.10±4.28	118.25±5.12	122.25±5.32

Values are mean of 6 animals ± S.E.M. $^{ns}P>0.05$ Vs control

Table 3. Food intake of albino rats exposed to Soothagathai Udaikkum Kasayam for 28days.

Dose (ml/kg/day)	Days (gms/rats)				
	1	7	14	21	28
Control	40.05±2.15	41.82±2.10	42.10±2.41	45.00±2.25	42.25±2.20
2.5	41.24±2.71	42.23±2.62	43.24±2.62	42.05±2.19	44.21±2.02
5	40.30±2.14	42.00±2.15	41.32±2.14	44.48±3.10	42.10±2.00
10	42.12±2.25	41.21±2.32	42.18±2.52	42.10±2.00	44.04±2.14

Values are mean of 6 animals ± S.E.M. $^{ns}P>0.05$ Vs control

Table 4. Water intake of male and female albino rats exposed to Soothagathai Udaikkum Kasayam for 28days.

Dose (ml/kg/day)	Days (ml/rat)				
	1	7	14	21	28
Control	52.10±2.28	51.00±3.13	52.28±3.18	50.72±3.16	50.20±3.12
2.5	50.12±2.41	50.42±3.01	45.23±4.00	48.15±3.44	40.55±2.48
5	44.70±2.18	40.12±3.82	40.87±3.32	44.14±2.19	44.10±3.24
10	50.13±2.25	52.46±2.05	50.26±3.18	45.28±3.00	45.20±3.50

Values are mean of 6 animals ± S.E.M. $^{ns}P>0.05$ Vs control

Table 5. Hematological parameters after 28days treatment with Soothagathai Udaikkum Kasayam in rats.

Parameter	Control	2.5ml/kg	5ml/kg	10ml/kg
Red blood cell (mm^3)	8.00±0.72	8.92±0.68	8.12±0.55	8.00±0.62
HB (%)	15.12±0.42	15.10±0.49	15.52±0.42	15.02±0.41
Leukocyte ($x10^6$/mL)	10214±125.11	10288±110.24	10245±134.12	10264±119.42
Platelets/ul	1242±30.14	1184±31.24	1132±30.22	1195±32.14
MCV (gl)	54.44±5.12	53.88±4.72	55.00±4.27	54.12±4.80
Neutrophil	5.46±2.81	5.42±3.27	5.18±3.96	5.14±3.47
Lymphocyte	92.02±2.90	91.48±2.12	90.22±2.62	92.32±1.88
Monocyte	2.42±0.23	2.20±0.28	2.28±0.20	2.22±0.24
Eosinophil	1.00±0.00	1.00±0.22	1.00±0.11	1.00±0.11
Basophil	0	0	0	0
ESR(mm)	1±00	1±00	1±00	1±00
PCV	44.20±2.62	45.24±2.18	45.10±2.02	45.14±2.22

Values are mean of 6 animals ± S.E.M. $^{ns}P>0.05$ Vs control

Table 6. Effect of treatment with Soothagathai Udaikkum Kasayam biochemical parameters.

Dose (ml/kg)	Control	2.5ml/kg	5ml/kg	10ml/kg
Total Bilirubin (mg/dL)	0.210±0.05	0.214±0.06	0.215±0.05	0.215±0.04
Bilirubin direct (mg/dL)	0.1±0.04	0.1±0.04	0.1±0.04	0.1±0.05
Bilirubin indirect(mg/dL)	0.1±00	0.1±00	0.1±00	0.1±00
ALP (U/L)	380.42±10.10	378.22±10.22	376.82±10.04	390.12±11.21
SGOT (U/L)	158.20±5.14	156.72±5.82	155.43±5.20	154.00±5.45
SGPT(U/L)	45.82±2.30	44.58±2.28	45.00±2.18	46.02±2.92
Total Protein(g/dl)	8.25±0.30	8.12±0.32	8.50±0.37	8.10±0.34
Albumin(g/dl)	3.22±0.25	3.31±0.24	3.14±0.30	3.22±0.42
Globulin(g/dl)	5.02±0.18	4.18±0.26*	4.18±0.21*	4.16±0.23*

Values are mean of 6 animals ± S.E.M. *P<0.05; Vs Control

Table-7 RFT

Dose (ml/kg)	Control	2.5ml/kg	5ml/kg	10ml/kg
Urea(mg/dL)	55.22±2.60	55.30±2.56	55.42±2.42	55.48±2.36
Creatinine (mg/dL)	0.77±0.05	0.76±0.06	0.76±0.05	0.77±0.05
Uric acid (mg/dL)	1.5±0.10	1.6±0.12	1.6±0.10	1.6±0.10
Na m.mol	140.70±5.42	141.56±5.11	139.12±5.22	140.12±5.02
K m.mol	20.22±2.78	19.87±2.08	20.40±2.36	20.10±2.42
Cl m.mol	101.00±4.22	101.12±5.12	100.18±4.82	101.00±5.10

i)

ii) *Table-8. Lipid Profile*

Dose (ml/kg)	Control	2.5ml/kg	5ml/kg	10ml/kg
Total cholestrol(mg/dL)	41.60±2.72	41.10±2.42	42.42±3.00	42.52±3.04
HDL(mg/dL)	14.22±2.42	14.27±1.47	13.44±2.45	13.24±2.43
LDL(mg/dL)	42.04±3.35	42.00±2.21	42.38±2.08	43.22±2.32
VLDL(mg/dl)	15.30±2.25	15.25±2.30	15.02±2.64	15.16±2.20
Triglycerides (mg/dl)	86.20±3.02	85.16±2.22	86.23±3.24	88.44±2.78
TC/HDL ratio (g/dl)	3.86±0.34	3.82±0.38	3.72±0.32	3.66±0.30
Blood glucose(mg/dl)	126.13±4.78	126.12±3.25	126.10±4.00	124.45±2.24

Values are mean of 6 animals ± S.E.M. ^{ns}P>0.05 Vs control

iii) *Table-9 Urine Analysis*

b) Parameters	Control	2.5ml/kg	5ml/kg	10ml/kg
Colour	Yellow	Yellow	Yellow	Yellow
Transparency	Clear	Slightly turbid	Slightly cloudy	Slightly turbid
Specific gravity	1.010	1.010	1.010	1.010
PH	>7.2	>8.0	>8.0	>9.0
Protein	Nil	3+	3+	3+
Glucose	Nil	Nil	Nil	Nil
Bilirubin	-ve	-ve	-ve	-ve
Ketones	-ve	+ve	+ve	+ve
Blood	Absent	Absent	Absent	Absent

i. Urobilinogen	Normal	Abnormal	Abnormal	Abnormal
Pus cells	0-cells/HPF	1-cell/HPF	2-cells/HPF	1-cell/HPF
RBCs	Nil	Nil	0-1cells/HPF	Nil
Epithelial cells	Nil	1-cell/HPF	Nil	1-cell/HPF
Crystals	Nil	Nil	Nil	Nil
Casts	Nil	Nil	Nil	Nil

Table 10. Effect of oral administration of Soothagathai Udaikkum Kasayam on organ weight

Dose (ml/kg)	**Control**	**2.5ml/kg**	**5ml/kg**	**10ml/kg**
Liver (g)	5.28±0.16	5.30±0.15	4.98±0.12	5.10±0.14
Heart (g)	0.62±0.04	0.62±0.04	0.61±0.04	0.60±0.04
Lung (g)	1.45±0.06	1.44±0.19**	1.46±0.24**	1.42±0.15**
Spleen (g)	0.66±0.05	0.66±0.04	0.65±0.04	0.65±0.05
Ovary (g)	1.68±0.12	1.80±0.15	1.88±0.11*	1.95±0.10*
Testes (g)	1.48±0.10	1.45±0.12	1.46±0.14	1.42±0.15
Brain (g)	1.54±0.15	1.52±0.13	1.52±0.12	1.50±0.14
Kidney (g)	0.72±0.04	0.71±0.04	0.70±0.05	0.71±0.05
Stomach (g)	1.35±0.10	1.35±0.11	1.38±0.12	1.34±0.10

Values are mean of 6 animals ± S.E.M. *P<0.05; **P<0.01. Vs Control

ANNEXURE –III
EFFECT OF SOOTHAGATHAI UDAIKKUM KASAYAM ON OVULATION IN RATS

INTRODUCTION

Infertility is one of the main problems seen in young couples. Due to cost and social problems, some couples seek traditional methods to treat their infertility before meeting with specialists. Since folk medicine plays an important role in individual and community primary health care, the use of herbal products are increasing in many countries. Polycystic ovary syndrome is characterized by anovulation and hyperandrogenism. Patients with this syndrome may complain of abnormal bleeding, infertility, obesity, excess hair growth, hair loss and acne.

In addition to the clinical and hormonal changes associated with this condition, vaginal ultrasound shows enlarged ovaries with an increased number of small (6-10mm) follicles around the periphery. While ultrasound reveals that polycystic appearing ovaries are commonly seen in up to 20% of women in the reproductive age range, Poly Cystic Ovary Syndrome is a estimated to affect about half as many or approximately 6-10% of women. The condition appears to have a genetic component and those effected often have both male and female relatives with adult-onset diabetes, obesity, elevated blood triglycerides, high blood pressure and female relatives with infertility, hirsutism and menstrual problems.

Hyperinsulin & PCOS

One of the major biochemical features of polycystic ovary syndrome is insulin resistance accompanied by compensatory hyperinsulinemia. There is increasing data that hyperinsulinemia produces the hyperandrogenism of polycystic ovary syndrome by increasing ovarian androgen production, particularly testosterone and by decreasing the serum sex hormone binding globulin concentration. The high levels of androgenic hormones interfere with the pituitary ovarian axis, leading to increased LH levels, anovulation, amenorrhea, recurrent pregnancy loss, and infertility. Hyperinsulinemia has also been associated high blood pressure and increased clot formation and appears to be a major risk factor for the development of heart disease, stroke and type II diabetes.

Diagnosis

Physicians consider diagnosis after making sure that do not have other conditions such as Cushing's disease, thyroid problems, congenital adrenal hyperplasia or increased prolactin production by the pituitary gland. TSH, 17-hydroxyprogesterone, prolactin and a dexamethasone suppression test may be advisable. Irregular or absent menstrual periods, clues from the physical exam will be considered. Height and weight is noted along with any increase facial or body hair or loss of scalp hair, acne and acanthosis nigricans. Elevated androgen levels, testosterone help make the diagnosis.

Newer Methods Of Treatment

Traditional treatments have been difficult, expensive and have limited success when used alone. Infertility treatments include weight loss diets, ovulation medications (*clomiphene, letrozole, Follistim, Gonal-F*), ovarian drilling surgery and IVF. Other symptoms have been managed by anti-androgen medication. Ovarian drilling can be performed at the time of laparoscopy.

A laser fibre or electrosurgical needle is used to puncture the ovary 10-12 times. This treatment results in a dramatic lowering of male hormones within days. Studies have shown that up to 80% will benefit from such treatment. Many who failed to ovulate with letrozole or metformin therapy will respond when rechallenged with these medications after ovarian drilling. Interestingly, women in these studies who are smokers, rarely responded to the drilling procedure. Side effects are rare, but may result in adhesion formation or ovarian failure if the procedure is performed by an inexperienced surgeon.

For women in the reproductive age range, polycystic ovary syndrome is a serious, common cause of infertility, because of the endocrine abnormalities which accompany elevated insulin levels. There is increasing evidence that this endocrine abnormality can be reversed by treatment with widely available standard medications which are leading medicines used in this country for the treatment of adult onset diabetes, metformin 500 or 850 mg three times per day or

1000mg twice daily with meals, pioglitazone 15-30 mg once a day, rosiglitazone 4-8 mg once daily or a combination of these medications.

These medications have been shown to reverse the endocrine abnormalities seen with polycystic ovary syndrome within two or three months. They can result in decreased hair loss, diminished facial and body hair growth, normalization of elevated blood pressure, regulation or menses, weight loss, reduction in cardiovascular risk factors, normal fertility, and a reduced risk of miscarriage. We have seen pregnancies result in less than two months in woman who conceived in their very first ovulatory menstrual cycle. By six months over 90% of women treated with insulin-lowering agents, diet and exercise will resume regular menses.

Miscarriage & PCOS

Women with PCOS who conceive either spontaneously or after ovulation induction have a much higher risk of miscarriage. Hypersecretion of LH was thought to cause chromosomally abnormal eggs leading to an increased risk of miscarriage. Hyperinsulinemia may be a contributing factor in the higher rate of miscarriage. Elevated levels of insulin interfere with the normal balance between factors promoting blood clotting and those promoting breakdown of the clots. Increases in plasminogen activator inhibitor activity associated with high insulin levels may result in increased blood clotting at the interface between the uterine lining and the placenta. This could lead to placental insufficiency and miscarriage.

Obesity, especially central adiposity, is present in around 40% of women with PCOS and a greater degree of obesity is associated with a more severe form

of PCOS. There is also a higher incidence of metabolic syndrome amongst women with PCOS than in non-PCOS overweight and obese women. Weight loss in the overweight/obese woman is therefore fundamental to treating the condition.

PCOS TREATMENT

1. Medications to Regulate the Menstrual Cycle

The most common form of PCOS treatment is the contraceptive pill or birth control pill; Even if not sexually active, birth control pills may be prescribed by health care provider because they contain the hormones that body needs to treat PCOS. These birth control pills help in:

- Correct the hormonal imbalance
- Regulate menstrual periods
- Lower the risk of endometrial cancer (which is slightly higher in young women who don't ovulate regularly)
- Prevent an unplanned pregnancy if sexually active
- They may also improve androgen-related acne problems, male-type hair growth, and male-pattern hair loss.

2. Medications to Reduce Insulin Resistance

Metformin is only FDA-approved treatment for insulin resistance and diabetes. Metformin is a useful medication in PCOS patients as it helps to improve fertility, reduce miscarriages and gestational diabetes, and reduce long-term health problems. The use of metformin in pregnancy remains controversial although the risk appears to be small.

3. Infertility Medications

In PCOD patients suffering from Infertility, the main aim of using medications is to make sure there is ovulation happening. Clomid or Letroze are the first line of medication used in treatment of infertility in PCOD patients which help in ovulation. Patients are educated about fertile period and with the help of ovulation prediction kits they are advised to have intercourse. This might not be helpful in PCOD patients with persistent high LH levels.

Because of the connection between PCOS and insulin resistance, medications that are normally used to treat diabetes, namely Metformin, may be used to increase insulin sensitivity. By increasing the body's response to insulin, it is thought that the ovary may not make as many androgens, which increases the likelihood that ovulation will occur. Metformin may also reduce the levels of circulating androgens, even if not trying to conceive. This will help regulate menstrual cycle and reduce the distressing symptoms that may be experiencing. Some women may need to take both Clomid and Metformin in order to ovulate.

In cases where oral medication is a failure, hormonal injections like Gonadotrophins are used. Each month, Gonadotrophins namely Follicle Stimulating Hormone (FSH) is secreted by the pituitary which makes an egg / follicle grow. Hence, Gonadotrophin injections directly increase the amount of FSH circulating in the body, promoting the growth and development of a mature egg. There is a risk of ovarian hyperstimulation when PCOD patients receive

gonadotrophin injections; therefore it's mandatory to monitor progress through ultrasound and blood tests.

Surgical Role In PCOD Patients

Surgery has got a minimal role in PCOD patients. However, therapeutic ovarian drilling can be performed where in the cysts of the ovary are punctures under laparoscopic guidance. This treatment results in a dramatic lowering of male hormones within days. Studies have shown that up to 80% will benefit from such treatment. Women who failed to ovulate with letrozole or metformin therapy will respond when rechallenged with these medications after ovarian drilling. Interestingly, women in these studies who are smokers rarely responded to the drilling procedure. Pelvic adhesions or ovarian failure are few of the side effects that can be rarely anticipated after laparoscopic ovarian drilling.

Role Of Assisted Reproduction In Pcod Patients

When medical and surgical line of treatments has failed assisted reproductive techniques like IUI or In Vitro Fertilization are the next options to be considered. Success (pregnancy) rates with IVF in PCOS patients are generally excellent, although a higher risk of Ovarian Hyperstimulation exists, especially in IVF patients who become pregnant.

MATERIALS AND METHODS

Procurement of Experimental Animal

Mice of either sex of wistar strain weighing 28-32gms and Female albino rats of wistar strain weighing about 95–135 gm were used. Pregnant animals were excluded. Animals were fed on conventional diets and water *ad libitum* and they were maintained under standard conditions of humidity, temperature (20- 24°C) and light (12 h light: 12 h dark cycle). Animals were kept in polycarbonate cages with laced steel roofs. The rats were acclimatized for 15 days to the laboratory conditions prior to experiments and were maintained on the balanced diet, and water was provided *ad libtum*. The study was conducted at the Vel's University, Chennai after obtaining Institutional Animals Ethical Committee clearance bearing the number XIII/VELS/PCOL/03/2000/CPCSEA/IAEC/08.08.2012.

Preparation of stock solution and drugs

For ovulatory studies, Soothagathai Udaikkum Kasayam was freshly prepared, concentrated and dilutions were prepared at different concentrations and administered orally. All the chemicals and standard drugs were procured from authorized suppliers.

Acute toxicity study:

Acute oral toxicity test was carried out as per OECD Guidelines 425 up and down method. Animals are observed individually after dosing at least once during the first 30 minutes, periodically during the first 24 hours, with special attention

given during the first 4 h, and daily thereafter, for a total of 14 days. Initially starting at a dose of 5ml/kg of Soothagathai Udaikkum Kasayam was given. Body weight and behavioral changes were noted. Animals are observed individually and were systematically recorded.

Preparation of Vaginal Smear

For taking vaginal smear, the animals were held with ventral side up. A drop of 0.9% w/v normal saline was inserted carefully in to the vagina with a dropper, without damaging the vagina to avoid false positive smears. The drop of normal saline was aspirated and introduced twice, before withdrawing from vagina the withdrawn fluid was transferred on to a microscopic glass slide. A cover slip was placed carefully on the smear avoiding the entry of air bubbles. The slide was then observed under an optical microscope.

Ovulation stimulation activity

In the present study, the study was conducted on twenty four mature virgin female Wistar Albino rats weighing of around (88- 130 gm) of 2 month old were obtained from the animal house at Vel's University, Chennai. Before starting drug treatment, the reproductive cycles of the rats were synchronized by the following method. 100μg estradiol dissolved in 2 ml olive oil was injected subcutaneously. All rats after a 24 hr period, received intramuscular injections of 50 μg progesterone dissolved in olive oil. After few hours, Vaginal smears were obtained by vaginal lavage to monitor ovulation and oestrous cycle. Vaginal smears were

prepared by washing vaginal opening with 0.9% w/v of sodium chloride with a glass dropper and placed in a clean glass slide and viewed under light microscope at 40X magnification. Examination of vaginal smears showed that all the animals were in the estrous stage. All the animals were weighed daily after drug administration for 10 days. The suitable sensitive rats were divided into four groups of six each as follows:

Group I Normal Control animals given only 2ml/kg of CMC solution.

Group II animals were administered 5ml/kg of Soothagathai Udaikkum Kasayam for 10days,

Group III rats were received 10mg/kg of Soothagathai Udaikkum Kasayam for 10 days

Group IV received clomiphene 10mg/kg and served as standard. All the drugs were given orally.

2ml of blood was collected by retro orbital puncture. Blood samples were centrifuged for 15 minutes at 4000 rpm and the separated serum samples were frozen at -20°C and kept for later estimation of LH, FSH and estradiol by ELISA method. To study the cycle pattern, animal showing regularity in three normal cycles were separated and chosen for further studies. Animals were sacrificed 24hrs after the last dose. Ovary and uterus were dissected out from adhering tissues adhering moisture was removed by pressing gently between two layers of filter papers and were immediately weighed on single pan electronic balance. For biochemical studies the blood was collected by retro orbital puncture. The

collected blood was used for estimating serum FSH, LH and estrogen level. At the end of experiment, the animals were sacrificed using ether anesthesia and the uteri were removed and weight was recorded. The oviduct was dissected out from the rats, suspended in normal saline and placed on a microscopic slide with a cover slip to count the number of ova analysis.

(b) Classification of ovarian follicles for analysis

Follicles were classified as primary, small preantral, large preantral, small antral and graffian according to the morphological classification scheme. Follicles were classified as atretic if they displayed two or more of the following criteria within a single cross-section: more than two pyknotic nuclei in the granulosa cell layer, granulosa cells and cell debris within the antral cavity, fragmented oocyte and granulosa cells pulling away from the basement membrane.

Histological analysis

At the end of the treatment, the ovary was removed and placed in formalin fixative for 20-24 hours. Fixed tissue samples were placed in ascending concentrations of alcohol and embedded in paraffin. Slices of tissue, 5-7 μm thick, were prepared and stained with hematoxylin and eosin, and then monitored and evaluated with a light microscope. To study folliculogenesis all tissue blocks were serially sliced. Follicle identification was based on the detection of a nucleus. The numbers of follicles (primordial, primary, etc.) were counted. Follicle recognition criterion on the slides was based on the type of epithelial cells surrounding them.

For example, primordial follicles have squamulose cells whereas primary follicles are surrounded by cuboidal cells. The numbers of follicles per slide were randomly counted.

Statistical analysis

The data were statistically analyzed and expressed as mean ± SEM. Statistical analysis of the variance between control and experimental values was done using Student's t test

RESULTS AND DISCUSSION

Results of acute toxicity study revealed that the Soothagathai Udaikkum Kasayam nontoxic effect upto 10ml/kg orally. Hence the therapeutic dose was selected as 5 and 10ml/kg in rats as higher and lower dose for the further pharmacological investigations. In this study, the total number of follicles were 18.2 ± 3.42 in test group-I (5ml/kg Soothagathai Udaikkum Kasayam), 21.5 ± 3.88 in test group-II (10ml/kg Soothagathai Udaikkum Kasayam), 28.21 ± 5.56 in standard group and 15.32 ± 3.4 in normal group (2ml/kg Saline). There were significant increase in ova population in the experimental groups compared to the control groups ($p<0.01$). There were no significant differences between the Soothagathai Udaikkum Kasayam concentrations. Similarly a significant increase was observed in the number of graffian, antral and multilaminar follicles ($p<0.05$) in the Soothagathai Udaikkum Kasayam groups, but there was no significant difference between the 5 and 10ml/kg doses of Soothagathai Udaikkum Kasayam.

There was no significant difference in the number of unilaminar primary follicles between the test groups and control groups.

Estrogens are steroid hormones which, together with other hormones, control the ovulatory cycle in the female mammal. Estrogen acts in a feedback mechanism, influencing the production of follicle stimulating hormones (FSH) from the pituitary gland. It is known that the FSH in turn promotes the development of the immature ovarian follicles, which increases the production of estrogen from the ovary. There is no scientific report on the effect of Soothagathai Udaikkum Kasayam on the ovary. In female rats, oral administration of Soothagathai Udaikkum Kasayam for ten days increased the weight of the mammary glands, oviduct, endometrium, myometrium, cervix and vagina. In the present study, the Soothagathai Udaikkum Kasayam has significantly induced an increase in the numbers of graffian, antral and multilaminar primary follicles and improved folliculogenesis in rat ovaries.

Histological sections of control and experimental groups showed increased numbers of growing follicles in the Soothagathai Udaikkum Kasayam groups. Present findings indicate that the administration of the Soothagathai Udaikkum Kasayam showed significant decrease in the estrogen level and induce stimulatory effect on FSH and LH resulting in initiate to ovulate. This can result from hypersecretion of gonadotropic hormones, in which case the intensity of the hormonal stimuli is sufficient to cause ovulation, or it can result from normal ovaries that will allow ovulation.

CONCLUSION

The present study elucidated that the Soothagathai Udaikkum Kasayam has a folliculogenesis effect in female rats consistent with its use in traditional medicine as a fertility enhancing agent. These actions may be attributed to the alterations in hormonal levels.

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Table 1: Effect of Soothagathai Udaikkum Kasayam on uterus, ovary and body weight of female rats

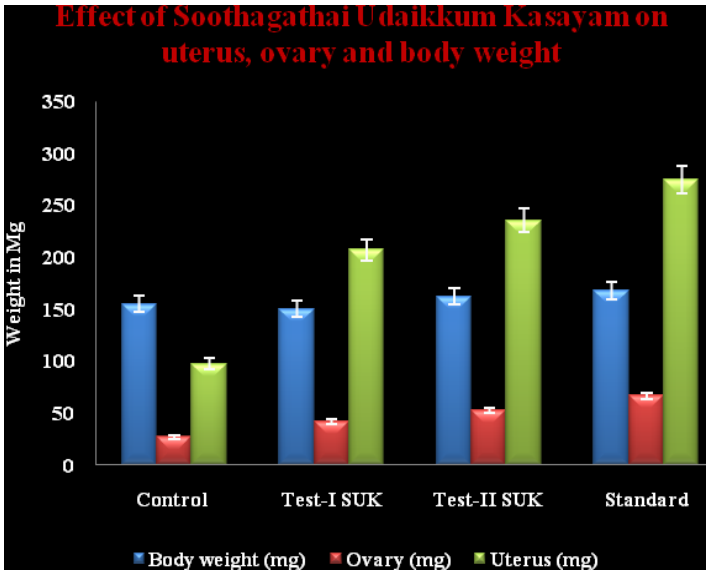
Treatment	Dose mg/kg	Body weight (mg)	Ovary (mg)	Uterus (mg)
Control Saline	2ml/kg	154.7 ± 8.9	26.8 ± 0.14	97.5 ± 4.2
Test-I SUK	5ml/kg	150.2 ± 6.5	41.7 ±5.32	206.9 ± 5.0**
Test-II SUK	10 ml/kg	162.1 ±7.2	52.2 ± 9.41*	235.4 ± 6.4**
Clomiphene	10mg/kg	167.4 ± 6.4	66.5 ± 7.18**	274.6 ±9.2**

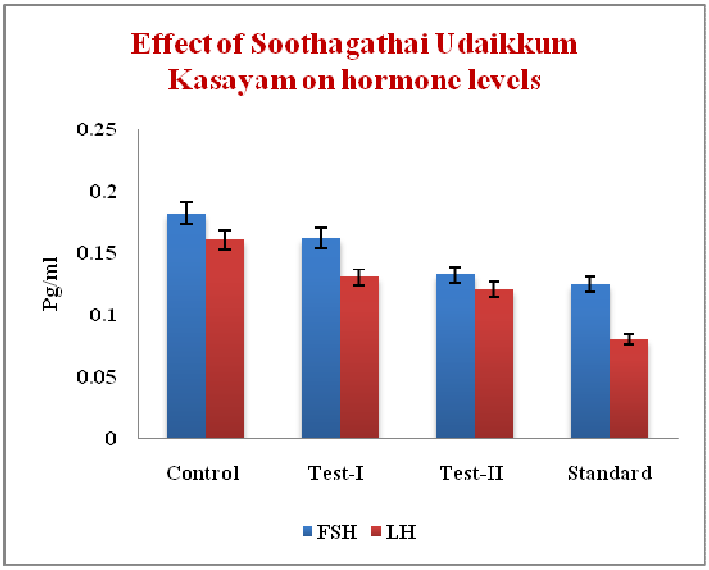
Values were expressed as Mean±SEM; *P<0.05; **P<0.01. N=6

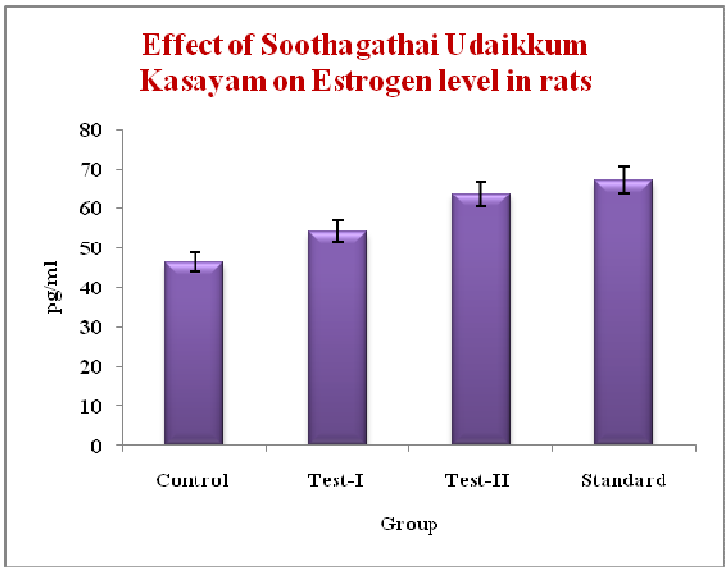
Table 2: Effect of Soothagathai Udaikkum Kasayam on hormone levels in female rats

Treatment	Dose mg/kg	FSH (Pg/ml)	LH (Pg/ml)	Estrogen (Pg/ml)
Control Saline	2ml/kg	0.182 ± 0.004	0.16 ± 0.05	46.44 ±1.45
Test-I SUK	5ml/kg	0.161 ± 0.004*	0.13 ±0.09	54.38 ± 1.57*
Test-II SUK	10 ml/kg	0.132 ±0.005**	0.10 ± 0.08	63.56 ± 1.77**
Clomiphene	10mg/kg	0.124 ± 0.007**	0.08 ± 0.03	67.27 ± 2.82**

Values were expressed as Mean±SEM; *P<0.05; **P<0.01. N=6


Effect of Soothagathai Udaikkum Kasayam on uterus, ovary and body weight
Weight in Mg
350
300
250
200
150
100
50
0
Control
Test-I SUK
Test-II SUK
Standard
Body weight (mg)
Ovary (mg)
Uterus (mg)


Effect of Soothagathai Udaikkum Kasayam on hormone levels
Pg/ml
0.25
0.2
0.15
0.1
0.05
0
Control
Test-I
Test-II
Standard
FSH
LH


Effect of Soothagathai Udaikkum Kasayam on Estrogen level in rats
80
70
60
50
40
30
20
10
0
pg/ml
Control
Test-I
Test-II
Standard
Group

ANNEXURE –IV
Bio Statistical Analysis

Treatment for Soothaga Vaayu

The most popular statistical tool, namely, Fisher's Exact Test analysis has been employed to analyses the effectiveness with the help of a hypothesis.

Hypothesis

There is no reducing symptoms among the patients for the treatment of Soothaga Vaayu.

Symptoms	**Number of Cases**	
	Reduced	**Not Reduced**
Primary	14 87.5%	2 12.5%
Secondary	1 25%	3 75%

Note:

Primary: Irregular Menstruation, amenorrhoea, dysmenorrhoea, oligomenorrhoea

Secondary: Constipation, Infertility.

Software: spss17 version

Number of cases: 20

Test: Fisher's Exact test

Confidence Interval: 95%

Result:

P Value (2 tailed): p<0.05

Inference:

Since the p value is significant (<o.o5), The hypothesis is not accepted. So there is significant reduced symptoms among the patients for the treatment of Soothaga Vaayu. Hence it is concluded that the treatment was effective and significant.

ANNEXURE –V

நோயாளியின் ஒப்புதல் படிவம்

திரு. _____ஆகிய நான் _____வயது,

(_____

_____வ

சிக்கும் இடம்.) என் சுய நினைவுடன் எழுதிக் கொடுக்கும் ஒப்புதல் படிவம்.

நான் **சூதகவாயு** என்னும் நோயால் பாதிக்கப்பட்டு சென்னை,அரசு சித்த மருத்துவ கல்லூரியில் (இடம்: அறிஞர் அண்ணா இந்திய மருத்துவமனை, அரும்பாக்கம், சென்னை-106.) நடத்தப்படும் சித்த மருத்துவ ஆராய்ச்சி மூலம் சிகிச்சை பெற என் சுய நினைவுடன் முழுசம்மதத்தையும் தெரிவித்துக்கொள்கிறேன்.

இந்த ஆராய்ச்சியின் நோக்கம், மருத்துவம் செய்யும் முறை, தொடர்கண்காணிப்பு மற்றும் என் உடல் நலம் குறித்த மருத்துவ பரிசோதனைகளைப் பற்றிய விரிவான விளக்கம் எனக்கு மருத்துவம் செய்யும் மருத்துவர் மூலம் தெளிவுபடுத்தப்பட்டுள்ளது. இந்த ஆராய்ச்சியில் பங்குகொள்ளும் என் சம்மதத்திற்கு யாருடைய நிர்பந்தமும் காரணமில்லைஎன்பதை தெரிவித்துக்கொள்கிறேன்.

இப்படிக்கு,

பெயர் :

முகவரி :

நாள் :

CONSENT FORM

I certify that I have disclosed all the details about the study in the terms readily understood by the patient.

DATE : SIGNATURE

NAME

CONSENT BY THE PATIENT

I have been informed to my satisfaction by the attending physician for the purpose of the clinical trial and the nature of the drug treatment and follow up including the lab investigation to be performed to monitor and safeguard my body functions.

I am aware of my right to opt out of the trial at any time during

the course of the trial without having to give reasons for doing so.

I ,exercising my free power of choice, here by give my consent to be included as a subject in the clinical trial of ***soothagathai udaikkum kasayam*** and ***Maeni Lavana Chooranam*** for the treatment of

SOOTHAGA VAAYU.

DATE: SIGNATURE

NAME

ANNEXURE –VI
CASE SHEET
POST GRADUATE DEPARTMENT - BRANCH-I

(POTHU) MARUTHUVAM

GOVT. SIDDHA MEDICAL COLLEGE & ANNA HOSPITAL, CHENNAI-106.

CASE SHEET PROFORMA FOR "SOOTHAGA VAAYU"

WARD NO.	:	NATIONALITY	:
O.P. NO	:	RELIGION	:
BED NO	:	OCCUPATION	:
NAME	:	INCOME	:
AGE	:	D.O.A	:
SEX	:	D.OD	:
PERMANENT ADDRESS	:		
		DIAGNOSIS	:

TEMPORARY ADDRESS:
Govt. Siddha Medical College &
Anna Hospital, Chennai – 106.

MEDICAL OFFICER :

COMPLAINTS AND DURATION:

HISTORY OF PRESENT ILLNESS:

HISTORY OF PAST ILLNESS:

FAMILY HISTORY:

PERSONAL HISTORY & HABITS:

A. Food	:	Veg	Non veg
B. Marital status	:	single	married
C. Duration of married life	:		
D. Gravid	:		
E. Para	:		
F. Live	:		
G. Abortion	:		

MENTRUAL HISTORY:

A. Regularly of cycle	:	Regular		Irregular	
B. Length of cycle [Days]	:				
C. Duration of flow[Days]	:				
D. Level of flow	:	low	moderate	heavy	
E. Abdominal pain	:	nil	mild	moderate	severe
F. LMP	:				

GENERAL EXAMINATION:

1. Physical build	:	lean	normal	obese
2. Height	:			
3. Body weight	:			
4. Temperature	:			
5. Pulse rate	:			
6. Heart rate	:			
7. Respiratory rate	:			
8. Blood pressure	:			
9. Pallor	:			
10. Cyanosis	:	present	absent	
11. Jaundice	:	present	absent	
12. Clubbing	:	present	absent	
13. Pedal oedema	:	present	absent	
14. Lymphadenopathy	:	present	absent	

EXAMINATION OF VITAL ORGANS

1.Heart :

2.Lungs :

3.Abdomen and pelvis :

Inspection:

Palpation:

Tenderness	Present	absent
Mass	Present	absent

SIDDHA ASPECTS

Yaakai (udal nilai)	Mukkunam
1. Vatham	1. Sathuva gunam
2. Pitham	2. Raasatha gunam
3. Kabham	3. Thamo gunam
4.Kalappu	

PARUVA KAALAM (SEASONS)		NILAM (PLACES)
1.	Kaar Kaalam (Aavani-Puratasi) Aug-sept.	1.Kurinchi (Hills Areas)
2.	Koothir Kaalam (Iypasi-Karthigai) Oct-Nov.	2.Mullai (Forest Areas)
3.	Munpani Kaalam (Maargazhi-Thai) Dec-Jan.	3.Marudham (Fertile Areas)
4.	Elavenil Kaalam (Chithirai-Vaikasi) Apr-May	4.Neithal (Sea Areas)
5.	Mudhuvenil Kaalam (Aani-Aadi) Jun-Jul	5.Paalai (Desert Areas)

AIYMPORIGAL/PULANGAL KANMAVIDAYAM		KANMENTHIRIYAM /
1.	Mei (Sensation)	1.Kai [Koduthal]
2.	Vaai (Taste)	2.Kaal [Nadathal]
3.	Kann (Vision)	3.Vaai [Pesal]
4.	Mooku(Smell)	4.Eruvai [Malam Kazhithal]
5.	Sevi (Hearing)	5.Karuvai [Aananthithal]

UYIR THATHUKKAL:

VATHAM:

1. Pranan
2. Abanan
3. Viyanan
4. Udhanan
5. Samanan
6. Naagan
7. Koorman
8. Kirukaran
9. Devadathan
10. Dhananjeyan

PITHAM:

1. Anal Pitham
2. Ranjaga Pitham
3. Saadhaga Pitham
4. Aalosaga Pitham
5. Prasaga Pitham

KAPHAM:

1. Avalambagam
2. Kledagam
3. Podhagam
4. Tharpagam
5. Santhigam

UDAL THATHUKKAL:

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

ENVAGAI THERVU:

1. Naa -
2. Niram -
3. Mozhi -
4. Vizhi -
5. Sparisam -
6. Malam
    a. Niram
    b.Nurai
    c.Erugal
    d.Elagal
7. Moothiram
    1) Neerkuri
        a. Niram
        b.Edai

c.Manam
d.Nurai
e. Enjal

2)Neikuri

8.Naadi

SIGNS AND SYMPTOMS

PRESENT **ABSENT**

1. Irregular menstruation -
2. Oligomenorrhoea -
3. Amenorrhoea -
4. Dysmenorrhoea -
5. Constipation -
6. Infertility -

Assessment:

Clinical features	**Before Treatment**	**After Treatment**			
		I	**II**	**III**	**IV**
Regularly of cycle					
Length of cycle					
Duration of flow					
Level of flow					
Abdominal pain and low back pain					
Constipation					

LABORTORY INVESTIGATIONS:

	BT	**AT**
1.Blood		
Tc		
Dc		
ESR		
Hb		
Bl-sugar (F)		
Sr.Cholesterol		
TSH		
2.Urine - alb		
Sug		
Dep		
3.USG – PELVIS		

TRAIL DRUGS:

Drug 1:

Dose:

Drug 2:

Dose:

Adjuvent:

Diet:

Duration of treatment:

Pathiam (Do’s and Don’ts):

Prognosis at the end of the treatment

Medical Officer Signature: **H.O.D**

BIBILIOGRAPHY

SIDDHA BOOKS:

1. AATHMARATCHAMIRTHAM ENUM VAITHIYASARA SANGIRAGAM
2. SIGICHARATHNA DEEPAM
3. KANNUSAMY PARAMBARAI VAITHIYAM
4. ARIVAIYAR CINTHAMANI
5. AGASTHIYAR GUNAVAGADA VAITHIYASARAM
6. PATHINEN SIDDHARGAL NAADI SASTHIRAM
7. NOI NAADAL NOI MUDHAL NAADAL – PART 1
8. SIDDHA MARUTHUVANGA SURUKKAM
9. THOTRAKIRAMA ARAICHIUM SIDDHA MARUTHUVA VARALARUM
10. THERAIYAR NEERKURI NEIKURI SASTHIRAM
11. GUNAPAADAM MOOLIGAI VAGUPPU- PART 1
12. GUNAPAADAM THAADU JEEVA VAGUPPU
13. BIRAMMAMUNI VAITHIYA SOOTHIRAM 390
14. PATHINEN SIDDHARGAL ARULIYA AAVIYALIKKUM AMUDHAMURAI SURUKKAM
15. AGASTHIYAR KANMAGANDAM 300
16. DHANVANTHIRI VAITHIYAM
17. AGASTHIYAR VAITHIYA KAAVIYAM 1500
18. THIRUMOOLAR THIRUMANTHIRAM
19. AGASTHIYAR PALLU 200
20. AGASTHIYAR AAYULVEDAM 1200

MODERN BOOKS:

1. SHAW'S TEXT BOOK OF GYNECOLOGY
2. TEXT BOOK OF PRACTICAL GYNECOLOGY-D. DUTTA
3. GYNECOLOGY AND OBSTETRICS- J.RYMEN
4. TEXT BOOK OF PATHOLOGY-HARSH MOHAN

MEDICILNAL BOTONY:

1. WEALTH OF INDIA
2. GLOSSARY OF INDIAN MDICINAL PLANTS-R.N.CHOPRA
3. INDIAN MEDICINAL PLANTS-KIRTIKAR & BASU
4. COMPENDIUM OF INDIAN MEDICINAL PLANTS
5. INDIAN MATERIA MEDICA

LABORATORY INVESTIGATION REPORT (O.P)

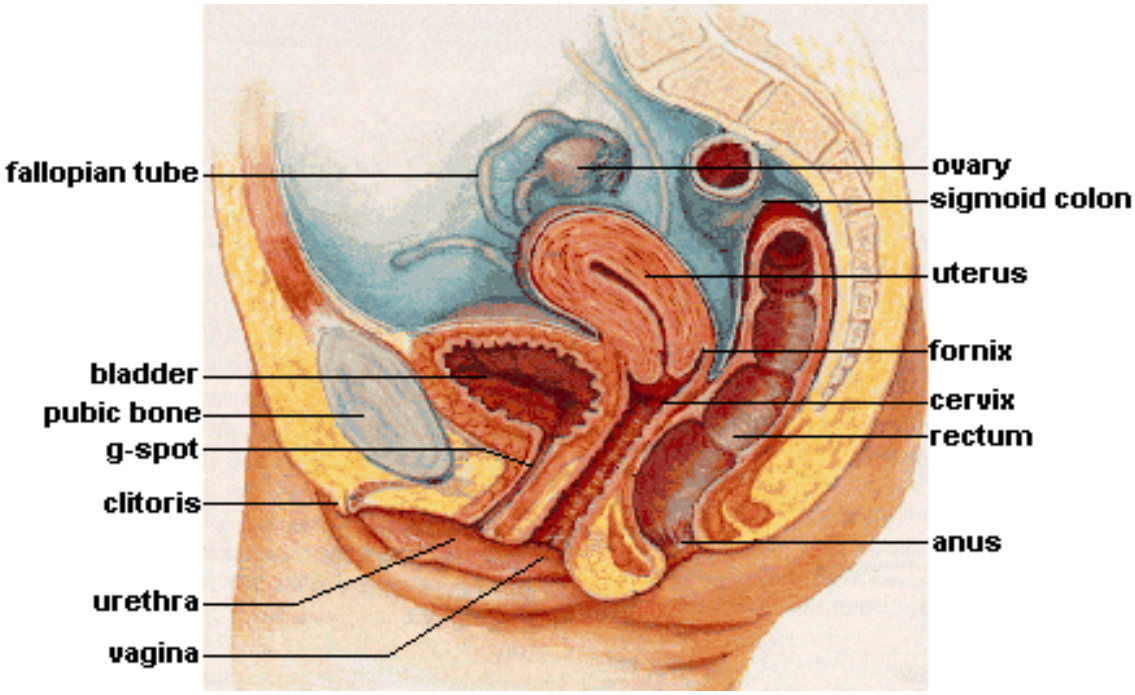
S. No.	OP No.	Name Age /Sex	Before Treatment				After treatment				ESR (mm)				HB (gm)		Blood Sugar(F)		S.Cholestrol mg%		Urine Analysis BT			Urine Analysis AT		
			TC Cells/ cumm	DC P %	DC L %	DC E %	TC Cells/ cumm	DC P %	DC L %	DC E %	BT ½ hr	BT 1 hr	AT ½ hr	AT 1 hr	BT	AT	BT	AT	BT	AT	Alb	Sug	Dep	Alb	Sug	Dep
1.	1334	Samundeeswari 24/F	9000	53	41	6	9100	58	38	4	23	52	12	25	10.8	11	84	82	153	154	Nil	Nil	FEC	Nil	Nil	Nil
2.	2859	Kavitha 28/F	8400	54	42	4	8600	54	40	4	20	50	15	30	8.4	9	88	89	150	153	Nil	Nil	OPC	Nil	Nil	Nil
3.	3509	Priya 22/F	10000	62	33	2	10200	60	33	2	35	72	20	40	8	10	98	96	170	174	Nil	Nil	OPC	Nil	Nil	Nil
4.	4220	Srileka 19/F	8600	55	41	4	8200	52	42	6	21	40	15	30	11	11	83	82	148	150	Nil	Nil	OPC	Nil	Nil	Nil
5.	6446	Gowri 21/F	9200	61	35	4	9200	64	29	4	31	61	15	30	11.8	12	83	80	152	155	Nil	Nil	FEC	Nil	Nil	Nil
6.	9528	Chitra 17/F	9400	55	41	4	8000	52	44	5	4	80	20	40	13	12	88	85	150	149	Nil	Nil	FEC	Nil	Nil	Nil
7.	1218	Saranya 21/F	10400	62	34	4	10600	58	38	4	21	44	15	30	11	11	80	78	153	155	Nil	Nil	OEC	Nil	Nil	Nil
8.	6193	Mary 21/F	9400	52	48	8	9500	54	36	4	12	21	11	20	10.8	11	83	85	150	152	Nil	Nil	OEC	Nil	Nil	Nil
9.	5125	Arunthathi 21/F	9800	63	33	3	9800	62	34	3	15	30	12	25	12	12	80	86	149	150	Nil	Nil	Nil	Nil	Nil	Nil
10.	5494	Karppagam 29/F	8700	55	39	6	8600	54	40	6	8	10	10	12	8.8	9	82	84	154	155	Nil	Nil	Nil	Nil	Nil	Nil

11.	6825	Sabana 26/F	8400	53	42	8	8300	53	42	5	6	11	5	10	10	11	70	72	150	149	Nil	Nil	FEC	Nil	Nil	Nil
12.	7325	Haritha 19/F	8000	57	36	7	8100	58	35	7	23	55	11	22	7.8	9	75	74	158	155	Nil	Nil	Nil	Nil	Nil	Nil
13.	032	Punitha 24/F	8100	53	43	4	8000	58	38	4	15	30	10	15	11	10.2	83	80	158	152	Nil	Nil	FEC	Nil	Nil	Nil
14.	9999	Umamageswari 29/F	10700	60	34	6	10700	58	36	6	5	10	5	10	12.6	12	84	85	149	150	Nil	Nil	Nil	Nil	Nil	Nil
15.	2528	Chitra 25/F	9800	57	39	4	9600	58	38	4	15	30	10	15	11	12	73	80	165	163	Nil	Nil	OEC	Nil	Nil	Nil
16.	4349	Keerithika 17/F	9000	57	38	5	9800	58	38	4	9	15	8	10	11.8	11	83	80	159	160	Nil	Nil	Nil	Nil	Nil	Nil
17.	6781	Kavitha 24/F	9200	57	40	3	8400	58	39	3	21	20	10	15	12.4	10	87	85	159	162	Nil	Nil	FEC	Nil	Nil	Nil
18.	7211	Punithavathi 19/F	9800	60	34	6	10000	58	36	6	44	88	20	35	11	11	83	78	153	150	Nil	Nil	OEC	Nil	Nil	Nil
19.	5903	Sudha 28/F	7900	55	39	6	7900	56	38	6	18	40	15	30	8	9	88	86	155	155	Nil	Nil	OPC	Nil	Nil	Nil
20.	4064	Kanchana 34/F	8000	58	38	4	8500	58	38	4	44	95	22	44	8	9	76	85	158	161	Nil	Nil	OEC	Nil	Nil	Nil

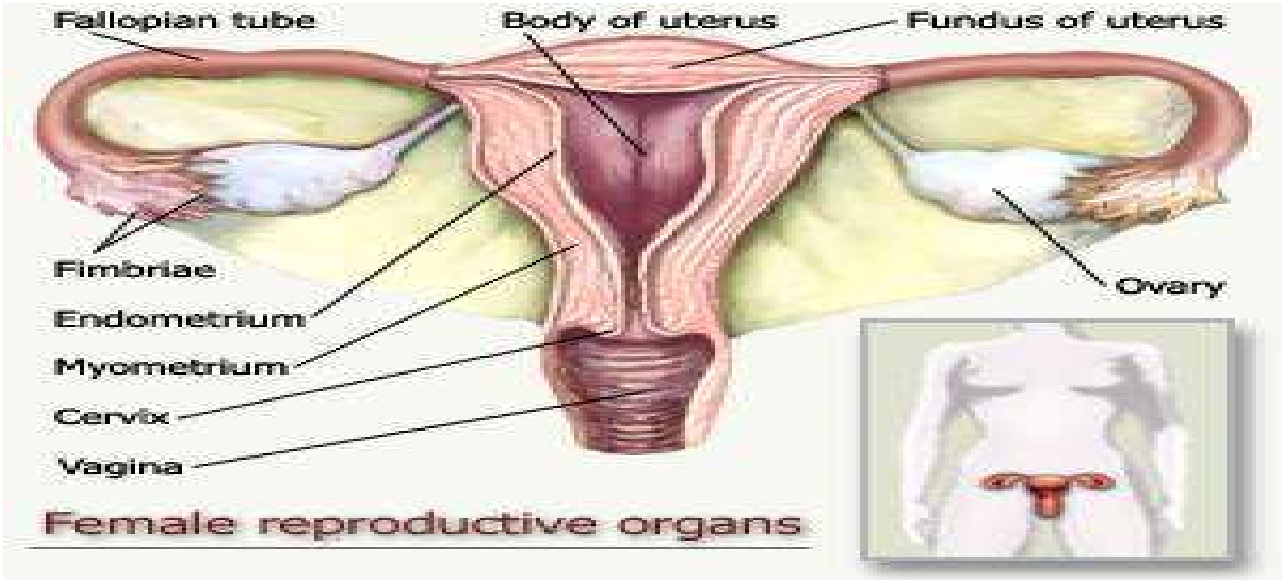
USG-ABDOMEN & PELVIS REPORTS

S.No.	OP No.	Name Age/Sex	USG/Scan (Pcos)
1.	1334	Samundeeswari 24/F	Bilateral
2.	2859	Kavitha 28/F	Bilateral
3.	3509	Priya 22/F	Bilateral
4.	4220	Srileka 19/F	Bilateral
5.	6446	Gowri 21/F	Bilateral
6.	9528	Chitra 17/F	Bilateral
7.	1218	Saranya 21/F	Bilateral
8.	6193	Mary 21/F	Unilateral
9.	5125	Arunthathi 21/F	Bilateral
10.	5494	Karppagam 29/F	Bilateral
11.	6825	Sabana 26/F	Bilateral
12.	7325	Haritha 19/F	Bilateral
13.	032	Punitha 24/F	Bilateral
14.	9999	Umamageswari 29/F	Bilateral
15.	2528	Chitra 25/F	Bilateral
16.	4349	Keerithika 17/F	Bilateral
17.	6781	Kavitha 24/F	Bilateral
18.	7211	Punithavathi 19/F	Unilateral
19.	5903	Sudha 28/F	Bilateral
20.	4064	Kanchana 34/F	Bilateral

FEMALE REPRODUCTIVE SYSTEM



INTERNAL GENITALIA



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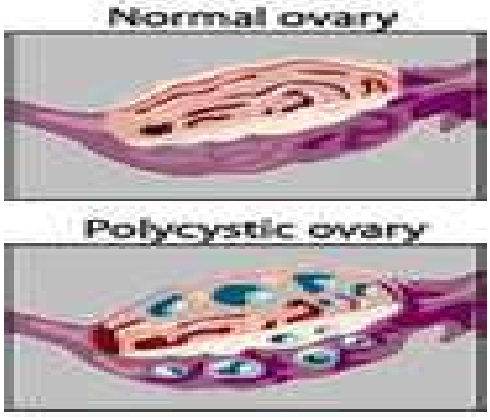
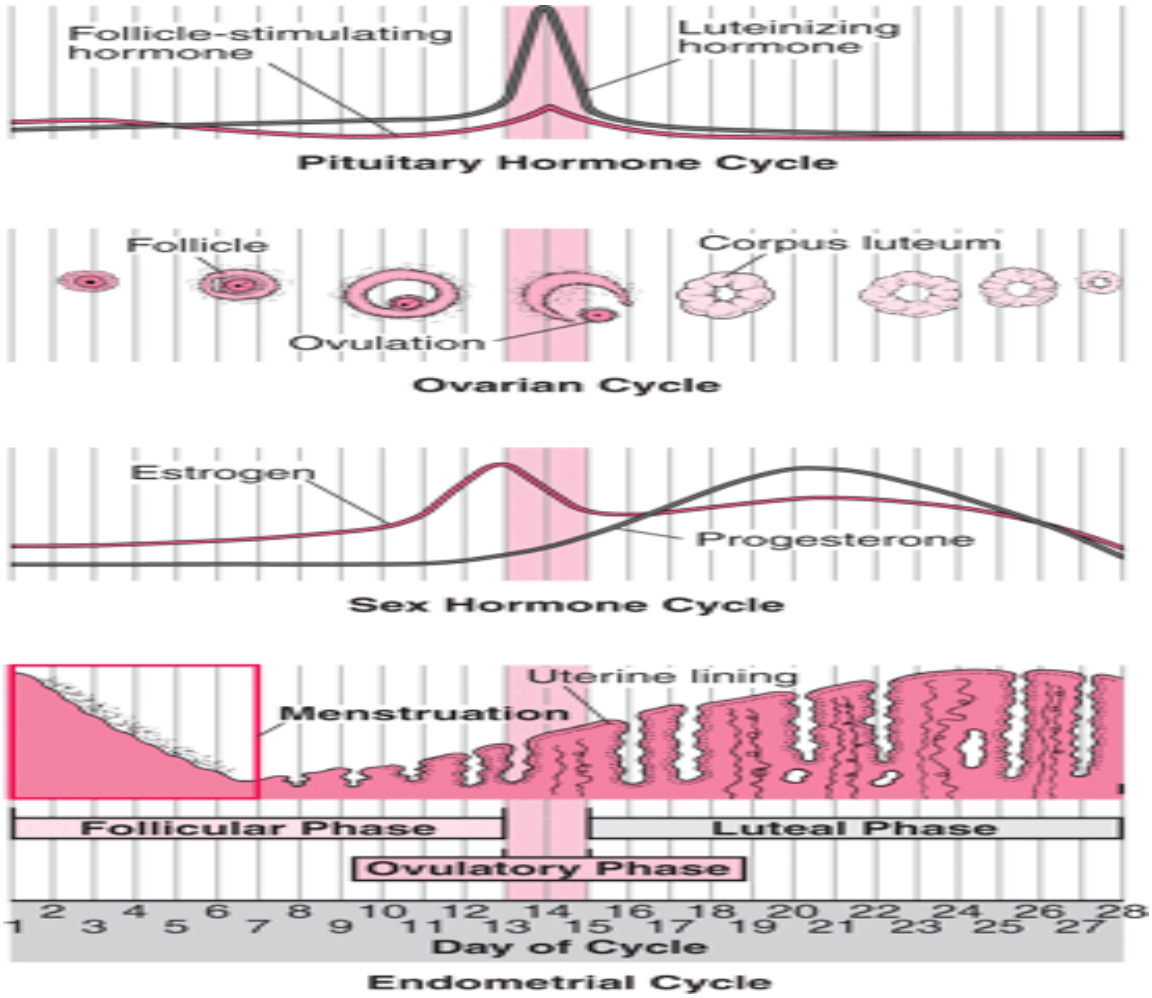
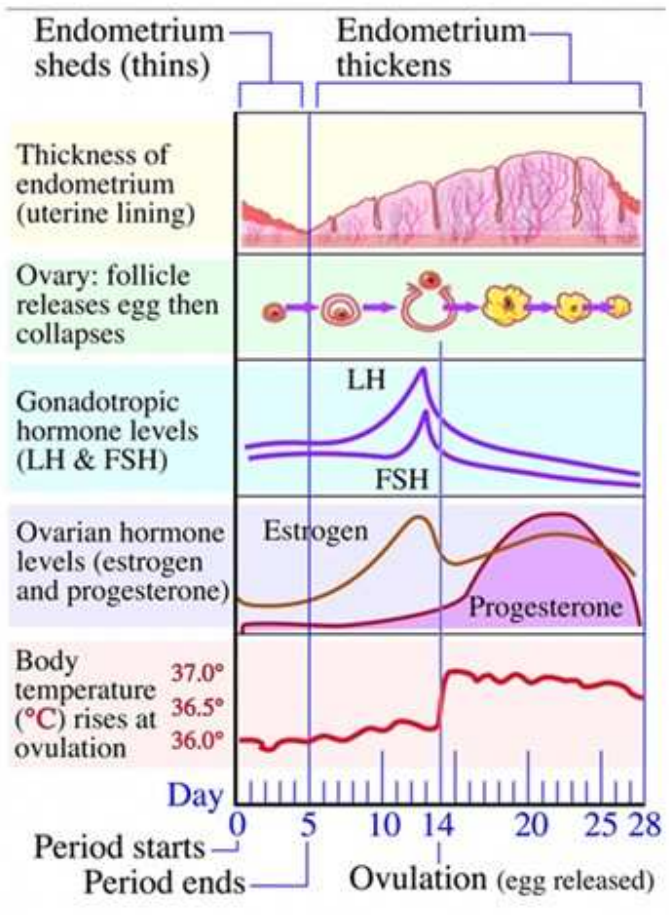


ENDOMETRIAL CYCLE



MENSTRUAL CYCLE



HISTOPATHOLOGY

BRAIN

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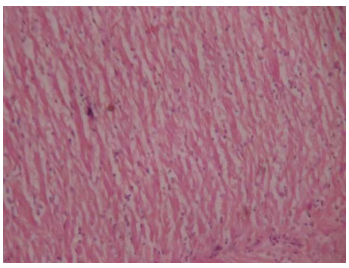

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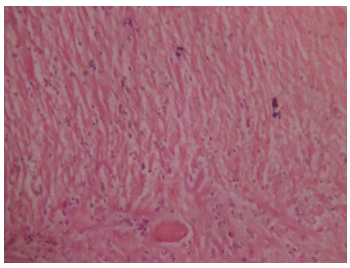

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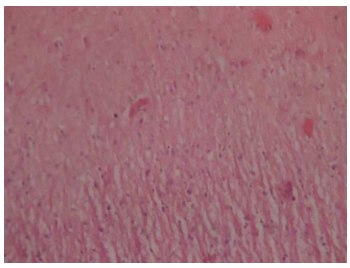

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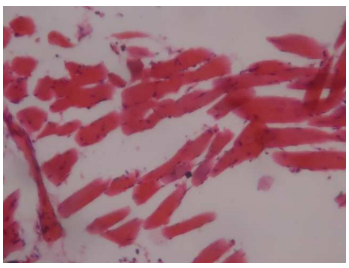

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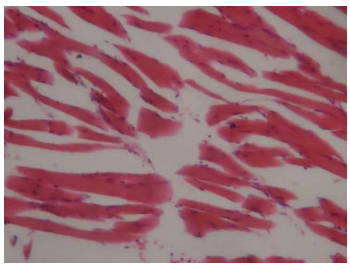

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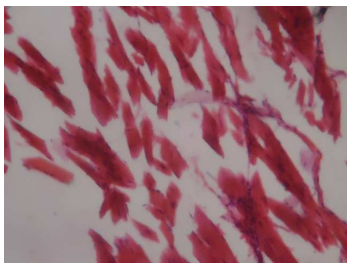

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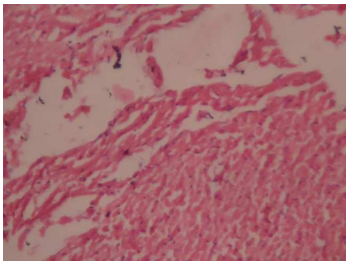

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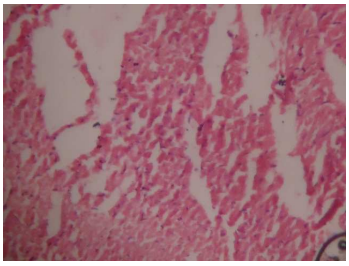

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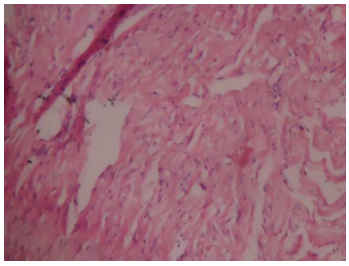

INTESTINE

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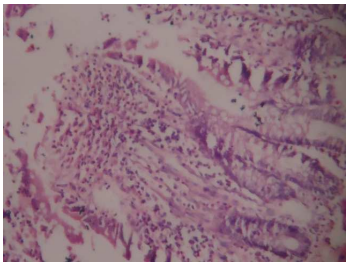

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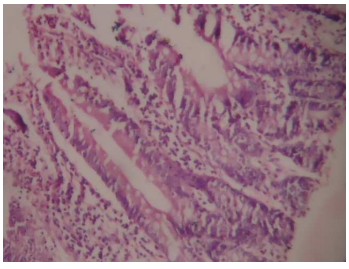

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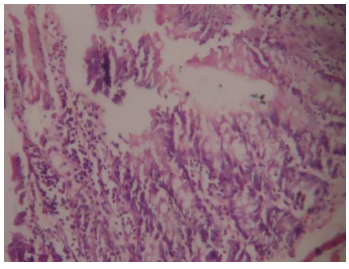

KIDNEY

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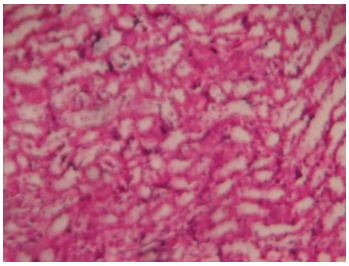

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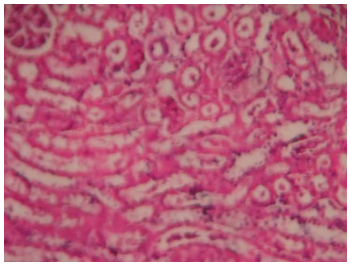

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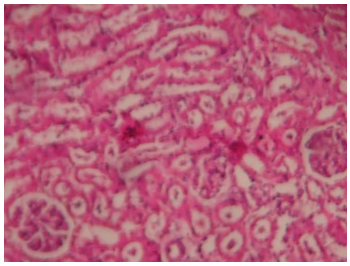

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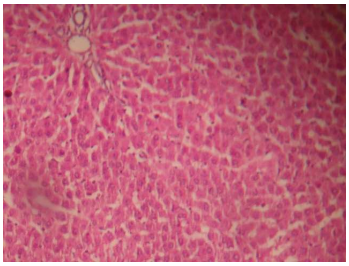

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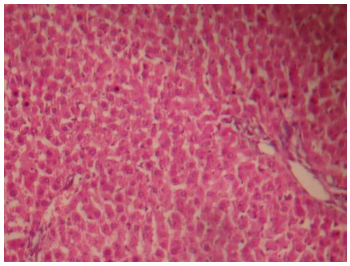

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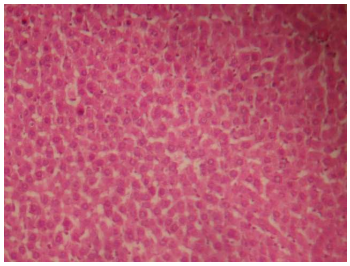

LUNG

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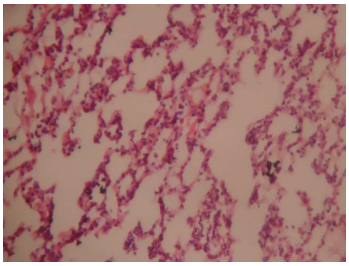

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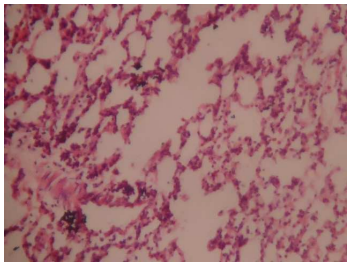

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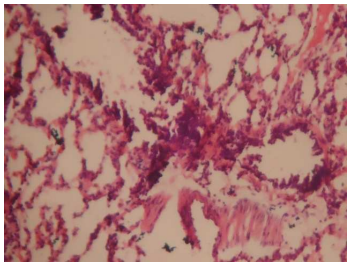

OVARY

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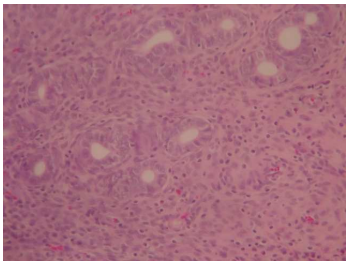

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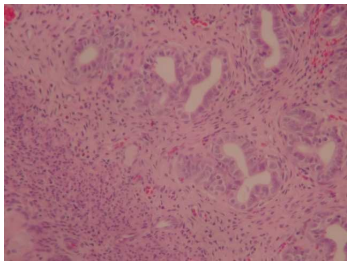

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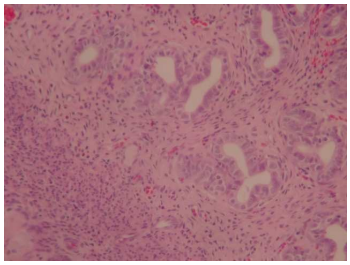

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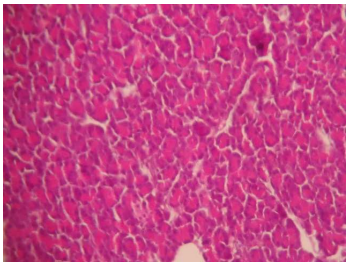

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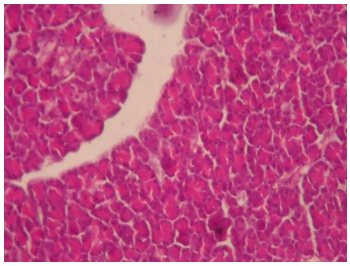

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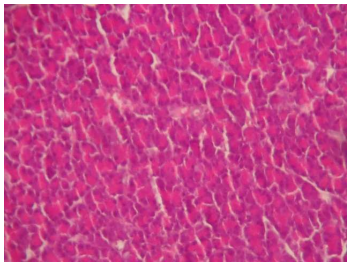

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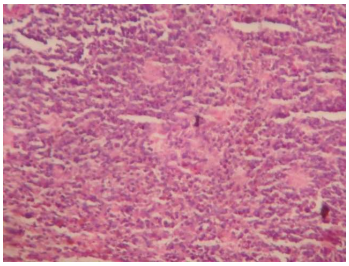

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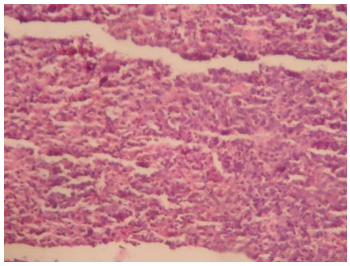

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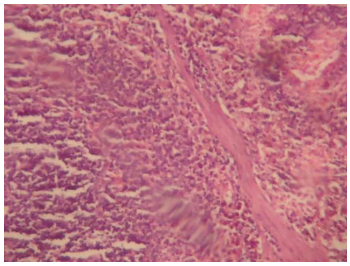

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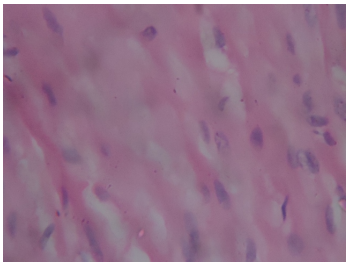

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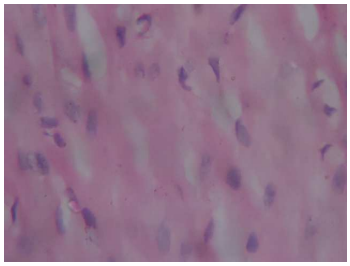

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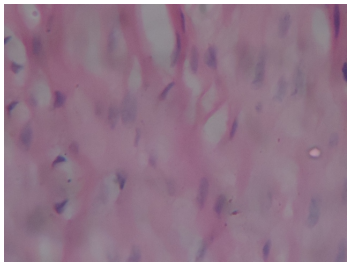

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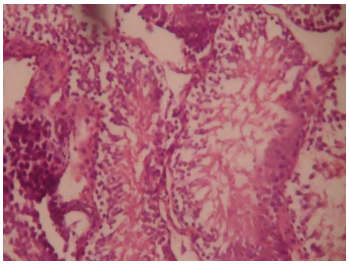

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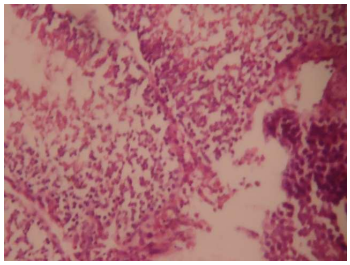

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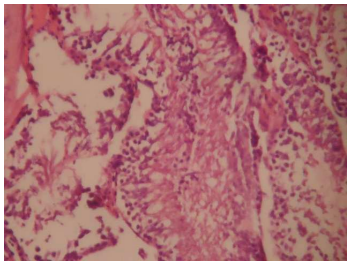

TRIAL DRUG: 1 SOOTHAGATHAI UDAIKKUM KASAYAM

OOMAM

SITHIRAMOOLA VAER

CHATHAKUPPAI

SITHIRAMOOLA VAERPATTAI

CHUKKU

PARANGI SAKKAI

THIPPILI

MAAVILANGA PATTAI

KARUNJEERAGAM

MOONGILILAI

TRIAL DRUG-2: MAENI LAVANA CHOORANAM

CHUKKU

INDHUPPU

OOMAM

SOTRUPPU

PERUNGAYAM

KUPPAIMNENI

DRUG:1

SOOTHAGATHAI UDAIKKUM KASAYAM

DRUG:2

MAENI LAVANA CHOORANAM

VEL'S COLLEGE OF PHARMACY

Approved by the Governrgent of Tamil Nadu
Affiliated to The Tamil Nadu Dr. MGR Medical University
Velan Nagar, P.V. Vaithiyalingam Road, Pallavaram, Chennai - 600 117
Phone : (91-44) 2266 2500 / 01 / 02 / 03 Fax : (91-44) 2266 2513
E-mail : velscollege@gmail.com Web site : www.velscollege.com

XIII INSTITUTIONAL ANIMAL ETHICS COMMITTEE MEETING

Date: 08.08.2012 and 11.08.2012 **Time:** 2.30 P.M.
Venue: Conference Hall, Vels College Pharmacy

XIII Institutional Animal Ethics Committee meeting was held as per the norms of CPCSEA and the enclosed list of members attended the meeting and discussed various project proposals submitted by the investigators. The details of the meetings and approval status of the proposed project are as follows

S.No	Title of The Project	Name of The Investigator	Approval status/Remarks	Project Reference
1.	Hepatoprotective activity of Charaparpam by CCL4 induced method in rats	Dr. Arun Mozhi	Total number of animals proposed was 42 rats and after having discussion it was decided to reduce 12 number of animals and suggested to share the standard group results with other researchers who has planned to carryout similar kind of study. And also to follow OECD 425 method for acute toxicity study.	XIII/VELS/PCOL/01/2000/CPCSEA/IAEC/11.08.2012
2.	A study on Poovarampattai kudineer choornam for the treatment of Swethakuttam.	Dr. G. Kala	Total number of animals proposed was 42 mice. But 20rats were Sanctioned.	XIII/VELS/PCOL/01/2000/CPCSEA/IAEC/11.08.2012
3.	Evaluation the therapeutic efficacy of Soothagathaiudaikkum kasayam in soothagavayu.	Dr. K .Dhanalakshmi	Total number of animals proposed was 40 rats, and it was advised to minimize the number to 30 rats only and suggested to reuse the animals sanctioned for safety study after recovery.	XIII/VELS/PCOL/01/2000/CPCSEA/IAEC/11.08.2012

City Centre : No. 521/2, Anna Salai, (Opp. G.R. Complex), Nandanam, Chennai - 600 035.
Phone / Fax : (91-44) 2431 5541 / 2431 5542 E-mail : velsrinivasa@vsnl.net

Dr. J. ANBU, M.Pharm., Ph.D., D.M.L.T., MBA
Professor & Head
Department of Pharmacology & [illegible]
School of Pharmaceutical [illegible]
Vels University
Pallavaram, Chennai-600 117.

The Tamil Nadu Dr. M.G.R. Medical University

69, Anna Salai, Guindy, Chennai-600 032

This Certificate is awarded to Dr .....K..DHANALAKSHMI.....

for participating as a ~~Resource Person~~ / Delegate in the VI Workshop on

"Research Methodology & Biostatistics"

for AYUSH Post-Graduates & Researchers

organized by the Department of Siddha

The Tamil Nadu Dr. M.G.R. Medical University

from 12th September 2011 to 16th September 2011

Dr. MAYILVAHANAN NATARAJAN
M.S.Orth. M.Ch.Orth. (L'pool) Ph.D. D.Sc. F.R.C.S. D.Sc. (Hon)^3
VICE CHANCELLOR

Dr. SUDHA SESHAYYAN, M.S.
REGISTRAR (FAC)

Dr. N. KABILAN, M.D. (Siddha)
READER, DEPT. OF SIDDHA