

A STUDY ON
THANDAGA VATHAM

Dissertation submitted to

THE TAMILNADU DR. M.G.R MEDICAL UNIVERSITY

Chennai-32

For the partial fulfillment of the requirements to the Degree for

DOCTOR OF MEDICINE (SIDDHA)

(Branch I – Pothu Maruthuvam)



DEPARTMENT OF POTHU MARUTHUVAM
GOVERNMENT SIDDHA MEDICAL COLLEGE
PALAYAMKOTTAI – 627 002.

APRIL – 2013



THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

69, Anna Salai, Guindy, Chennai - 32.

DEPARTMENT OF SIDHA

CERTIFICATE OF PARTICIPATION

This is to certify that Dr.*M.S.MANICK*.....

has participated as Resource Person / Delegate in the Workshop on

"Research Methodology & Biostatistics" for AYUSH Post Graduates &

Researchers organized by the Dept. of Siddha, from ~~Nov-8-7:30AM~~ to ~~08-07-2017~~


Dr. M. Kabilash
Prof. & Head





Dr. Sudha Seshayyan
Registrar


Dr. Mayil Vahaman Matarajan
Vice-Chancellor

GOVT. SIDDHA MEDICAL COLLEGE,
PALAYAMKOTTAI,
TIRUNELVELI - 627002.
SCREENING COMMITTEE

Candidate Reg No: 32101004

This is to certify that the dissertation topic THANDAGA VATHAM (LUMBAR SPONDYLOSIS) and the drug VATHATHIRKU CHOORANAM have been approved by the screening committee.

S.No	Name	Signature
1.	Prof. Dr. N. CHANDRAMOIHAN DOSS, M.D (S) Principal & Chairman	
2.	Prof. Dr. R. THIANGAMONEY, M.D (S)	
3.	Dr. A. SUBRAMANIAN, M.D (S)	

(Kindly make sure that the minutes of the meeting duly signed by all the participation are maintained by the college office)

ACKNOWLEDGEMENT

I am extremely grateful to my Lord almighty that empowered me with his blessings and grace to finish my dissertation work successfully.

My heartfelt thanks to my beloved husband Mr.Hemanth Kumar who gave me moral support for this project. My soulful thanks to my mother, father, kids Nishit, Nivish, mother in law, father in law and all my family members who gave me moral support to complete this project successfully.

I take this opportunity to express gratitude and acknowledgement to the **Vice-Chancellor, the Tamilnadu Dr. M.G.R. Medical University**, Chennai, **The Commissioner, Director of Indian Medicine and Homeopathy**, Chennai and joint Director of Indian Medicine and Homeopathy Chennai.

I express my thank to our principal Prof. **Dr.N. Chandra Mohan Dass M.D. (S)**, and Vice principal Prof. **Dr.S. Soundara Rajan M.D. (s)**, Government Siddha Medicine College, Palayamkottai for providing all necessary facilities for my work.

I express my deep sense of gratitude to **Dr.S. Mohan M.D(s)** Professor and head of the Department of PG Pothu Maruthuvam, Government Siddha Medical College, Palayamkottai for his valuable guidance and suggestion in caring out my dissertation.

I express my sincere thanks to **Dr.A. Manoharan M.D. (s)** Reader, PG Pothu Maruthuvam, Government Siddha Medical College, Palayamkottai for his kind and affectionate encouragement to my work.

I am very grateful to **Dr.S. Justus Antony M.D(s)**, Assistant Lecturer, Department of Post Graduate Pothu Maruthuvam, Govt. Siddha Medical

College, Palayamkottai for giving encouragement and valuable suggestions for my dissertation work.

I record my deep sense of gratitude to Professor **Dr. V. Neela Kandan M.B.B.S; MD (Internal Medicine)**, Modern Medicine, Government Siddha Medical College, Palayamkottai for his valuable guidance in modern aspects.

I acknowledge my thanks to **Mr. M.Kalaivanan M.Sc; M.Phill**; Lecture, Modern Pharmacology Department, Government Siddha Medical College, Palayamkottai for their help during the entire course of my work.

I also thanks to **Mrs.N. Nagaprema M.Sc; M.Phill**; Lecturer Head of the Department and all the staffs of Department of Biochemistry, for their help in Biochemical analysis for this work.

I wish to thank all the faculties especially librarians and lab technicians, Government Siddha Medical College, Palayamkottai for their whole support.

My deep sense of gratitude towards my dear friends and **Dr.S.Babymalathi**, for their timely help associated with this project.

And my great thanks to **Broad-Band Net Cafe** for their sincere and kind cooperation to complete this work successfully.

CONTENTS

SL.NO.	TITLE NAME	PAGE NO.
1	INTRODUCTION	1
2	AIM AND OBJECTIVES	3
3	ABSTRACT	4
4	REVIEW OF LITERATURES	
	A. SIDDHA ASPECT	5
	B. MODERN ASPECT	36
5	MATERIALS AND METHODS	54
6	OBSERVATIONS AND RESULTS	58
7	DISCUSSION	79
8	SUMMARY	89
9	CONCLUSION	92
10	ANNEXURE	
	I. DRUG REVIEW	
	II. BIO-CHEMICAL ANALYSIS	
	III. PHARMACOLOGICAL ANALYSIS	
	IV. PROFORMA OF CASE SHEET	
11	BIBLIOGRAPHY	

INTRODUCTION

“Health is wealth”. Healthy living is the most essential thing in everyone’s life. Disease is the barrier for this achievement. Every medical system has its own way to treat diseases. Siddha system of medicine not only cures the disease but also postulated ways to attain eternity.

Siddha system of medicine differs from other systems in many ways. The etiology of diseases lies on the change in equilibrium of the three humours namely vatham, Pitham, Kabam. The mode of treatment is based upon balancing the three humours.

Spondylosis of lumbar spine, is a term with many definitions. In the literature it has been utilized in many different contexts, employed synonymously with arthrosis, spondylitis, hypertrophic arthritis and osteo arthritis in other instances spondylosis is considered mechanistically, as the hypertrophic response of adjacent vertebral bone to disc degeneration. Osteophytes may infrequently form in the absence of disease discs. Finally spondylosis may be applied non specifically to any and all degerative conditions affecting the discs, vertebral bodies and / or associated joints of the lumbar spine.

The degeneration of the spinal vertebra is also called wear and tear of the vertebra which is commonly due to aging people above the age of 40 are more at the risk for developing lumbar spondylosis. Degenerative

disc disease is natural and almost all of us have the disease to a certain degree in our old age.

Lumbar spondylosis is most common at L5, accounting for 85% of all cases and may be observed as high as L2. Therefore a slip is most common at the level of L5 slipping forward on S1. Lumbar spondylosis is the cause of most common type of spondylolisthesis.

Lumbar spondylosis is a complicated diagnosis. Moreover there is no current concrete gold standard treatment approach, to the diverse range of patient presentations despite substantial research effort to identify conservative methods of managing, symptoms of lumbar spondylosis. An attempt was made to achieve this in this dissertation work.

The drug of choice to treat lumbar spondylosis is **“VATHATHIRKKU CHOORANAM”** from the reference book **“ AGATHIAR VAKKIYAM – 50”**. 20 IP and 20 OP patients are selected through selection proforma and are diagnosed through eight fold diagnostic tool and also scientific diagnostic tools. The results are discussed and concluded that **VATHATHIRKKU CHOORANAM** played a significant role in managing lumbar spondylosis. Moreover a clinical trial over a large population may provide fruitful results.

AIM OF THE STUDY

To evaluate the clinical efficacy of the trail drug VATHATHIRKKU CHOORANAM in treating Thandaga Vatham.

Objectives:

- To analyse Thandaga Vathagam in view of its etiology, pathophysiology, symptoms as said in our literature.
- To analyse lumbar spondylosis in relation with Thandaga vatham.
- To have a literary review about Thandaga Vatham
- To analyse the trial drug biochemically and pharmacologically.
- To utilize both siddha and modern parameters in the diagnostic purpose of the disease.

ABSTRACT

The disease Thandagavatham is extremely common in now-a-days because of its degenerative mechanism. So the author had chosen this disease and attempts search for a perfect remedy for the same.

For this study Twenty patients of either sex were selected as inpatients and twenty patients of either sex were selected as out patients. The patients were administered with the trial medicine “vathathirkku chooranam – 2gms” with hot water twice a day during the whole study period.

Scientific analysis such as bio-chemical and pharmacological studies was carried out for the trial medicine.

At the end of the trial study, 77.5% of patients were improved and 22.5%of patients were moderately improved.

REVIEW OF LITERATURES

SIDDHA ASPECTS

In the siddha system the diseases either minor [or] major are due to the vitiation of Thridosha namely Vatha, Pitha and Kabha.

Thiruvalluvar says,

“மிகினும் குறையினும் நோய் செய்யும் ஞாலோர்
வளி முதலா எண்ணிய மூன்று”

- திருவள்ளுவர்

Vatha, Pitha and Kabha are called Thrithathu or Uyir thathu in their normal condition, regulates all physiological activities of the human beings and keep the body healthy.

When their mutual harmony is disturbed they are called Thridosha and they bring about ill health. Based on this theory, the problems of various systems are classified as Vatha diseases, Pitha diseases and Kabha diseases.

DEFINITION AND DESCRIPTION OF VATHA

Vatha consists of vayu [air] and aahayam [sky], the two out of five elements i.e pancha boothas. In our ancient siddha literature the diseases are classified into 4448 types based on the mukkuutra theory [vatha, pitha, kabha]. However vatha diseases got a major role among them, Thandaga Vatham is one of the vatha varieties, which is taken for the author's dissertation.

As per our siddha aspect the first phase in human life is attributed to vatha, the middle to pitha and the last phase to kabha. This is known from the following verses.

“வாதமாய்ப் படைத்து பித்த வன்னியாய்க் காத்து
சிலேத்தும சீதமாய்த் துடைத்து”

- தேரையர் மருத்துவ பாரதம்

The details of vatha have been dealt before reviewing the specific signs and symptoms of Thandaga Vatham

The relation between Pancha boothas and Uyir thathukkal

Uyir Thathukkal	Pancha Boothas
Vatha	Aahaayam (space) + Vayu (Air)
Pitha	Theyu (Fire)
Kabha	Appu (water) + Prithivi Earth

It would be incorrect to think of the thodams only as the three dynamic elements manifesting in the body. These active elements are always supported by the two stable elements. Thus vayu and aahaayam can only happen upon the foundation of stable. Thus Vayu and Aahaayam combine to become "Vatha Thodam" which controls all aspects of movements as well as space within the body. In spite of this combination, however, vatha thodam tends to display primarily the characteristics of vayu i.e. wind. The words "dry, light, cold, quick, rough, minute and mobile" describe the characteristics of "Vatha Thodam".

Pitha Thodam is primarily characterized by the qualities of theyu, which are "heat, sharp, penetrating, light, acidic and slightly oily".

‘Appu’ supported by "Prithivi" becomes "Kabha Thodam" and controls liquefaction, lubrication and cohesion. It is also responsible for giving solidity and structure to the body. `Kabha Thodam' primarily reflects the qualities of the water, but also some traits of the earth elements. Consequently `Kabha' is heavy, slow, cold, steady, solid and oily. Another interesting feature of the thodas is that each has a taste associated with it.

Vatha is mostly Pungent.

Pitha is Sour and

Kabha is Sweet.

THODAMS AND THEIR FUNCTIONS

Vatha Thodam	Separation/Movement
Pitha Thodam	Conversion/Transformation
Kabha Thodam	Cohesion/Liquidity

These three humours Vatha, Pitha and Kabha are more or less correlated with Air, Gastric Juice and Saliva respectively. They circulate in the body system in different proportions and help in the digestion of food and other general physiological functions of the body. Each of them has different functions. The right proportion of each, in proper combination is responsible for maintaining the good health.

When some of the environmental factors like diet, weather etc, disturb vatha, it loses its control, which may be reduced or exaggerated. So the other two thodams are also disturbed and so the normal equilibrium is disturbed. Finally this may lead to "Vatha" diseases.

LOCATIONS OF VATHA

Vatha is below the navel.

“நாமென்ற வாதத்துக் கிருப்பிடமே கேளாய்

நாபிக்குக் கீழென்று நவில வாகும்”

- யுகி முனி

Generally Vatha lives in

- Abaanan
- Edakalai
- Kamakkodi
- Undhiyin keezh moolam
- Hip region
- Bones
- Muscles
- Nerves
- Joints
- Skin

Hair follicles and Stools Physiologically vatha, which has no alterations, lives in gastrointestinal tract, bones, ear, thigh, hip and skin.

NATURAL PROPERTIES OF VATHA

- Giving briskness
- Expiration and Inspiration
- Functioning of the mind, thoughts and body.
- Regulation of the "Fourteen physiological reflexes" [Vegam]
- Functioning of the “Seven udal kattugal” uniformly
- Protection and strengthening of the five sensory organs.

[tymporigal]

FUNCTIONS OF VATHA

According to Siddha Maruthuvaanga Surukkam,

- Body ache
- Pricking pain
- Tearingpain
- Nerve weakness
- Shivering
- Mental distress
- Dryness
- Movements
- Weakness
- Joints pain
- Traumatic pain
- Dislocation of joints

- Weakness of organs
- Pilo-erection
- Paralysis of limbs
- Polydypsia
- Severe pain in calf and thigh muscles
- Bony pricking pain
- Anuria and constipation
- Unable to do flexion and extension of the limbs
- All tastes to be like astringent
- Excess salivation and
- Darkness of skin, eyes and urine

QUALITY OF VATHA

Own Qualities

- Kadinam – Rough
- Varatchi – Dry
- Elagu – Light
- Kulirchi – Cold
- Asaithal – Unstable
- Anuthuvam – Subtle

OPPOSITE QUALITIES

- Miruthu – Soft
- Pasumai – Unctuous
- Paluvu – Heavy
- Akkini – Hot
- Sthiram – Stable
- Katti – Solid

RELATION WITH TASTE :-

The tastes, which increase vatha, are Sour and Astringent.

“புளி துவர் விஞ்சுங்கறியாற் பூரிக்கும் வாதம்
ஒளி யுவர் கைப்பேறில் பித்துச் சீறும்- கிளிமொழியே
கார்ப்பினிப்பு விஞ்சிற்கபம் விஞ்சுஞ்சட்டிரதச்
சேரப் புணர் நோயணு காதே.”

- சித்த மருத்துவ நோய் நூல் நோய் முதனாடல் திரட்டு I

The tastes, which neutralize Vatha, are Sweet, sour and salt.

“வாதமே லிட்டால் மதுரம் புளி யுப்பு
சேதமுறச் செய்யுஞ் சிறையம் - ஓதக்கேள்
காரந்துவர் கசப்புக் காட்டுஞ் சுவையெல்லாம்
சாரப் பரிசாரஞ் சாற்று”

- கண்ணுசாமியம்

RELATION WITH FIVE ELEMENTS

Vatha	-	Air + Sky
Pitha	-	Fire
Kabha	-	Water + Earth

Vatha has "Air" and "Sky" as its elemental constituents. If "Air" and "Sky" or any one of them is decreased [or] increased from the normal level, it will surely lead to pathological state of vatha.

Regarding diet, bitter, pungent and astringent tastes contain air and bitter alone contains sky. So if these are consumed in large amounts, they result in the vitiation of vatha and eventually vatha diseases.

THE SIX TASTES AND THEIR CONSTITUENT ELEMENTS ARE AS FOLLOWS

- Sweet = Earth + Water
- Sour = Earth + Fire
- Salt = Water + Fire
- Bitter = Air + Sky
- Pungent = Air + Fire
- Astringent = Earth + Air

Three phases of prapakam [Metabolism]: -

Prapakam [Metabolism]	Thodam	Taste	Function
Inippu	Kabha	Sweet	Moistening of food
Pulippu	Pitha	Sour	Conversion of food
Karppu	Vatha	Pungent	Absorption and separation of food

ALTERATIONS OF VATHA

Vatha is specialized in Aadi, Aavani, Purattasi and Iyppasi physiologically.

THE TYPE OF ALTERATIONS OF VATHA ARE

1. THANNILAI VALARCHI (தன்னிலை வளர்ச்சி)

DEFINITION

A Kutram, which is provoked in its own location, is called Thannilai Valarchi.

LIMITATION

Hatefulness of the things, which are causing thannilai valarchi, and likeness of things, which are getting opposite properties are the limitations of Thannilai Valarchi.

DURATION

Vatha gets "Thannilai Valarchi " during Mudhuvenil Kaalam (Aani and Aadi].

2. Vetrunilai Valarchi (வேற்றுநிலை வளர்ச்சி)

DEFINITION

A kutram, which is provoked to other locations, is called "Vetrunilai Valarchi".

LIMITATION

Signs and symptoms of the affected kutram and the pathological conditions of the Udal kattugal give details of the limitations.

DURATION

Vatha Gets "Vetrunillai Valarchi" during Kaar Kaalam [Aavani and Purattasil.

3. THANNILAI ADAITHAL (தன்னிலை அடைதல்)

DEFINITION

A provoked Kuktram, which is neutralizing in its own property, is called Thannilai Adaithal.

DURATION

The provoked vatha neutralizes during Koodhir Kaalam (lyppasi and Kaarthigaij.

FACTORS WHICH ALTER VATHA

1. When hot foods are mixed with vayu, vatha gets "Thannilai Valarchi".
2. When cold is mixed with vayu, vatha gets "Vetrunilai Valarchi".
3. And when oily foods with hotness are mixed with vayu, vatha neutralizes in its own property that means healthy conditions.

“ வாயுவின் குணத்துடன் சூடணுகில்

வாயுவின் டங்களில் நோய்களுண்டு

வாயுவில் குளிர்ச்சிதான் கூடிடலே

வந்திடும் நலிகளும் வேறிடத்தே

வாயுவில் அனல் தரும் நெய்ப்பமைந்தால்

வாயுவும் அடங்கிடும் வாய்மையிது

வாயுவின் பிணிகளைப் போக்கிடவே

வகுத்திடும் முனிமொழி கண்டிடுமே”

- சித்த மருத்துவாங்கச் சுருக்கம்

DESCRIPTION OF VATHA

The siddha classical texts divide the vatha into ten subsidiary forms that differ from one another by their location in the body [Anatomical] and by their particular functions. [Physiological].~

They are: -

1. PRAANAN' [HEART CENTRE]

It corresponds to the cardiac plexus and refers to the chest. It maintains the action of the heart, the functioning of the mental faculties of perception and concentrations and also cares for the arteries, veins and nerves. It regulates the respiration and digestion. It is otherwise called as "Uyirkkaal”

2. ABAANAN [MOOLAATHARAM CENTRE]

It corresponds to the pelvic plexus and controls the excretion. It is focussed in the lower part of the gut and also occupies the sites in the bladder and genitals. It has a tendency to travel downwards. It moves in the whole genito urinary tract and regulates the defaecation, micturition,

menstruation, parturition and ejaculation. It is otherwise termed as "kezhnökkukaaM

3. VIYAANAN [FORE HEAD CENTRE]

It corresponds to the nasociliary plexus at the root of the nose and base of the skull and controls the will. It helps in the circulation of energy throughout the entire nervous system and the movements of various parts of the body. It also transports nutrients and blood throughout the entire body. It is also known as "Paravukaaal".

4. UTHAANAN: [THROAT CENTRE]

This corresponds to the pharyngeal plexus in the throat region and controls speech and breathing. It is also responsible for the physiological reflex actions like vomiting, hiccup, cough etc. It has the tendency to travel upwards. It is otherwise named as "Melnökkukaaal"

5. SAIVIAANAN [NAVEL CENTRE]

It corresponds to the solar plexus in the navel region and controls digestion. It selects the useful substances from the swallowed food and supplies them to the whole body. It balances the other vayus. It is also called "Nadukkaal".

6. Naagan:

It is responsible for the intelligence of an individual, winking, singing and piloerection.

7. Koorman

It is responsible for yawning, closing of mouth [immovable of lower jaw], winking, shedding of tears, vision and opening of the eyes.

8. Kirugaran

It is responsible for salivation and nasal secretion. It helps in digestion and meditation. It produces cough and sneeze.

9. Devathathan:

It is responsible for laziness, lassitude, quarreling, arguing, and also for much anger. It helps movements of the eyeball in various directions and is present in genital and anal region.

10. Thananjeyan:

It is present in nose and responsible for swelling of the body and tinnitus. It leaves from the body by blowing up the cranium only on the third day after death.

CHARACTERISTICS OF VATHA THEGI:

ACCORDING TO SIDDHA MARUTHUVAANAGA SURUKKAM:

வாத உடலினனுக்குத் தீயும் ஐயமும் குறைந்து வளி மிகுந்திருப்பது மன்றி, மெலிந்து உயர்ந்த உடலும், பருத்த அடித் தொடைகளும், நடந்தால் கீல்கள் நெட்டையிடுதலும், தடித்த இமைகளுடன் வட்டமாக விகாரித்துச் சாக்கண் போன்று சுரசுரப்பாயும், சிறிது வெண்மை கலந்தனவாயுமிருக்கும் கண்களும், குளிர்ந்த பார்வையும், சிறிது கறுமை வெண்மை கலந்து ஒளிரும் உடலநிறமும், அவ்வாறு கறுத்து முனை பிளந்த தலை மயிரும், தெளிவான

வார்த்தையையும் சில வேளை மனக் கலக்கத்துடன் பட்டும் படாமையுமான தடுமாற்ற வார்த்தையும், தித்திப்பு புளிப்பு, உப்பு, சூடு உள்ள பொருள்களில் சிறிது விருப்பமும், குளிர்ச்சி பொருந்திய பொருள்களில் வெறுப்பும், மிக்க உண்டியும், மிக்க உண்டியெனினும் அற்ப வன்மையுமட, பெண்களிடத்தில் அற்ப விருப்பும், வீரிய வளர்ச்சிக் குறைவும், புத்திரப் பெருக்கமும், ஆண்மை, உணர்ச்சி, அறிவு இவை நிலையின்னையும், விளையாட்டு, இசை, அவமதிச்சிரிப்பு, தொக்கணம், வேட்டையாடலில் விருப்பும், தகுதி இன்மை, பகைமை, ஈகையின்மை, பொன்னாலான பொருள்களைக் கவர்தலில் நினைப்பு முதலிய பண்புகளும், புகழின்மையும், அரைக்கண் மூடிய சிறு தூக்கமும், அத்தூக்கத்தில் விண், மலை, காடு இவைகளில் தான் நடப்பதாகக் காணுகின்ற கனவும், புலமைத் திறமையும் உண்டாயிருக்கும்.

- சித்தமருத்துவாங்கச் சுருக்கம்

According to Siddha Maruthuvaanga Surukkam,

Vatha thegi has an appearance of

- Thin, tall built
- Large thighs
- Thickened eyelids
- Round, small, white, mixed eyes
- Cool sight Black and white coloured skin complexion
- Black, diverten hairs
- Clear speech - some times slurring, digressing speech etc

Vatha thegi has the characteristics of

- Preference of sweet, sour, salt and hot foods
- Over eating
- Less strength
- Hatefulness of cold foods
- Less sexual desire Oligospermia
- Unstable stamina, mood, intelligence
- Predictable games, music, exercise, laugh, massage, hunting etc
- Unqualification in everything
- Fighting with others Theft
- Loss of fame
- Short, interrupted sleep
- Dreams like walking through sky, forest, mountains etc
- Efficient in poetry et

AETIOLOGY OF VATHA DISEASES

The aetiological factors for all types of vatha diseases including "Thandaga Vatham" have been described generally in "Yugi munivar Vaithiya Chinthamani Perunool 800" and "Agasthiyar Kanma Kaandam 300".

In "Yugi munivar Vaithiya Chinthamani Perunool 800"

- Breach of trust
- Abusing from the pious, elderly people and priests.

THE FEATURES OF EXAGGERATION OF VATHA

- Emaciation and black discoloration of skin
- Liking to eat hot foods
- Shivering
- Abdominal distension
- Constipation
- Reduction of strength
- Giddiness
- Insomnia
- Laziness
- Loss of strength of five sensory organs

THE FEATURES OF DIMINUTION OF VATHA

- Body ache
- Low pitched voice
- Loss of memory
- Syncope Difficulty to do any work
- Paleness and coolness of body
- Excessive salivation
- Heaviness of body
- Anorexia
- Cough, sleep and abdominal distension.

CLASSIFICATION OF VATHA DISEASES

Various siddha texts give different classifications of vatha diseases as follows:

CLINICAL FEATURES OF THANDAGA VATHAM

Thanadaga Vatham is one of the vatha diseases, which is described in Yugi Vaithiya Chinthamani.

DEFINITION

Thandaga Vatham is a condition, which deals with pain surges up from the sacro iliac region and ascends to involve the entire vertebral canal. It is characterized by,

- Sweating
- Bodyache
- Pallor
- Yellow coloured stools and urine
- Incontinence of urine and faeces
- Pain in the nerves, bones and also in the chest
- Inability to walk

AETIOLOGY

ACCORDING TO YUGI VAITHIYA CHINTHAMANI

In Yugi Vaithiya Chinthamani we cannot find any specific causes for **Thandaga vatham**. But the general causes of all types of vatha diseases have been described.

“என்னவே வாதந்தா னெண்பதாகும்
இகத்திலே மனிதர்களுக் கெய்யுமற்று
பின்னவே பெண்தனையே சேரஞ்செய்து
பெரியோர்கள் பிராமணரைத் தூடணித்தும்
வன்ன தேவச் சொத்தில் சேரஞ்செய்து
மாதாபிதா குருவை மறந்த பேர்க்கும்
கன்னவே வேதத்தை நிந்தை செய்தால்
காயத்திற் கலந்திடுமே வாதந்தானே.”

- யுகி வைத்திய சிந்தாமணி - பாடல் 243

- Breach of trust
- Abusing the pious, elderly people, the priests and also the holy spirits
- Exploitation of charitable properties
- Ingratitude towards mother, father and teacher.

“தானென்ற கசப்போடு துவர்ப் புறைப்பு
சாதகமாய் யிஞ்சுகிலும் சமைத்த வன்னம்
ஆனென்ற வறினது புசித்த லாலும்
ஆகாயத் தேறலது குடித்தலாலும்

பாணென்ற பகலுறக்க மிராவிழிப்பு
பட்டினியே மிகவறுதல் பார மெய்தல்
தேனென்ற மொழியார் மேற்சிந்தை யாதல்
சீக்கிரமாய் வாதமது செனிக்குந் தானே.”

- யுகி வைத்திய சிந்தாமணி - பாடல் 244.

- Excessive intake of bitter foods, astringent foods and punget foods
- Intake of dry and old cooked rice
- Drinking raw rain water
- Sleeping during day time and keeping awake during night
- Undue starving
- Lifting of heavy loads and sexual preoccupations.

“ஆனான வரன்றையே மதியாமாந்தர்
ஆகதி பரதேசியர்கட் கன்ன மீயார்
கோனான குருமொழியை மறந்த பேர்கள்
கொலை களவு பொய்காமங் குறித்த பேர்க்கு
ஊனான சடந்தன்னில் வாதம் வந்து
உற்பவிக்கும் வேதத்தின் உண்மைதானே.”

- யுகி வைத்திய சிந்தாமணி பாடல் 253.

- Disobedient attitude towards God
- Refusing food for destitute and sanyasis
- Disregarding the advice of priests
- Engaging in murdering
- Stealing and
- Lying

“பகரவே வாதமது கோபித் தப்போ

பண்பாக ஸ்திரீ கோஷ்டியது தான் செய்யில்

நகரவே வெகுதூரவழி நடக்கில்

நளிர்நான கற்றுமே பனிமேற் பட்டால்

மிகரவே காய்கள் கனிகிழங்கு தன்னை

மிகவருந்தி மீறியே தயிர்தான் கொண்டால்

முகரவே முதுகெலும்பை முறுக்கி நொந்து

முழங்காலும் கணைக்காலும் கடுப்பு உண்டாமே.”

- யுகி வைத்திய சிந்தாமணி பாடல் 285.

- Including in sexual act during the abnormally increased condition of vatha.
- Walking for a long distance
- Exposure to chillness and
- Excessive consumption of tubers, fruits, curd, etc.

ACCORDING TO AGASTHIYAR NAADI :-

“சொல்லவே வாதமது மீறிற்றானால்

சோர்வடைந்து வாயுவினால் தேகமெங்கும்

மெல்ல கை கால் களசதியுண்டாகும்

மெய்முடங்கும் நிமிர்வெண்ணாகத் திமிருண்டாகும்.”

- அகத்தியர் நாடி.

- Weakness of the limbs
- Sluggishness
- Stiffness of joints
- Numbness.

ACCORDING TO THERAIYAR VAAGADAM :-

“வாதவீறு அன்னயிறங்காது கடுப்புண்டாம் வண்ண முண்டாம்
மோது கட்டு ரோகம் சுர முண்டா மிருமலுமி முறங்கா தென்றும்
ஓது சூரிய வாதமனலாக நடுக்க முண்டாம் பொருள் களாய்த்
தீதெனவே நரம் பிசித்து சந்துகள் தேறும் கிடுக்குந் தானே.”

- தேரையர் வாகடம்.

- Loss of appetite
- Backache
- Fever
- Cough
- Sleeplessness
- Shivering and pain in joints

“தக்க வாயு கோபித்தால் சந்து வுளைந்து தலைநோவா
மிக்க மூரி கொட்டாவி விட்டங் கெரியு மலங்கட்டும்
ஓக்க நரம்பு தான்முடங்கு முலர்ந்து வாய் நீருறிவரும்
மிக்க குளிரும் நடுக்கமுமாம் மேனி குன்றி வருங்கானே.”

- தேரையர் வாகடம்.

I.e. vitiated vatha causes

- Pain in the joints
- Headache
- Excessive yawning
- Constipation
- Burning sensation of the body

- Paralysis
- Excessive salivation
- Chillness
- Tremors.

ACCORDING TO AGASTHIYAR KANMA KANDAM – 300

“நூலென்ற வாதம் வந்தவகை தானேது

துண்மையாய்க் கன்மத்தின் வகையைக் கேளு

காலிலே தோன்றியது கடுப்ப தேது

கைகாலில் முடக்கியது வீக்கமேது

கோலிலே படுகின்ற விருட்ச மான

குழந்தை மரந்தன்னை வெட்டல்மேல் தோல்சீவல்

நாலிலே சீவசெந்து கால் முறித்தல்

நல்ல கொப்பு தழை முறித்தல் நலித்தல் தானே.”

- அகத்தியர் கன்ம காண்டம்

In siddha system, many diseases are to be precipitated by kanma, which means the deeds good or bad committed by an individual in his previous and present births. The Genetic dispositions of certain diseases are probably the result of kanma. According to the above verse, vatha disease may also be precipitated by kanma.

ACCORDING TO SIKITCHA RATHNA DEEPAM :

“வாதத்தின் குணமே தன்னில் மயங்குந்தியெங்கும் மலர் சிவக்கும்
பாதங் குளிர்ந்து சருவாங்கம் பற்றிநடக்கு முகங் கடுக்குஞ்
சீதத்துடனே வயிறு புண்ணாஞ் சிரிப்பித்ததுந் தெறி மூச்சாம்
போதத் தண்ணீர் தான்வாங்கும் புகழும் பஞ்ச குணமாமே.”

“வாதமே கதித்த போது வாயவ மெழும்புங் கண்டீர்
வாதமே கதித்த போது வாயவ வந்திடுஞ் சன்னி தேசம்
வாதமே கதித்த போது வந்திடும் வியாதி மேலும்
வாதமே கதித்த போது வல்லுடல் மெலிந்து கெடல்லும்.”

- அகத்தியர்.

- Giddiness
- Chillness in the lower extremities
- Excessive thirst
- Pain in the face.

“அறியவிம் மூன்றின் தாண்மை சொன்னார் நந்தி
எறிய நல்வாத மெறிக்குங் கணங்கேளு
குறியெனக் கைகால் குளைச்ச விலாச் சந்து
பறியென நொந்துடற் பச்சைப் புண்ணாகுமே”

“புண்ணாய் வலிக்கும பொருமுங் குடலோடித்
தண்ணா மலத்தைத் தம்பிக்கும் போக்காது
ஒண்ணான ஆசன முறவே சுருக்கிடும்
மண்ணான குளிர் சீதம் பருத்திடும் வாதமே”

- திருமூல நாயனார்

- Joint pain in upper and lower limbs
- Flatulence
- Constipation
- Chillness of body.

ACCORDING TO AGATHIYAR 2000

“வாதத்தின் குணத்தைக் கேண்மின் வயிறூதும் பொருமிக் கொள்ளும்
தாதூற்ற உடம்பு கைகால் சந்துகள் கடுப்புத் தோன்றும்
தீதுற்ற சிறுநீர் தானுஞ் சிவந்துடல் கடுத்து விழும்
போதுள்ள வப்புசமாய் போதவும் பசித்திடாதே”
“கால்கை கடுக்கும் திமிருண்டாங் கண்ணுந் தூங்கிச் சோபிக்கும்
கோலங் செரியு மங்க மெல்லாங் குளிர்ந்து சந்து கனங்கொள்ளும்
சீல மிகுந்து சீர் காணில் சிறுநீர் வற்றி வருமிகவே
மலத்தடங்கண் மான னையாய் மாத வாத ரோகமிதே”

- அகத்தியர் 2000

When vatha is increased it causes,

- Flatulence
- Burning pain in the upper and lower extremities
- Burning and scanty micturition
- Loss of appetite
- Numbness in the limbs
- Chillness of body

ACCORDING TO YUGI VAITHIYA CHINTHAMANI :-

“வழுத்தவே மூலாதாரத்தைப் பற்றியே

மருவியே மேலேறி முதுகுண்டாதல்

விழுத்தவே சிரசில் வந்து வியர்வுமாகி

விகுவாக நோவாகி மேனி கன்னி

பத்தவே உடம்பெங்கும் பஞ்சு போலாம்

பாங்கான மலசல மஞ்சளாகும்

குழுத்தவே தெண்டமாம் வாதந்தன்னைக்

கூறினோங் குணமெல்லாங் கூர்ந்து பாரே”

- யுகிவைத்திய சிந்தாமணி பாடல் 288

“கூர்ந்திட்ட மலசலங்கள் துரிதமானால்

கொண்ட டக்கிப் பின்புதான் கொடிதாய் தள்ளி

ஊர்ந்திட்ட சரீரத்தி லுதிர மீறி

உறத் தேயத்து தலையதனி வெண்ணெய் வார்த்தில்

வார்த்திட்ட வழி நடக்கில் மெத்த வந்தான்

வாதந் தானுற்பவித்து நடை கொடாமல்

நூர்ந்திட்ட நரம்போடு எலும்பிற் சூழ்ந்து

நணுகியே யோடி நெஞ்சி வேறுந் தானே

- யுகிவைத்திய சிந்தாமணி பாடல் 289

யோகத்தின் முதல் நிலையில் நுழையும் போது உண்டாகும் கேட்டால், முதுகுத் தண்டின் கீழ்ப்புற மிருந்து தலை வரையிலும் கிளம்பிய வாயுவினால் ஏற்படும் நோயாகும். இந்நோயில் வியர்த்தல், உடல் இறுகுதல், வலித்தல், உடல் பழுத்துப் பஞ்சு போல் வெளுத்தல், மலமும் சிறுநீரும் மஞ்சளாதல் என்னும் குறி குணங்களைக் காட்டும்.

தண்டக வாயுவிலுண்டாகும் கழிச்சலை அடக்கி வருவதால் சின்னாட்கள் சென்ற பின்பு அக்கழிச்சல் அடக்க முடியாத அளவில் மிகுந்து கழியத் தொடங்கும். அதனால் உடல் முழுமையுமுள்ள கருதி தன்னளவில் மிகுந்து பாயும். அன்றியும் இந்நோய் முழுமையும் போகாதிருக்கையில் தலை முழுகல், அதிக தொலைவு நடத்தல் இவற்றை மேற்கொள்ளில் வளிக் குற்றம் மிகுந்து நரம்பு, எலும்புகளைப் பற்றிச் சூழ்ந்து நடக்க முடியாமற் செய்து அவ்வாயு நெஞ்சு வரையும் பாயும்.

- Bodypain
- Pallor
- Yellow colour faeces.
- Yellow colour urine
- Incontinence of faeces

ACCORDING TO THANVANTHIRI VAITHIYAM :-

“ஆமகட்டதளால் வாயு வதிகமாய்ச்சிலேற் பனத்தைத்

துமகட்டாகச் சேர்த்துத் தடித்திடுஞ்ச் சரீர மெல்லாம்

நோமக் கட்டான மேனி நுவலிளைப் பெயர்ப்புத் தோன்றும்

தாமக் கட்டான ரோகந் தண்டக வாதமாமே”

- தன்வந்திரி வைத்தியம்

ஆமத்துடன் வாயு அதிகரித்து கபத்துடன் சேர்ந்து சரீரத்தை ஸ்தூலிக்கச் செய்யும். சரீரம் வாட்டமடையும்.

- Generalized odema
- General weakness

ACCORDING TO ROGANIRNAYASARAM :-

“தேகம் தண்டத்தைப் போல் விழுந்து அசைவில்லாமல் இருக்கும்”

- ரோக நிர்ணய சாரம்

➤ Body is rendered like a log of wood.

ACCORDING TO JEEVARATCHAMIRTHAM :-

வாயுவானது எண்ணெய் வஸ்து, மந்தவஸ்து, சீர வீரிய வஸ்து, தயிர், அதிக லவணம், பகல் நித்திரை, பதினான்கு வேகங்களை மறித்தல் ஆகியவற்றால் பிறந்து சப்ததாதுக்களிலும் வியாபித்து அவைகளைக் கலைத்துவிட்டு ஆமாசயஸ்தானத்தை அனுசரித்துச் சிலேத்ம பித்தங்களைத் தன்னனுடன் சேர்த்துக் கொண்டு அவயவங்களின் செயலை மாற்றிவிடும். இதனால் ரசாதி தாதுக்களில் மரத்தல், சீதளம், உள்ளெரிச்சல், சரீரங் கனத்தல், ஞாபகமறதி, பிரமை, சுழலல் போலிருத்தல், இளைப்பு, அதிகவேதனை, நீர்க்கட்டு என்னும் இக்குறிகுணங்களோடு தேகமானது தண்டத்தைப் போல விழுந்து அசைதலும் நீட்டல் முக்கலும் எழுதலும் இல்லாதிருக்கும். இது தேகத்தை தண்டைப் போல நீட்டி விடுதலால் தண்டக வாதம் எனப்பேர்பெற்றது.

- அனுபோக வைத்திய தேவரகசியம் [முதல்பாகம்]

- Numbness
- Burning sensation
- Loss of memory
- Giddiness
- Dyspnoea

- Body pain
- Unurea
- Body is rendered like a log of wood
- Restricted movements.

ACCORDING TO SIKITCHARATHANADEEPAM :-

வாயுவானது மூலாதாரத்தைப் பற்றி மேலேறி முதுகிலிருந்து சிரசில் வந்து வியர்த்து நோயுண்டாக்கி சர்வாங்கத்தையும் நோயுறச் செய்வதுடன் மலசலம் மஞ்சள் வர்ணமாகவும் தேகத்தை தண்டகம் போல் நீட்ட விடாமல் செய்யும்.

- சிகிச்சா ரத்ன தீபம்.

- Yellow colour faeces
- Yellow colour urine
- Body is rendered like a log of wood

ACCORDING TO SAMBA SIVAMPILLAI DICTIONARY – IV :-

அவயவங்களை செயலறச் செய்து உடம்பை தண்டகத்தைப் போல் வீழ்த்தி நீட்டல், மடக்கல், அசைத்தல் முதலியவை இல்லாமல் சவத்தைப் போல் கிடக்கச் செய்யும் வாத நோயாகும்.

- T.V. சாம்பசிவம்பிள்ளை அகராதி IV

A kind of rheumatism characterized by great prostration in which the body is rendered like a log of wood, unable to stretch or fold the limbs and pass motion or urine. The whole body assumes rigidity due to stiffness just like a dead body.

ACCORDING TO THERAIYAR VAAGADAM :-

“மன்னிய தம்பஞ் சலங்கட்டும் குடைச்சலுண்டாம்”

- தேரையர் வாகடம்

தம்ப வாதத்தில் சலக்கட்டு [சிறுநீர் இறங்காமை] ஏற்படும். குடைச்சல் உண்டாகும்.

- Suppression of urine
- Body ache

Pathophysiology:

உணவாதி செயல்களினால் வாதம் வாதஸ்தானத்திலும் கபஸ்தானத்திலும் தன்னிலை வளர்ச்சியடைகிறது.

வாதஸ்தானத்தில் தன்னிலை வளர்ச்சியடைவதால் வியானன் துண்டப்பட்டு வலி உண்டாகிறது.

கபஸ்தானத்தில் தன்னிலை வளர்ச்சியடையும் போது சந்திக கபம் வறளும் நித்தப்பை வறளும். என்புகளில் உராய்வு ஏற்படும்.

நாட்பட்ட நிலையில் கபமும் தன்னிலை வளர்ச்சியடைந்து கபஸ்தானம் தூண்டப்பட்டு மண்ணின் கூறான என்பு வளர்ச்சி ஏற்படுகிறது.(Osteophyte)

Noi Kanippu Vivadham (Differential Diagnosis)

Some other types of Vatha diseases mimicking **Thandaga vatham** are mentioned. Careful and clear history taking and examination will reveal the correct diagnosis.

They are

1. Aasuva thamba vatham.
2. Ooruthamba vatham.

ஆசுவதம்ப வாதம்

”வாதமா யுடல்வெளுத்து வடிவெல் லானோம் மயக்கமோ டிருமலா யுளை யுண்டாம்
நேதமாய் நெஞ்சடைத்துப் பொறிக லங்கும் நெருப்பாக உடல்காணு நெடுமூச் சண்டாம்
கோதுதான் மயக்கத்தில் மருந்தி நீட்டால் குளிர்ச்சியாய்க் கோபிக்குங் கூச்சலுண்டாம்
பாதந்தான் திமிருண்டாய் முட்போலாகும் படுத்தஆ சுவதம்பம் பகரலாமே
பகரவே வாதமது கோபித் தப்போ பண்பாக ஸ்திரீகோஷ்டி யதுதான் செய்யில்
நகரவே வெகுதூர வழிநடக்கில் நளிரான காற்றுமே பனிமேல் பட்டால்
மிகரவே காய்கள்கனி கிழங்கு தன்னை மிகவருத்தி மீறியே தயிர்தான் கொண்டால்
முகரவே முதுகெலும்பை முறுக்கி நொந்து முழங்காலுங் கணைக்காலுங்
கடுப்புண்டாமே ”

யூ.கி. வை. சிந்தாமணி.

The clinical features are

- Paleness of the body.
- Cough.
- Heaviness in the chest.
- Numbness of both feet.
- Indulging in sexual intercourse, long walking, exposure to chill weather, eating curd, tubers etc worsen the disease.

ஊருத்தம்ப வாதம்

”ஆமென்ற வாதமது உள்ளடங்கி அடித்துடைதான் குறங்கிரண்டு மலவாய்ப் பற்றிக்

காமென்ற கைகாலில் விரலுஞ் சுற்றிக் கனத்துமே சாணியது பொதிந்தார் போலத் தேமென்ற சிரந்தனிலே பாரமுண்டாய்த் தேமெங்கு மூதியே திமிருண்டாம் நாமென்ற நடக்கொணா வொடுக்க மாகி நலியுருத் தம்பமது நணுகுங் காணே”

- யூகி. வை. தாமணிசிந்.

- Heaviness in both thighs.
- Feeling of cow dung applied over fingers of both hands and feet.
- Numbness in whole body.
- Difficulty in walking.

MODERN ASPECT

INTRODUCTION

The low back officially begins with the lumbar region of the spine directly below the cervical and thoracic regions and directly above the sacrum. The lumbar vertebrae, L1-L5, are most frequently involved in back pain because these vertebrae carry the most amount of body weight and are subject to the largest forces and stresses along the spine.

The spinal cord ends at approximately the L1 level, where it divides into many different nerve roots that travel to the lower body and legs. This collection of nerve roots is called the "cauda equina," which means horse's tail and describes the continuation of the nerve roots at the end of the spinal cord.

Vertebrae

The vertebral body is a thin ring of dense cortical bone. The vertebral body is shaped like an hourglass, thinner in the center with thicker ends. Outer cortical bone extends above and below the superior and inferior ends of the vertebrae to form rims. The superior and inferior endplates are contained within these rims of bone.

Pedicles

The pedicles are two short rounded processes that extend posteriorly from the lateral margin of the dorsal surface of the vertebral body. They are made of thick cortical bone.

Laminae

The laminae are two flattened plates of bone extending medially from the pedicles to form the posterior wall of the vertebral foramen.

The Pars Interarticularis is a special region of the lamina between the superior and inferior articular processes. A fracture or congenital anomaly of the pars may result in a spondylolisthesis.

Intervertebral Discs

Intervertebral discs are found between each vertebra. The discs are flat, round structures about a quarter to three quarters of an inch thick with tough outer rings of tissue called the annulus fibrosis that contain a soft, white, jelly-like center called the nucleus pulposus.

Flat, circular plates of cartilage connect to the vertebrae above and below each disc. Intervertebral discs separate the vertebrae, but they act as shock absorbers for the spine. They compress when weight is put on them and spring back when the weight is removed.

Inter-vertebral discs make up about one-third of the length of the spine and constitute the largest organ in the body without its own blood supply. The discs receive their blood supply through movement as they soak up nutrients. The discs expand while at rest allowing them to soak up nutrient rich fluid. When this process is inhibited through repetitive movement, injury or poor posture, the discs become thinner and more

prone to injury. This may be a cause of the gradual degeneration of the structure and function of the disc over time.

Facet Joints

Joints between the bones in our spine are what allow us to bend backward and forward and twist and turn. The facet joints are a particular joint between each vertebral body that helps with twisting motions and rotation of the spine. The facet joints are part of the posterior elements of each vertebra.

Each vertebra has facet joints that connect it with the vertebrae above and the vertebrae below in the spinal column. The surfaces of the facet joints are covered with smooth cartilage that help these parts of the vertebral bodies glide smoothly on each other.

Ligamentum Flavum

The ligamentum flavum is a strong ligament that connects the laminae of the vertebrae. The term "flavum" is used to describe the yellow appearance of this ligament in its natural state.

The ligamentum flavum serves to protect the neural elements and the spinal cord and stabilize the spine so that excessive motion between the vertebral bodies does not occur. It is the strongest of the spinal ligaments and often has a thinner middle section. Together with the laminae, it forms the posterior wall of the spinal canal.

LUMBAR VERTEBRAE

They are 5 in number, of which the first four are typical and the fifth is atypical. A lumbar vertebra is identified by;

- Its longer size
- By the absence of costal facets on the body.

Typical lumbar vertebra:

- Body is large and is wider from side to side than from before to backwards.
- Vertebra; foramen is triangular in shape and is larger than thoracic region.
- Pedicles are short and strong. They project backwards from the upper part of body.
- Laminae are short and thick broad. They are directed backwards and medially.
- The spine forms a vertical quadrilateral plate direct backwards and downwards.
- The transverse processes are thin and tapering and are directed laterally and slightly backwards.
- The superior articular processes lie farther apart than inferior. Each process bears a concave facet facing medially and backwards. Inferior articular process lies nearer to each other than superior.

FIFTH LUMBAR VERTEBRAE:

The most important distinguishing features are as follows.

1. The transverse process are small short and pyramidal in shape.
2. The distance between the inferior articular processes is equal or more than the distance between the superior articular process.
3. The spine is small and short.
4. Body is the largest of all lumbar vertebrae. Anterior surface is deep.
5. Pedicles are directed backwards and laterally
6. Superior articular facets look more backward than medially and inferior articular facet look more forwards.

LUMBAR SPONDYLOSIS

Back ache which was known as an ancient curse is now known as a modern International epidemic . 80% of people is affected by this symptom.

NOMENCLATURE:

Lumbar –low back region

Spondylosis –vertebral ankylosis

SYNONYMS:

Spondylo arthritis, Spondylo arthrosis, Spondylosis deformans, lumbar osteophytes, barre – lieou syndrome.

DEFINITION:

It is defined as a degenerative, non inflammatory disease characterized by destruction of articular cartilage and formation of new bone at joint surface margin.

EPIDEMIOLOGY:

GENDER

Men – 78%

Women – 89%

AGE

20% of men and 22% of women are affected between the age group of 45 -55 years.

30% of men and 28% of women are affected between the age group of 55 -64 years.

More than 40% of female are commonly affected. 27 -37% of people are asymptomatic. Internationally it can begin in persons as young as 20 years.

LOCATION:

L4 – L5 , L5 - S1 levels are commonly involved due to maximal movements occurring at their lumbar spine.

Sacralisation of L5 vertebrae most common after 5th decade.

AETIOLOGY:

- A. Previous injury to spinal joints.
- B. Scheuermans Kyphosis
- C. Degenerative causes

There are primary and secondary Lumbar Spondylosis:

1. Primary – senility, genetic factors, metabolic factors, manual labour.
2. Secondary – osteo arthritis, rheumatoid arthritis, spinal metastasis, tuberculosis of spine, pagets disease, scheuermans kyphosis.

D. INJURY:

Automobile accidents

Athletic injury (sports injury)

Previous injury with fracture or disc prolapses

Sudden jerks or frequent forward bending

Heavy lift bearing

E.OCCUPATIONAL CAUSES:

Occupational stress and strain

Poor posture

Obesity

The physical strain,integrity of work and duration of working hours all constitutes the occupational strain.

F.HEREDITARY FACTORS:

Congenital narrowing of the lumbar spinal canal

Segmental defects – hermi vertebrae, fused vertebrae

Acquired narrowing of lumbar spinal canal

Osteophytes

Sacralisation of L5 vertebrae

Ossified part of longitudinal ligament

Hypertrophied ligamentum flavum

Inter vertebral disc protrusions:

This is most common in lumbar region which is due to chronic weight bearing , degeneration of Intervertebral discs and if it involves several discs with osteoarthritis liable to interfere with the blood supply of cord, compression of nerves and this leads to further damage.

LUMBAR DISC DISEASE:

Degenerative process is divided into three stages:

1.Stage of dysfunction:

Seen between 15 to 45 years of age.

Circumferential and radial tears seen in the disc annulus Localized synovitis of the facet joints is seen.

2.Stage of instability:

Seen between 35 to 70 years

There is internal disruption of the disc

Progressive disc resorbtion takes place.

Degeneration of facet joints with lax capsules , subluxation and joint erosions are seen.

3.Stage of stabilization:

Seen over 60 years of age.

Progressive development of hypertrophic bone about the disc and facet joints leading to segmental stiffening or frank ankylosis is seen.

Prolapsed Intervertebral disc:

- a.Disc bulging or protrusion
- b. Prolapsed disc
- c. Extruded disc
- d.Sequestered disc

Etiology of disc herniation:

- Use of machine tools
- Jobs requiring heavy and repetitive weight lifting
- Cigarette smoking, tobacco consuming
- Operation of motor vehicles
- Anxiety and depression
- Stressful occupation as in doctors and police etc.
- Obesity and improper postural habits.
- Women with more number of pregnancies.

CLINICAL FEATURES:

1.LOW BACK ACHE:

It is common in second decade ,disc disease and disc herniation in the 3rd or 4th decade. The usual history if lumbar disc herniation is of repetitive low back pain, radiating to the buttocks and decreased by rest in is increased by flexion episode, sitting, straining,sneezing, coughing etc..pain is decreased by rest and in semifowler position.

2. RADICULOPATHY:

Pain in distribution of sciatic nerve and is invariably due to disc herniation. This is called sciatica. Radicular pain from nerve root compression due to herniated disc is evidenced by the leg pain, equal to or more than the back pain. pain radiating to sacroiliac region, buttocks and thighs.

3. NERVE ROOT COMPRESSION:

About 95% of disc prolapse, takes place through the L4 – L5 region compressing the L5 nerve root. The other nerve roots commonly involved are L4 and S1 due to disc prolapse L3 –L4 and L5 –S1 respectively.

LUMBAR OSTEOARTHRITIS:

It is a degenerative process defined radiologically by joint space narrowing, osteophytosis, subchondral sclerosis, and cyst formation . Osteophytes included within this definition fall into one of the two primary clinical categories:

1. Spondylosis deformans:

Describes bony outgrowths arising primarily along the anterior and lateral perimeters of the vertebral end-plate apophyses . These osteophytes have minimal effect on intervertebral disc height and are frequently asymptomatic.

2. Intervertebral osteochondrosis:

Describes the formation of more pathological end-plate osteophytes, associated with disk space narrowing, and vertebral body reactive changes .These bony growths may compress nerves with resulting radiculopathy or spinal stenosis. Moreover, these bony projections may limit joint mobility.

DEGENERATIVE DISC DISEASE

It refers to back pain symptoms attributable to intervertebral disc degeneration. Such pathologic changes include disk desiccation, fibrosis, and narrowing.

The annulus may bulge, fissure, or undergo mucinous degeneration.

LUMBAR SPONDYLOSIS

Spondylosis happens when a crack forms in the bony ring on the back of the spinal column. In this condition, the bone that protects the spinal cord fractures as a result of excessive or repeated strain. The area affected is called the pars interarticularis, so doctors sometimes refer to this condition as a pars defect.

The term spondylosis may be applied to any and all degenerative conditions affecting the discs, vertebral bodies, and/or associated joints of the lumbar spine.

The high incidence of simultaneous degenerative changes to the intervertebral disc, vertebral body, and associated joints suggests a progressive and dynamic mechanism.

Intervertebral disks are believed to undergo a “degenerative cascade” of three overlapping phases.

Phase I (Dysfunction Phase):

Phase I describes the initial effects of repetitive microtrauma with the development of circumferential painful tears of the outer, innervated

anulus, and associated end-plate separation that may compromise disc nutritional supply and waste removal. Such tears may coalesce to become radial tears, more prone to protrusion, and impact the disk's capacity to maintain water, resulting in desiccation and reduced disk height.

Phase II (Instability Phase):

Phase II is characterized by the loss of mechanical integrity, with progressive disc changes of resorption, internal disruption, and additional annular tears, combined with further facet degeneration that may induce subluxation and instability.

Phase III (Stabilization Phase):

In this phase; continued disk space narrowing and fibrosis occurs along with the formation of osteophytes.

LUMBAR SPONDYLITIS

Spondylitis is a condition where there is an inflammation of lumbar spine. The inflammation can be mild, moderate or severe leading to a range of severity of symptoms. There is not only inflammation of the vertebra but also some amount of fusing, which gives painful stiffness.

Symptoms:

- Pain associated with stiffness.
- Restricted mobility of the back, disturbing day to day life activities.
- There may also be deformity of the spine over the period of time.

LUMBAR SPONDYLOLYSIS

Spondylolysis is thought to be caused by repeated strains that damage the lower opine over time. The repeated strains can eventually lead to an overuse injury in the pars interarticularis. The most common location for this to occur is in the lowest vertebrae of the spine.

Symptoms:

- People with spondylolysis may feel pain and stiffness in the center of the low back.
- Bending fully backward increases pain.
- Symptoms typically get worse with activity and go away with rest.
- Individuals may eventually experience pain that radiates down one or both legs.

Lumbar spondylolisthesis

The word spondylolisthesis is derived from the Greek words *spondylo*, meaning spine, and *listhesis*, meaning to slip or slide. It is a descriptive term referring to slippage (usually forward) of a vertebra and the spine above it relative to the vertebra below it.

The etiologies can be classified as;

- Congenital (dysplastic),
- Spondylolytic (isthmic),
- Degenerative,
- Traumatic,

- Pathologic,
- Iatrogenic (eg, postoperative).

The spondylolytic type is the most common form of spondylolisthesis. It affects the region of the pars interarticularis.

A defect at this point functionally separates the vertebral body, pedicle, and superior articular process from the inferior articular process and the remainder of the vertebrae. Thus, the defect cleaves the vertebra into 2 parts. The portion of the vertebra posterior to the defect remains fixed, and the anterior portions are free to potentially slip forward relative to the posterior structures and spine below. A bilateral pars defect is needed to allow slippage.

EXAMINATION OF THE LUMBAR REGION:

INSPECTION:

Any postural defects like scoliosis, or lordosis or kyphosis.

PALPATION:

1. TENDERNESS:

- Diffuse tenderness over the lower back
- Localized tender infiltrates of the skin and subcutaneous tissue
- Palpable tender indurations of small Intervertebral muscles
- Tenderness at the level of posterior articulation of the involved segment and pain on percussion of affected Intervertebral space.

2.MOVEMENTS:

All the movements of the spine are tested and found to be restricted in all directions.

3.CLINICAL TESTS:

a) Forward bending to touch the toes.

b) Straight leg raising test

Patient is in supine position, the examiner raises the leg straight one after the other. Upto 30 degree nerve is not put under the stretch. Between 30 and 70 degree nerve encounters the prolapsed disc and the patient complains of pain. Beyond 70 degree if the patient complains of pain, it is usually not due to disc prolapse but could be due to sacroiliac joint involvement.

c) Contralateral well leg raising test is more pathognomonic of disc prolapse than SLR test.

d) Femoral nerve stretch test

e) Lasegue's test

f) Braggard's test

g) Flip test

The patient is in prone position and asked to lift the leg straight.this puts a stretch on the femoral nerve. If the patient complains of pain, it indicates a high level disc prolapse(L1-L3).

DIAGNOSIS

Diagnosis is mainly based on X-rays

1. X- Ray Lumbar Spine

- AP view –look for vertebral column, any pedicular lesion.
- Lateral view –shape &size of vertebral body.
- Integrity of ant .& post .walls
- Inter vertebral disc space
- Oblique view– side to side collapse.
- Any deviation in the longitudinal axis of vertebral column.

2. Computed Tomography:

Very useful, non-invasive, painless outpatient procedure. Help to detect the foraminal structures and lateral disc prolapse.

3. MRI

Extremely useful, pain less, non inflammatory process. Help to detect intra- spinal lesion, examine entire spine, identifies degenerative disc.

4. Myelograph

Injecting radio opaque dye inserted spinal canal and taking radiographs of back. Helping in detecting intraspinal lesion, spinal stenosis, causes of previously operated backs.

5. Other Tests

Discography, Bone scans, EMG

DIFFERENTIAL DIAGNOSIS

1. Multiple myelomas
2. Ankylosing spondylitis
3. Vascular insufficiency
4. Osteoporosis with stress fractures
5. Extra dural tumors.
6. Peripheral neuropathy
7. Herpes zoster
8. Multiple sclerosis

COMPLICATIONS

- Severe spinal stenosis
- Paraplegia
- Cauda equina syndrome
- Neurogenic claudication.

MATERIALS AND METHODS

The Clinical study on **Thandaga vatham (Lumbar spondylosis)** was carried out in the post graduate department of Pothu Maruthuvam, Govt Siddha Medical College, Palayamkottai. In this study 20 patients were treated as out-patients and the other 20 as in-patients . After discharge the patients were also followed as out patients.

Selection of the Patients:

Inclusion criteria:

1. 1.Age : 20-70 years
2. 2.Sex: Male and Female
3. 3.Patients having the symptoms of
 - Pain in the lumbar region
 - Pain in the lower limbs
 - Restricted movements
 - Tenderness
 - Numbness
 - Constipation

Exclusion criteria:

- Hypertension
- Diabetes mellitus

- Cardiac disease
- Spina bifida
- Diabetes mellitus
- Osteomyelitis
- Use of narcotic drugs
- Pott's spine
- Trauma
- Ankylosing spondylitis
- Serious systemic illness
- Pregnancy & lactation
- Neoplasm
- Congenital anomalies of spine

Diagnosis:

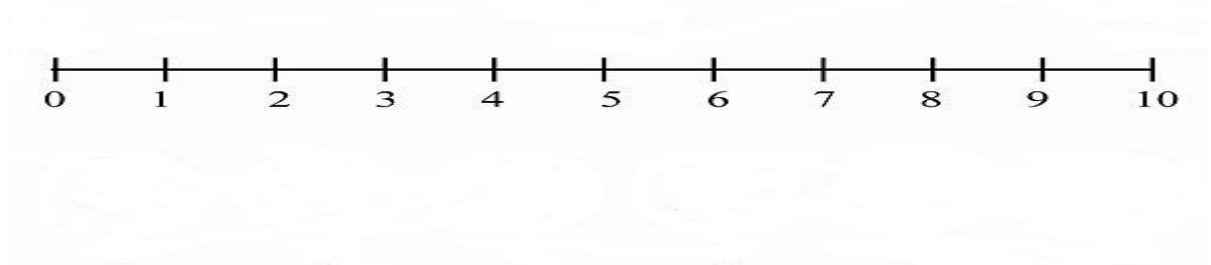
The diagnosis was made by the following siddha diagnostic methods, Nilam, Kaalam, Poriyalaridhal, Pulanalarithal, Vinaadhal, Mukkutra Nilaigal, Udal Thathukal Nilai and Envagai Thervugal. Thus the diagnosis of **Thandaga Vatham** was obtained and confirmed by X-ray.

Assessment of results:

The results were assessed on the basis of symptomatic improvement and **universal pain assessment scale** . For instance, for the

symptom of pain, the one end of the scale was marked with 0 which represented “no pain” and the other end marked with 10 representing “worst possible pain”.

UNIVERSAL PAIN ASSESSMENT SCALE:



- A. 0 : No Pain
- B. 1 -3 : Mild pain
- C. 4-6 : Moderate pain
- D. 7-10 : Severe pain

(Reference: Clinical Manual for Nursing Practice. (National Institute of Health Warren Grant Magnuson Clinical Center))

Investigation:

The following investigations were done in all selected patients in the laboratory of Govt Siddha Medical College, Palayamkottai.

Blood:

- Total WBC Count
- Differential WBC count
- Erythrocyte Sedimentation Rate
- Haemoglobin
- Blood Sugar

- Blood Urea
- Serum Creatinine
- Serum Bilirubin
- Serum Cholesterol.

Urine:

- Albumin
- Sugar
- Deposits

Radiological Investigations:

X – Ray: Lumbosacral spine

AP – View

Lateral View

Treatment

Vathathirku chooranam-2gm with hot water after meals, twice a day.

The Bio - Chemical analysis was done in the department of Bio Chemistry and Pharmacological analysis was done in the pharmacological laboratory of Government Siddha Medical College, Palayamkottai.

RESULT OBSERVATION

For the clinical study 20 Inpatients and 20 Out patients were selected, treated in PG-I Department of PothuMaruthuvam G.S.M.C Palayamkottai. Result were observed with respect to following criteria.

- 1) Sex Distribution
- 2) Age Distribution
- 3) Kaalam
- 4) Thegi
- 5) Gunam
- 6) Religion
- 7) Thinai
- 8) Diet
- 9) Occupational Status
- 10) Socio- Economical Status
- 11) Etiological Factor
- 12) Mode of Onset
- 13) Duration Of Illness
- 14) Clinical Manifestation
- 15) Gnanendrium
- 16) Kanmendrium

- 17) Kosam
- 18) Conditions Of Mukkutram (Vatha,Pitha,Kabha)
- 19) Udal Kattukal
- 20) Envagai Thervugal
- 21) Neikuri
- 22) Gradation Of Results
- 23) Radiological findings
- 24) Outcome measurement primary out come
- 25) X-ray
- 26) Laboratory Findings

1) Sex Distribution

Table1. Illustrates sex distributions and relative percentage

S.No	Sex	Out Patients (OP)		In Patients (IP)	
		No Of Cases	Percentage	No Of Cases	Percentage
1	Male	6	30	8	40
2	Female	14	70	12	60

Among 20 Out Patients , 30% were males and 70% females

Among 20 Inpatients 40% were males and 60% females.

2) Age Distribution

Table2. Illustrates the age distributions and its relative Percentage.

S.No	Age group in years	Outpatients (OP)		Inpatients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	21-30	1	5	-	-
2	31-40	5	25	1	5
3	41-50	9	45	3	15
4	51-60	4	20	12	60
5	ABOVE-60	1	5	4	20

Among the 20 Outpatients.

5% were in the age group between 21-30yrs. 25% were in the age group between 31-40yrs. 45% were in the age group between 41-50.20% were in the age group between 51-60yrs. 5% were in the age group between above 60yrs.

Among the 20 Inpatients

5% were in the age group between 31-40yrs. 15% were in the age group between 41-50yrs. 60% were in the age group between 51-60yrs. 20% were in the age group between above 60yrs.

3) Kaalam.

Table:3 Illustrates Kaalam and relative percentage

S.No	Kaalam	Out Patients (OP)		In Patients (IP)	
		No of Cases	Percentage	No of cases	Percentage
1	Vadha Kaalam first 33yrs 4months	4	20%	-	-
2	Pitha Kaalam second 33yrs and 4 months	16	80%	20	100 %
3	Kabha Kaalam Third 33yrs and 4months	-	-	-	-

Among 20 Outpatients.

20% under vatha kaalam. 80% under pithakaalam.

Among 20 Inpatients.

20% under Vathakaalam. 100% under pithakaalam.

4) Constitution of the Body

Tab-4 – Illustrate constitution of the body and its Relative Percentage.

S.NO	Constitutions of the body	Out Patients (OP)		In Patients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Vadha thegi	10	50	10	50
2	Pitha thegi	5	25	6	30
3	Kabha thegi	2	10	2	10
4	Thontha thegi	3	15	2	10

Out patients :

50% outpatients were vatha thegi, 25% pitha thegi, 10% kaba thegi and 15% thontha thegi.

Inpatients :

50% inpatients were vathathegi, 30% pitha thegi, 10% kaba thegi and 10% thontha thegi.

5) Gunam.

Table5- Shows Gunam and its relative percentage.

S.No	Gunam	Out Patients (OP)		In Patients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Sathuvagunam	-	-	-	-
2	Rajogunam	20	100	20	100
3	Thamogunam	-	-	-	-

In patients or out patients 100% are Rajogunam.

6) Religion Distribution.

Table6. Illustrates Religion Distribution and its relative.Percentage

S.No	Religion	Out Patients (OP)		In Patients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Hindu	19	95%	18	90%
2	Christian	-	-	1	5%
3	Muslim	-	-	1	5

Among 20 Outpatients

95% of cases were Hindus.

Among 20 Inpatients

90% were Hindus, 5% were Christians and 5% were Muslims.

7)Thinai

Table : 8 Illustrates the thinai. And relative percentage.

S.No	Thinai	Outpatients (OP)		Inpatients (IP)	
		No of Cases	Percentage	No of cases	Percentage
1	Kurinji	-	-	-	-
2	Mullai	-	-	-	-
3	Marutham	18	90%	17	85%
4	Neithal	2	10%	3	15%
5	Palai	-	-	-	-

Among 20 Outpatients-

90%cases were in Marutham and 10% cases were Neithal.

Among 20 Inpatients-

85% cases were in Marutham and 15% cases were Neithal.

8) Diet

Table8. Diet Distribution and its relative percentage

S.No	Diet	Out patients (OP)		In Patients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Vegetarian	0	0	0	0
2	Mixed diet	20	100	20	100

All of the 40 cases are mixed diet

9) Occupation

Table -9 Illustrates the Occupation.and relative percentage.

S.No	Occupation	Outpatients (OP)		Inpatients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Agricultural labours	3	15	2	10
2	Cooly	5	25	1	5
3	Watchman	2	10	-	-
4	Housewife	6	30	10	50
5	Tailors	2	10	2	10
6	Driver	1	5	-	-
7	Teacher	1	5	2	10
8	Salesman	-		2	10
9	Electrician	-		1	5

Among 20 Outpatients.

15% were Agricultural labours, 30% were Housewife, 10% Tailors, 5% Drivers. 5% Cooli, 10% Watchman, 5% Teachers were observed.

Among 20 In patients.

10% Agricultural labours, 50% House wife , 10% Tailors. 5% Cooli, 10% Teachers, 10% Salesman, 5% Electrician.

10) Socio-Economic Status

Table10- Illustrates the Socio-Economic Status and relative percentage

S.No	Socio Econmic Status	Out patients (OP)		In patients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Rich	-	-	-	-
2	Middle class	8	40	5	25
3	Poor	12	60	15	75

In poor Socioeconomic status Outpatients 60% and Inpatients 75%

In middle class OP-40% and IP- 25%

11) Aetiological Factors

Table 11 Illustrates the Aetiological Factors.and Relative percentage

S.No	Preciptating Factors	Outpatients (OP)		Inpatients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Age	4	20	5	25
2	Occupation	9	45	10	50
3	Trauma	2	10	3	15
4	Obesity	5	25	2	10
5	Congenital	-	-	-	-

Among 20 Outpatients

Aetiological factor of the disesase due to age 20%, Occupation 45% ,Trauma 10%, Obesity 25%

Among 20 Inpatients

Aetiological factor of the disease due to age 25% ,Occupation 50% Trauma 15%, Obesity 10%

12) Mode of onset

Table 12 – Illustrates the mode of onset.and relative percentage.

S.No	Mode of Onset	Out Patients (OP)		In Patients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Acute	1	5	-	-
2	Chronic	19	95	20	100

In Opstudy 5% of cases are acute onset, 95% of cases onset is chronic.

In Ipstudy 100% of cases onset is chronic.

13) Duration of Illness

Table:13 Illustrates Duration of Illness and relative percentage.

S.No	Duration of Illness	Out Patients (OP)		In Patients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	10-15days	2	10	1	5
2	15-30days	3	15	3	15
3	1-2months	1	5	2	10
4	2-3months	3	15	1	5
5	Above 3months	11	55	13	65

Among 20 Outpatients

Duration of illness in 10-15 days is 10%,15-30days 15%,1-2months 5%, 2-3months 15%,Above 3months 55%.

Among 20 Inpatients

Duration of illness in 10-15days is 5%, 15-30 days 15%,1-2 months 10%,2-3months 5%, Above 3months 65% .

14) Clinical Manifestations

Table 14 – Illustrates the Clinical Manifestations.and relative percentage.

S.No	Signs and Symptoms	Inpatients (IP)		Outpatients (OP)	
		No of cases	Percentage	No of cases	Percentage
1	Pain in the Lumbar region	20	100	20	100
2	Pain in the lower limbs	20	100	20	100
3	Restricted movements	20	100	20	100
4	Tenderness	9	45	8	40
5	Numbness	15	75	14	70
6	Constipation	6	30	15	75
7	Mental depression	2	10	5	25

100% of the patients had pain in the lumbar region and lower limbs both in IP & OP. 100% OP & IP patients had restricted movements 40% of OP patients had tenderness and 45% IP patients had tenderness.

Numbness present in 75% OP & 70% IP patients. Constipation persists in 30% OP & 75% IP Patients. 10% of OP patients & 25% IP patients are mentally depressed.

15) Gnanendrium reference

Table 15 – Illustrates the condition of Gnanendrium and relative percentage.

S.No	Gnaendrium	Inpatient (IP)		Outpatient (OP)	
		No of cases	Percentage	No of cases	Percentage
1	Mei	20	100	20	100
2	Vai	-	-	-	-
3	Kan	-	-	-	-
4	Mooku	-	-	-	-
5	Sevi	-	-	-	-

Among Outpatients 20

Mei was affected 100% of cases.

Among Inpatients 20

Mei was affected 100% of cases.

16) Kanmendrium

Table 16- Illustrates Kanmendrium and relative percentage.

S.No	Kanmendrium	Outpatient (OP)		Inpatients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Vaai	-	-	-	-
2	Kaal	20	100	20	100
3	Kai	-	-	-	-
4	Eruvai	6	30	15	75
5	Karuvai	-	-	-	-

Among Outpatients 20 cases

Kaal affected in 100% of cases, Eruvai affected in 30% of cases.

Among Inpatients 20 cases

100% of cases are affected in kaal, 75% of case affected in Eruvai.

17) Kosam

Table 17 Illustrates Kosam and relative percentage.

S.No	Kosam	Inpatient (IP)		Outpatient (OP)	
		No of cases	Percentage	No of cases	Percentage
1	Annamyakosam	-	-	-	-
2	Pranamyakosam				
3	Manomyakosam	2	10	5	25
4	Vingnayanamyakosam	20	100	20	100
5	Aanandamyakosam	2	10	2	10

Among 20 Outpatients

10% of cases affected in manomyakosam and Anandamyakosam.

100% of cases affected in vingnayanamyakosam

Among 20 Inpatients

Manomyakosam affected in 25% of cases. Vignanamyakosam affected in 100% of cases. Anandamyakosam affected in 10% of cases.

18) Conditions of Mukkutram

A) Disturbance in Vaatham

S.No	Disturbance In Vaatham	Outpatients(OP)		Inpatients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Piranan	-	-	-	-
2	Abanan	10	50	10	50
3	Viyanan	20	100	20	100
4	Udhanan	-	-	-	-
5	Samanan	20	100	20	100
6	Nagan	-	-	-	-
7	Koorman	-	-	-	-
8	Kirukaran	-	-	-	-
9	Dhevathathan	20	100	20	100
10	Dhananjeyan	-	-	-	-

In both IP and OP Study

Abanan was affected in 50% of cases OP 50% of cases of IP.

Viyanan and samanana was affected 100% in both OP and IP cases.

Dhevathatham was affected 100% of OP and IP cases. Koorman Nagan and Dhananjeyan was found to be normal in all Cases.

B) Disturbances in Pitham

S.No	Disturbances in Pitham	Outpatients (OP)		Inpatients (IP)	
		No of cases	Percentage	NO of cases	Percentage
1	Analpitham	-	-	-	-
2	Ranjagam	-	-	2	10
3	Prasagam	-	-	-	-
4	Alosagam	-	-	-	-
5	Sathagam	20	100	20	100

In both OP and IP study

Ranjagapitham affected in 10% cases of IP.

Prasagam , sathagam was found to be normal in all cases.

C) Disturbances in Kabham-

S.No	Disturbances in Kabham	Outpatients (OP)		Inpatients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Avalambagam	-	-	-	-
2	Kilethagam	-	-	-	-
3	Pothagam	-	-	-	-
4	Tharpagam	-	-	-	-
5	Santhigam	20	100	20	100

In both OP and IP study

Santhigam affected in 100% cases of OP and IP. Pothagam found to be normal in OP and IP cases.

19) Involvement of udal thathukkal

Table 19 – Illustrates the involvement of udalthathukkal and relative percentage.

S.No	Udal Thathukkal	In Patients (IP)		Out Patients (OP)	
		No of cases	Percentage	No of Cases	Percentage
1	Saaram	20	100	20	100
2	Senneer	-	-	2	10
3	Oon	-	-	-	-
4	Kozhuppu	15	75	15	75
5	Enbu	20	100	20	100
6	Moolai	-	-	-	-
7	Sukkilam/Suronitham	-	-	-	-

In both OP and IP study

Saaram Enbu affected in 100% of cases of OP & IP. Senneer affected in 10% of cases of IP. Kozhuppu affect 75% in OP & IP.

20) Conditions of Envagai thervugal

Table 20 - Illustrates the conditions of Envagai thervugal and relative percentage.

S.No	Envagaithervugal	Inpatients (IP)		Outpatients (OP)	
		No of cases	Percentage	No of cases	Percentage
1	Naa	-	-	2	10
2	Niram	-	-	2	10
3	Mozhi	-	-	-	-
4	Vizhi	-	-	2	10
5	Malam	-	-	2	10
6	Moothiram	-	-	-	-
7	Sparisam	20	100	20	100
8	Naadi (Thontha Naadi)	20	100	20	100

In both IP and OP study

Naa was affected in 10% of IP cases. Malam affected in 10% cases of IP. Sparisam affected in 100% cases of OP and IP. Thonthanaadi found in 100% cases of OP and IP. Mozhi Moothiram was found to normal in OP and IP cases. Niram affected 2% of IP cases.

21.Neikuri

Table 21 Neikuri Condition and relative percentage.

S.No	Neikuri	Outpatients (OP)		Inpatients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Spreading like snake	10	50	12	60
2	Spreading like ring	2	10	1	5
3	Spreading like pearl	4	20	6	30
4	Spreading like pearl then snake	4	20	1	5

Out of 20 Outpatients

50% had vathaneer ,10% had pithaneer , 20% had kabhaneer,
20% spreads like pearl then snake

Out of 20 Inpatients

60% had vathaneer, 5% had pithaneer, 30% kabhaneer , 25%
spreads like pearl then snake.

22. Gradation of Results

Table 22 – Illustrates gradation of results. And relative percentage.

S.No	Results	Outpatients (OP)		Inpatients (IP)	
		No of cases	Percentage	No of cases	Percentage
1	Improved	16	80	15	75
2	Moderately improved	4	20	5	25
3	No improvement	-	-	-	-

In OP 80% were improved & 75% were improved in IP.

In OP 20% were moderately improved and 25% of IP were moderately improved.

23.Radiological Findings

Table 23 Illustrates Radiological findings.And relative percentage.

S.NO	Radiological findings	Inpatients (IP)		Outpatients (OP)	
		NO of cases	Percentage	No of cases	Percentage
1	Degeneration	20	100	20	100
2	Narrowing IVS	7	35	9	45
3	Osteophyte changes	20	100	20	100
4	Fusion of osteophyte	-	-	1	5
5	Loss of lordosis	4	20	4	20
6	Excessive lordosis	-	-	-	-
7	Posterior Displacement	-	-	-	-

Outpatients 20

100% shows Degenerative Osteophytic changes.35% narrowing of Intervertebral sapace. 20% loss of lordosis.

In patients 20

100% shows Degenerative changes,Osteophytic changes.45% narrowing Intervertebral space. 5% fusion of osteophytic changes 20% loss of lordosis.

24.Outcome Measurement Primary Outcome Observation

Table no : 24 Pain Assessment Scale

S.No	Pain scale	Out patients				In patients			
		Before treatment		After treatment		Before treatment		After treatment	
		No of cases	Percentage	No of cases	Percentage	No of cases	Percentage	No of cases	Percentage
1.	No pain (0)	-	-	15	75	-	-	15	75
2.	Mild (1-3)	5	25	5	25	7	35	-	-
3.	Moderate (4-6)	8	40	5	25	7	35	5	25
4.	Severe (7-10)	7	35	-	-	6	30	-	-

Numeric Rating scale (0-10) for pain:

- 0 No Pain
- 1-3 Mild pain (Nagging, Annoying, Interfering little with ADLs)
- 4-6 Moderate pain (Interferes significantly with ADLs)
- 7-10 Severe pain (Disabling, unable to perform ADLs
(ADLs- Activities of daily living))

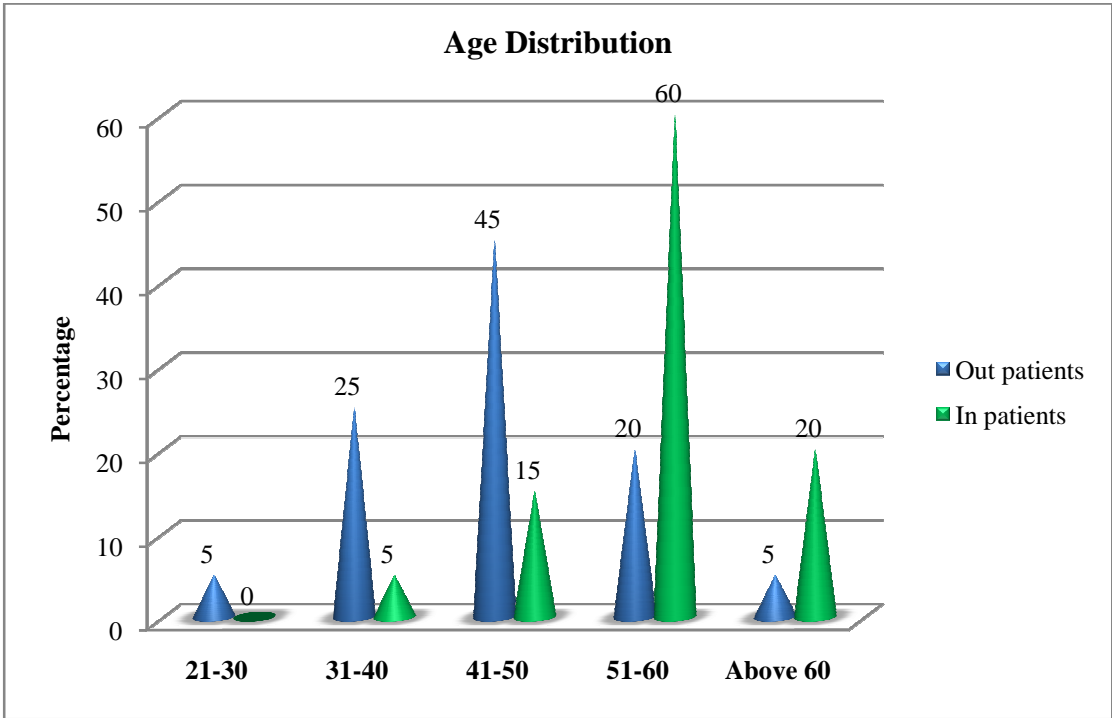
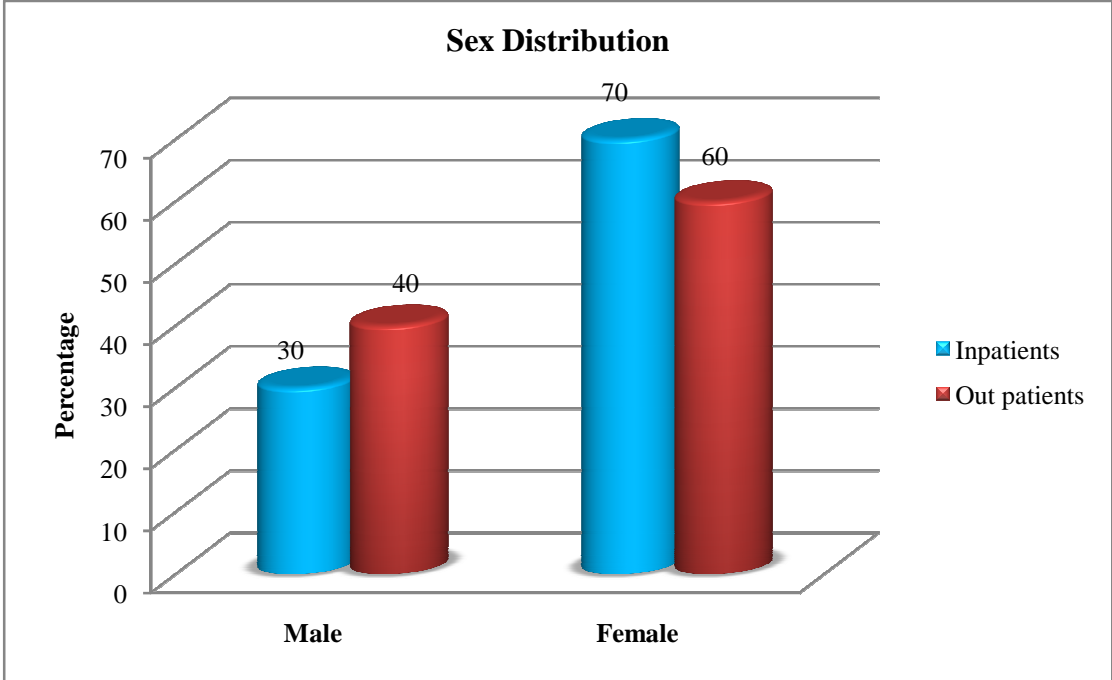
Ref National Institute of Health, Pain – Clinical manual for nursing practice. McCaffery, M., & Beebe,A (1993).

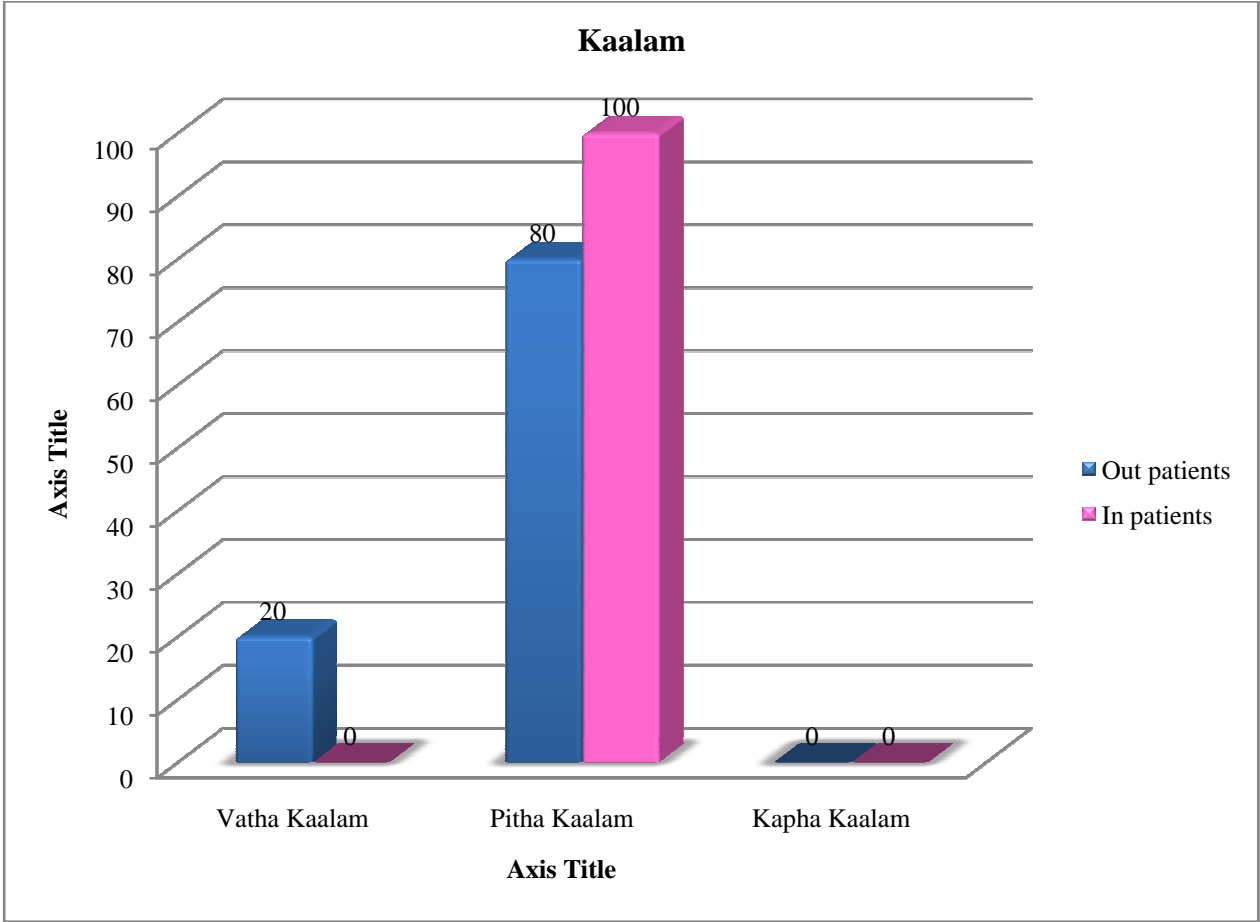
Among out patients:

After treatment 15 (75%) of op patients relieved from pain, 5 (25%) cases had mild pain and moderate pain

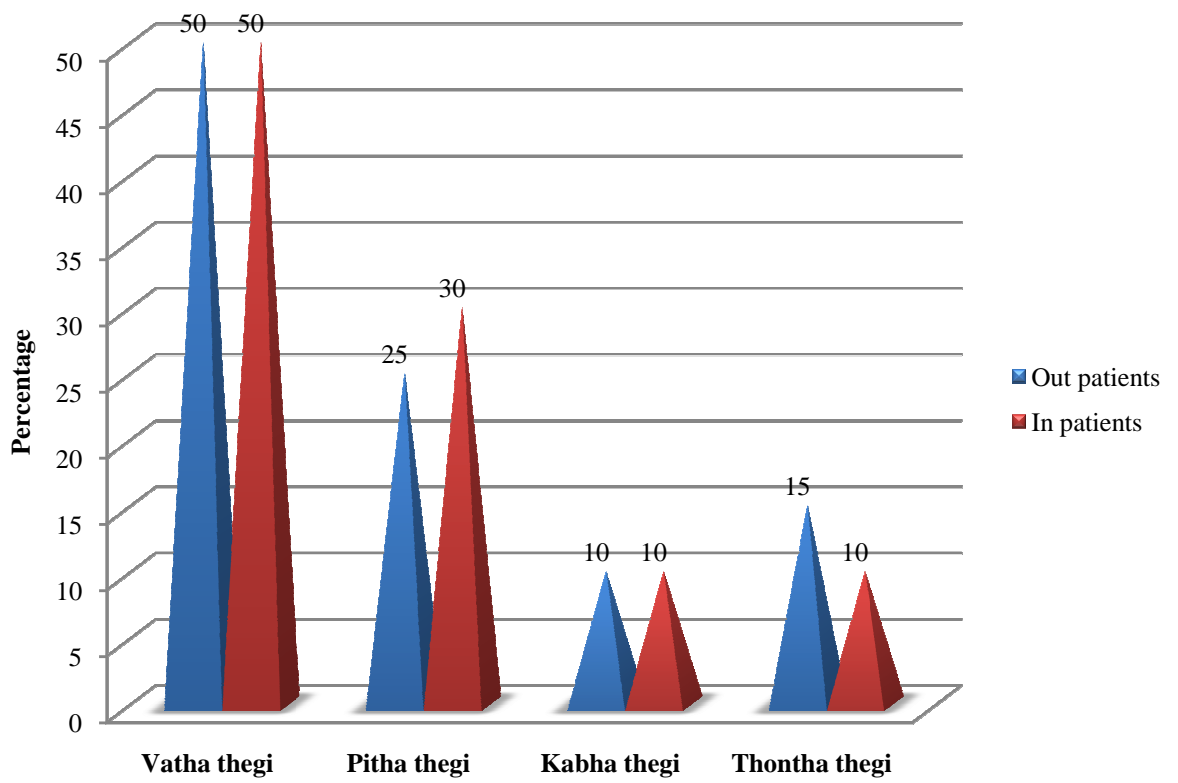
Among In patients:

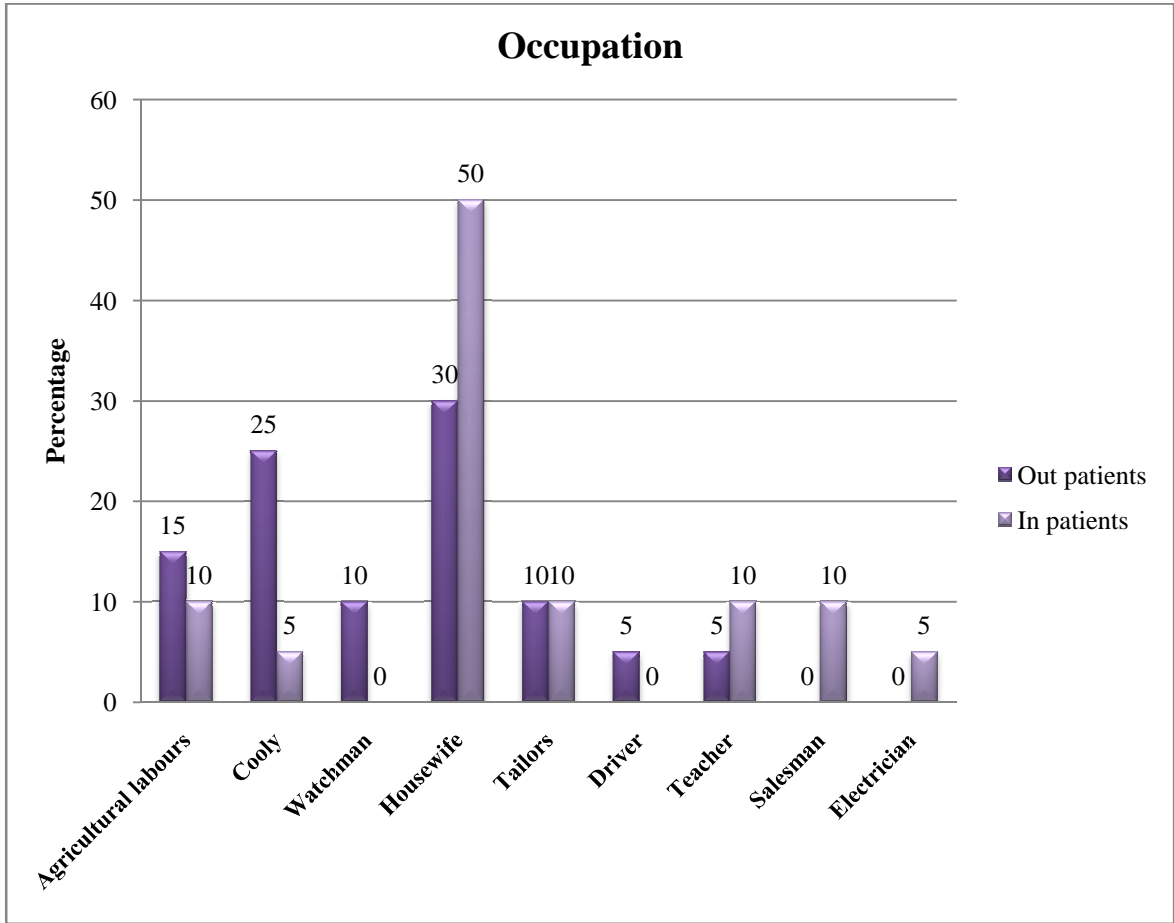
After treatment among 20 cases 15 cases (75%) relieved from pain 5 (25%) cases had mild pain.



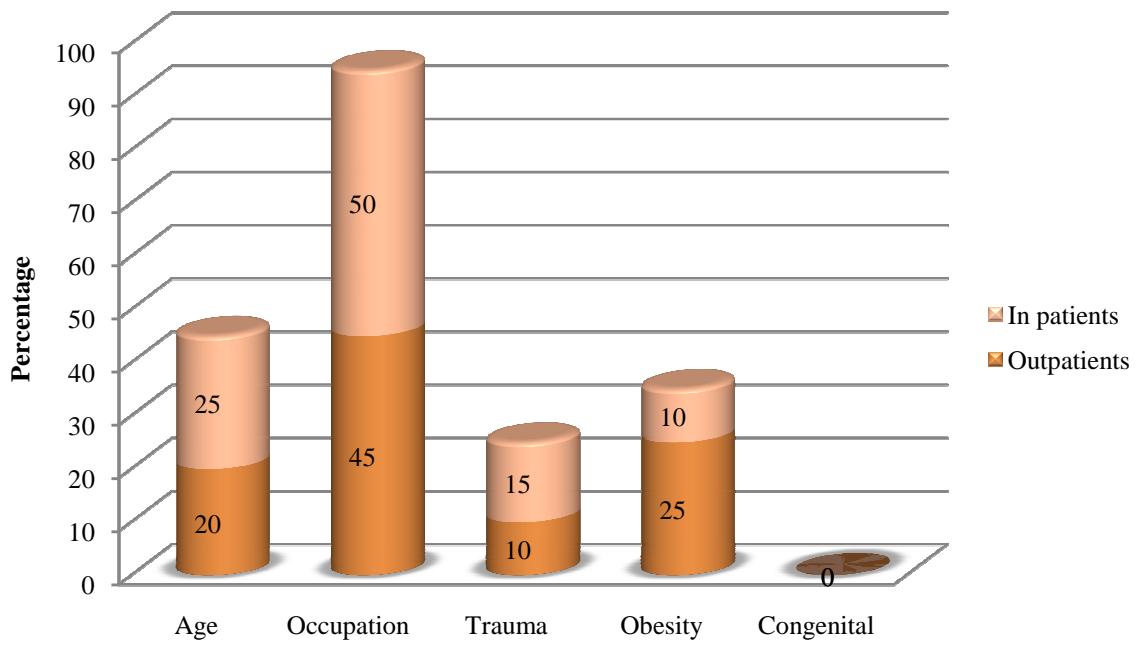


Constitution of the Body

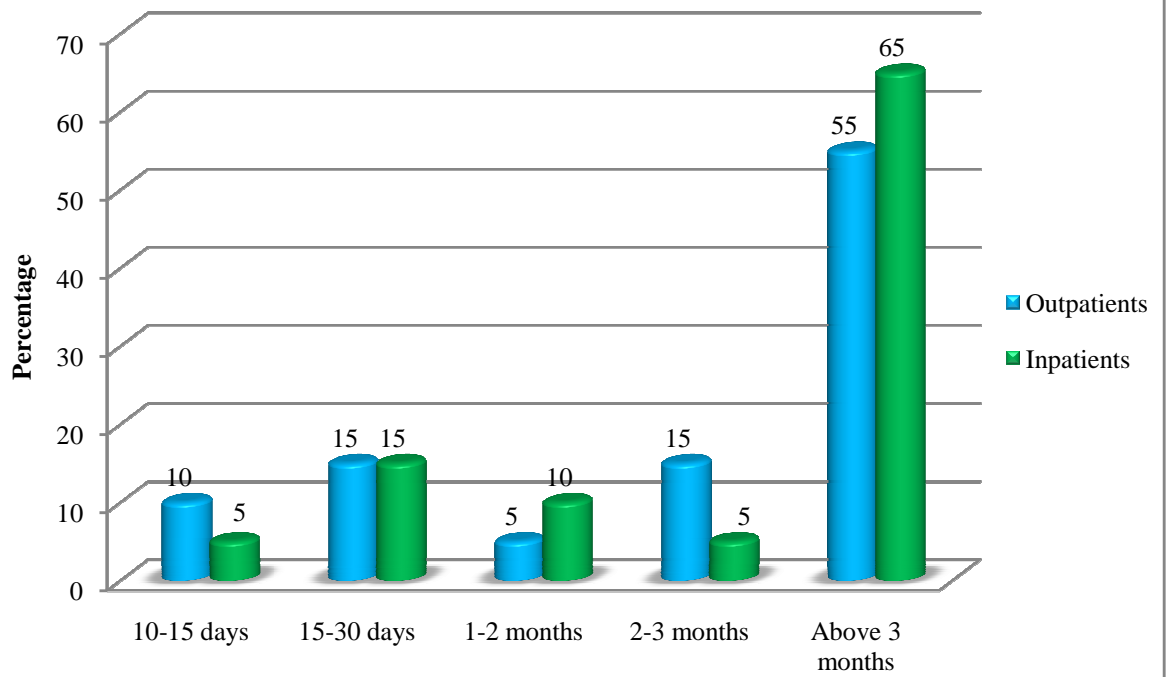




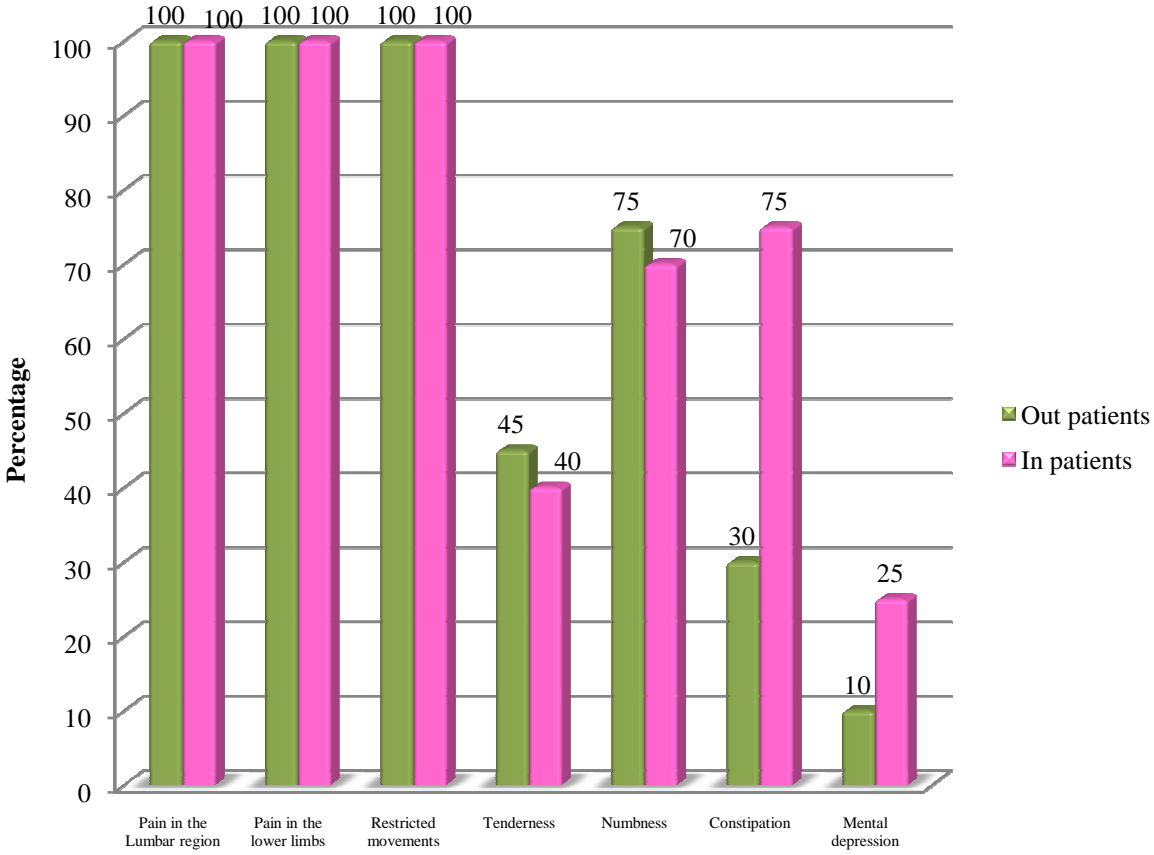
Aetiological Factors



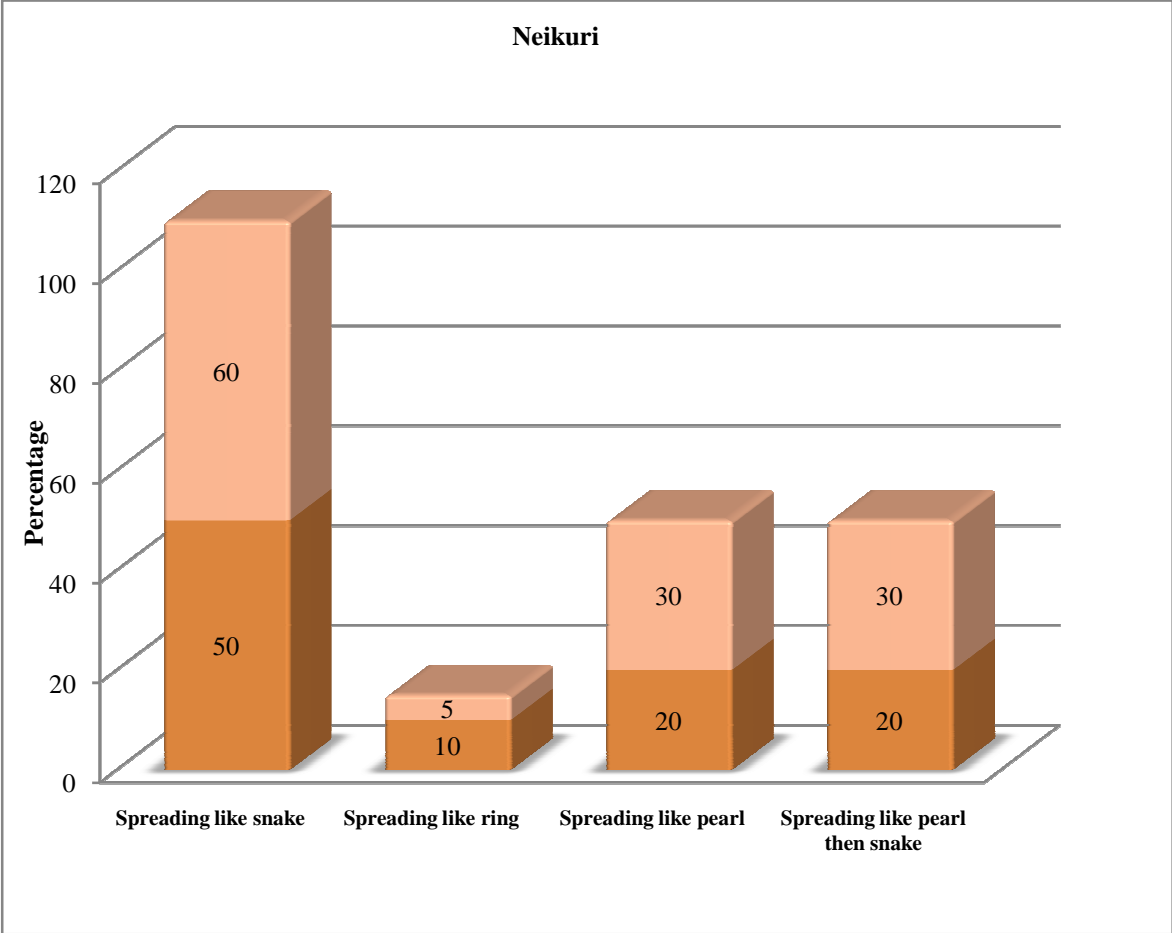
Duration of Illness



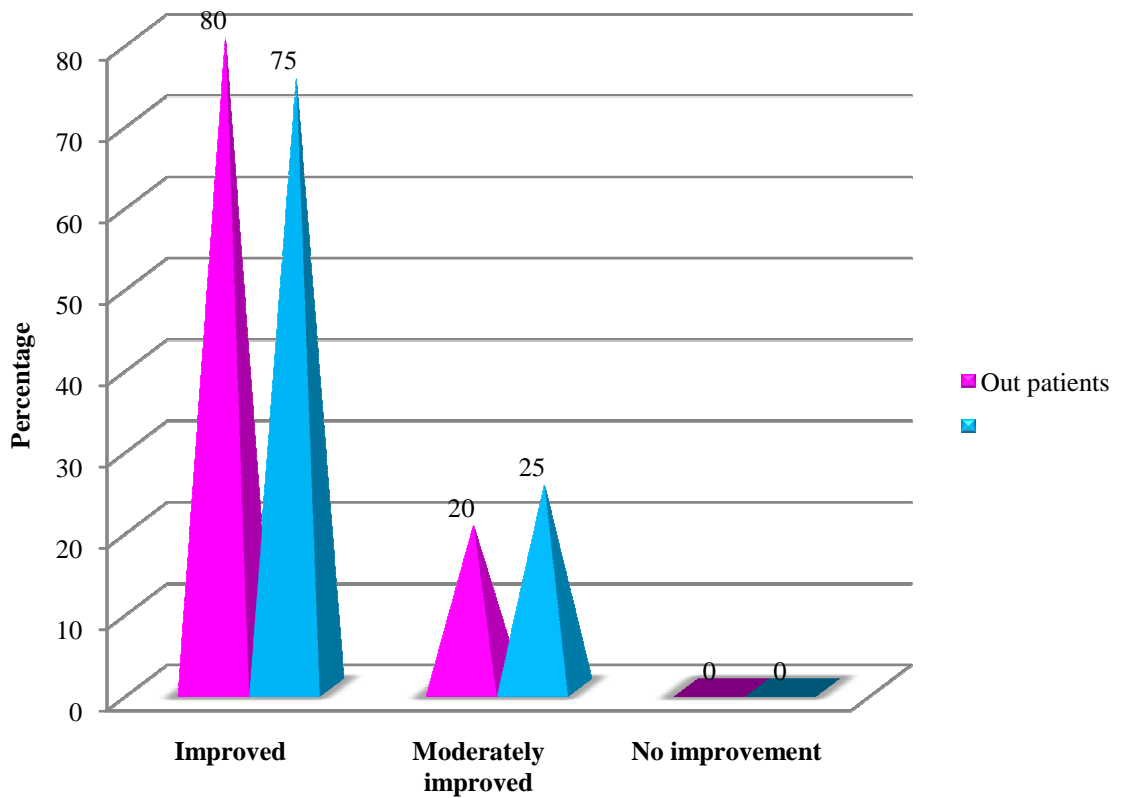
Clinical Manifestations



Neikuri



Gradation of Results



DISCUSSION

Thandagavatham is one of the vatha diseases affecting the lumbar vertebrae. It is characterized by pain in the lumbo sacral region with stiffness and ascends to involve the entire vertebral column.

The reference of the disease thandagavatham is taken from the book **Yugi vaithiya chinthamani** and the had drug for this disease is chosen from the book **Agathiar vakkiam 50**.

The evidences for both Thandagavatham and the trial drug are collected from various siddha and modern literatures. The trial drug was subjected to preclinical studies.

40 patients were selected for this trial work 20 patients were treated as out patient ward and 20 patients were treated as in patient ward.

The patients were selected and diagnosed by both the modern and siddha parameters. The whole study was supervised by the Professor, Reader and Assistant lecturer of Government siddha medical college, PG maruthuvam department, palayamkottai.

The study is carried out in inpatient and out patient ward of PG Pothu Maruthuvam department of Government siddha medical college, palayamkottai.

Gender

Among 20 in patients, 40% were males and 60% were females. Among 20 out patients 30% were males and 70 % were females. It infers that females are more prone to this Thandagavatham. Lack of calcium during pregnancy and lactation dwells behind this factor.

Age

The patients belonged to different age groups from 20-60. The highest incidence was the age between (51-60) in both IP & OP patients as 60% & 20% respectively.

Kaalam

According to kaalam 100% of in patients belongs to pithakaalam and also 80% of out patients belongs to pitha kalaam (34-66 years). Since degeneration takes place in pitha kaalam.

Constitution of the body

Vatha thegi in patients 50% ,30% of pitha thegi and 10%of Kaba thegi. In op patients there are 50%of vatha thegi, 25%of pithathegi and 10%of kaba thegi. 10% of Ip patients and 15% of OP patients are thontha thegi.

Gunam

Among 20 in patients ,100% had Rajogunam

Among 20 out patients, 100% had Rajogunam.

Religion

Hindus are more affected in out patients 90% and in patients 95%.

Nilam

85% of the IP patients belonged to Marutham thinai 15% of IP patient belong to Neithal thinai.

90% of the OP patients belonged to marutham thinai 10% belonged to neithal thinai.

Though Marutham thinai is considered to be a land of healthy living, due to various other personal habits, age people belonging to marutham thinai was also affected by Thandaga vatham.

Occupation

50% of the trial group were housewife in IP patients. 30% of the trial group were house wife in OP patients.

Tailors contributed 10% of IP trial group and 10% of OP trial group.

Drivers contributed to 5% of OP trial group.

Teachers contributed 10% of IP trial group and 5% of the OP trial groups.

Salesman contributed 10% of IP trial group.

Electrician contributed 5% of trial group of IP patients.

Cooly contributed 5% of IP trial group and 25% of OP trial group.

House wives had more incidence since because of increased house hold works.

Diet

100% of IP trial group had mixed diet.

100% of OP trial group had mixed diet.

Socio economic status

25% of the IP trial group belong to middle class. 40% of the OP trial group belong to middle class.

75% of the IP trial group belong to poor socio economic status and 60% of OP trial group belong to poor socio economic status.

Aetiological factors

Age plays 25% in IP trial group in aetiology and 20% in OP trial group. Occupation plays 50% role in aetiology among IP trial group and 45% in OP trial group.

Trauma plays 15% role in IP trial group. 10% role in OP trial group.

Obesity plays 10% role in IP trial group and 25% role in OP trial group.

There is no congenital manifestation among either IP trial group or OP trial group.

Hence occupation and age plays majority role in causing the disease Thandaga vadham.

Mode of onset

95% of OP trial group had chronic onset and 5% of OP trial group had chronic onset.

In IP trial group 100% had chronic onset.

Hence Thandagavatham seems to have chronic onset.

Duration of illness

Among 20 IP patients, above 3 months 65%

Among 20 OP patients, above 3 months 55%.

Clinical manifestations

100% of the trial group in IP & OP had pain in the lumbar region, pain in the lower limbs and restricted movements.

Tenderness was present in 40% of IP trial group and 45% in OP trial group.

Numbness is present in 70% of the IP trial group and 75% of the OP trial group.

Constipation is present in 75% in IP trial group and 30% of OP trial group.

Mental depression was present in 25% of IP trial group and 10% of OP trial group.

Gnanendrium :

Mei was affected (pain in lumbar region and lower limb) in 100% of IP and OP trial groups.

Kanmendrium

Kaal (pain in lower limbs) was affected in 100% cases of both OP & IP trial groups.

Eruvai (constipation) was affected in 75% of IP patients and 30% of OP patients.

KOSAM

Manomaya kosam (mental depression) was affected in 25% of the IP trial group and 10% of the OP trial group.

Vingyanamayakosam (pain lumbar region and lower limbs) was affected in 100% cases of both IP and OP trial groups.

Aanandhamayakosam was affected in 10% of the IP trial group and 10% of the OP trial group.

Mukkutram

a) Disturbances in vatham

Viyanan and samanana and Dhevathathan were affected in 100% cases of both IP and OP trial groups each.

Abanan was affected in 50% of both IP and OP trial groups each.

Viyanan affected due to pain in lumbar region.

Devadhathan affected due to laziness due to pain.

Abanan affected due to constipation.

b) Disturbances in pitham

Ranjagam (anaemia) was affected in 10% of IP trial group.

Sathagam (restricted movements) was affected in 100% of both IP and trial groups each.

c) Disturbances of kabam

Santhigam (restricted movement) was affected in 100% of IP & OP trial groups each.

Udal thathukkal manifestations

Saaram (tiredness) and Enbu (degeneration in lumbar vertebra) was affected in 100% of IP and OP trial groups each.

Envagai thervugal manifestations

Sparisam (tenderness in the lumbar region) was affected in 100% cases of both IP and OP trial group each.

Malam (constipation) was affected in 10% of the IP trial group.

Naa, Niram, Vizhi are affected in 10% of the IP trial group due to presence of anaemia.

Naadi was affected in 100% cases of both IP and OP trial group each.

Pitha vatha naadi was found predominantly in the trial group.

Neikuri Manifestations

60% of IP trial group and 50% of OP trial group had spreading pattern like snake (vatha neer).

5% of IP trial group and 10% OP had spreading pattern like ring (pitha neer)

30% of IP cases and 20% of OP cases in trial group had spreading patterns like pearl (kaba neer).

5% of IP and 20% of OP cases in trial group had spreading pattern like pearl and snake (Thontha neer).

Pain is measured using internationally accepted pain scale.

The x-ray imaging, before and after treatment were done in the study place – Govt. Siddha Medical college Hospital, Palayamkottai. On observation the symptoms re very well relieved / decreased at the end of course of the trial

The changes in Naadi, Neikkuri were observed before and after the treatment. The abnormal increase in the vatha, pitha components were bring down to normal levels. In the laboratory investigations, the raised leucocytic count and Erythrocyte sedimentation rate were normal at the end of the course of treatment.

On observation, the serum cholesterol level to lowered is most of the patient which should be subjected to a scientific analysis of the drug.

The biochemical analysis of the trial drug showed the presence of sulphate, calcium, chloride, ferrous iron, starch, unsaturated compound.

The pharmacological studies on the trial drug revealed that VATHATHIRKKU CHOORANAM has moderate analgesic effect significant anti inflammatory effect and mild antipyretic effect.

Before starting the treatment with the trial drug, Nilavagai chooranam – 5gm O.D at night time with hot water is given to all the trial subjects.

The trial medicine Vathathirkku Chooranam is given from the first day of the treatment till the end of the trial period.

Patients were adviced to have a balanced diet, and to avoid excessive intake of carbohydrate rich diet, tamarind, salt.

உப்பின் செய்கை

“சிறுக அளவோடு சேர்த்துணத் தேகத்
துறுப்பின் சுருக்கம் ஒழிக்கும் - வறட்சி
அழகலகற்றும் அசனவிருப்பாக்கும்
ஒழுகுவியர் வாக்கும் உறும நெய்ப் - பொழுங்காய்
மலந்தள்ளும் சேதனி தீட்சணியா முப்பின்
நலம் பயக்குஞ் செய்கை நவில்”

பொருள்:

குறைவாகவும், தக்க அளவோடும் உப்பைச் சேர்க்கக் கூடிய உணவுப் பண்டங்களுடன் சோத்தி உண்டால உடலுறுப்புகளில் சுருக்கம் நீங்கும் வறட்சியை நீக்கும்.

உடலுக்கு நெய்ப்புத் தன்மையை உண்டாக்கும் மலம் குடலில் தங்காமல் ஒழுங்காக வெளியாகச் செய்யும்.

தீட்சணி - மிகுந்த வெப்பத்தை தரவல்லது.

Constipation induces the accumulation and increase of vatha humour. Increased vatha humour devititates pitha humour which results in decrease of the synovial fluid. This results in friction between joints.

Uppu suvai that increases pitham causes increases in the synovial fluid and reduces friction between joints. Uppu suvai also corrects constipation.

SUMMARY

The disease **Thandagavatham** is taken for the clinical study with reference in **Yugi Vaithiya Chinthamani-800**. The disease Thandaga Vatham is corrected with the modern term Lumbar Spondylosis. The clinical diagnosis was done on the basis of clinical features which is described in Yugi Vaithiya Chinthamani – 800

The trial drug chosen for the clinical study is **Vathathirkku chooranam – internal 2 gms** twice a day with hot water after food.

The aetiology, pathology, pathogenesis, clinical features, classification and prognosis of the disease were collected from a number of literatures both in siddha aspect and in modern aspect.

40 patients of both sexes clinically diagnosed and selected for this study.

In this twenty patients were diagnosed admitted in the IN patients ward and treated with trial medicines.

Another twenty patients were treated as out – patients were followed as out- patients.

The course of clinical study, selection of patients, management of patients during the study was carried out under the supervision of Professor, Reader and Assistant lecturer of P.G Pothu Maruthuvam department, Government siddha medical college, palayamkottai.

A case sheet proforma was prepared with suitable references focussing Siddha and modern clinical parameters.

IN patients were maintained with separate case sheets and their vital signs, signs and symptoms were monitored and the datas are recorded daily.

The patients were treated with Vathathirkku chooranam (internal)

This disease predominantly affects females than males which was clearly inferred from the clinical data.

The maximum incidence of age for this disease was between 51 – 60 i.e in Pitha kaalam.

Various factors along with signs and symptoms mentioned in the case sheet were elaboratly discussed in the previous chapter.

To follow the prognosis of the patients the routine blood examination estimation of blood sugar, blood urea, serum cholesterol and investigation of urine, were done before and after treatment.

The disease was diagnosed on the basis of ENVAGAI THERVUGAL especially with naadi and neikuri.

The efficacy of the medicine ‘Vathathirkku chooranam’ (internally) was studied and observed during the period of this research.

At the end of the treatment there was marked reduction of clinical symptoms like back pain with stiffness (which is the classical symptoms of Thandaga vatham) with sense of well being.

In haematological study there was decreased ESR, cholesterol level with mild increase in haemoglobin level was observed at the end of the course of treatment trial drug is efficient in curing the disease and maintaining the normal health conditions also.

The patients taken for the clinical study were observed for a period of 30 days during and after the course of treatment, no signs of complications were reported. Clinically the trial medicines were used only after careful purification process.

The pharmacological evaluation of

a) “Vathathirkku chooranam” showed moderate analgesic action, significant anti - inflammatory action, and significant anti – pyretic actions. No acute toxic effects were noted.

b) Bio – chemical analysis of Vathathirkku chooranam showed presence of calcium, sulphate, chlorides, starch, ferrous iron and unsaturated compound.

On the basis of symptoms relieved and results observed during the study, the clinical improvement was graded as improved and moderately improved.

The IN patients were discharged only after satisfactory clinical improvement and they are advised to follow up the OUT patients ward.

The improvement was observed only clinically and there was no changes in radiological findings.

CONCLUSION

The clinical trial revealed good prognosis among patients suffering from Thandagavatham.

The trial medicine **Vathathirkku chooranam** had not produced any toxic, adverse or side effects.

The trial medicine has significant **anti inflammatory action, moderate analgesic and antipyretic effects.**

The uppu suvai of the trial medicine propably helps in the management of degenerative manifestation.

Further making the trial medicine available in the market would be economic and satisfactory in the management of Thandaga vatham.

ANNEXURE – I

PREPARATION OF TRIAL MEDICINE

Preparation of Vathathirkku Chooranam :

மருந்துதான் சித்திரமூலம் வளருமா விலங்கை கொன்றை
திருந்திய முருங்கை சங்கு சேர்ந்தவெள் ளறுகு வேம்பு
பொருந்திய வெருகு சுக்கு புகழுந்திப் பிலிம ரீசங்
கருந்திய லவண மஞ்சம் காயங்கொள் வாதம் போமே. (43)

Ingredients

1. சித்திரமூலம்	-	35 கிராம்
2. மாவிலிங்கப்பட்டை	-	35 கிராம்
3. கொன்றைப்பட்டை	-	35 கிராம்
4. முருங்கைப்பட்டை	-	35 கிராம்
5. சங்கம்பட்டை	-	35 கிராம்
6. வேப்பம்பட்டை	-	35 கிராம்
7. வெள்ளறுகு	-	35 கிராம்
8. மெருகன்கிழங்கு	-	35 கிராம்
9. சுக்கு	-	35 கிராம்
10. திப்பிலி	-	35 கிராம்
11. மிளகு	-	35 கிராம்
12. பெருங்காயம்	-	35 கிராம்
13. கறிஉப்பு	-	35 கிராம்
14. வளையலுப்பு	-	35 கிராம்
15. கல்லுப்பு	-	35 கிராம்
16. இந்துப்பு	-	35 கிராம்
17. வெடியுப்பு	-	35 கிராம்

Method :

The ingredients from 1-12 are roasted slightly and powdered finely. Then the ingredients from 13-17 are finely powdered individually and mixed well with the former. Then the chooranam is stored in clean and dry containers.

Dose :

2 gms B.D

Adjuvant :

Hot water

Indications :

வாதநோய்கள்

Expiry :

3 months from the date of preparation.

Reference :

Agathiyar vakkiam 50.

PROPERTIES OF THE INDIVIDUAL COMPONENTS

VATHATHIRKKU CHOORANAM

1. சித்திரமூலம்

1. CommonName : Chithiramoolam
2. Synonyms : Koduveli, Vanni, Akkini, Thazhal
3. Botanical Name : Plumbago indica
4. Family : Plumbaginaceae
5. Parts used : Root
6. Characters
Suvai : Kaarppu
Thanmai : Veppam
Pirivu : Kaarppu
7. Therapeutic actions : Tonic, Stomachic
9. Uses

கட்டிவிர ணங்கிரந்தி கால்கள் அரையாப்புக்
கட்டிச்சூ லைவீக்கங் காழ்மூலம் - முட்டிரத்தக்
கட்டுநீ ரேற்றங் கணத்த பெருவயிறும்
அட்டுங் கொடிவேலி யாம்.

குணபாடம் மூலிகை வகுப்பு

2. மாவிலிங்கபட்டை

1. CommonName : Mavilingam
2. Synonyms : Mavilingu, Kumaragam, Varani
3. Botanical Name : Crateva Magna
4. Family : Capparidaceae
5. Parts used : Leaf, Bark, Root
6. Characters
Suvai : Kaippu
Thanmai : Veppam
Pirivu : Kaarppu
7. Therapeutic actions : Stomachic, Febrifuge, Tonic
8. Uses

சுரங்கடியின் றோடக் தொலையாத வாதம்
உரம்பெறு விடங்க மொழியும் - அரமுங்
கருமா வருவயிலுங் கண்டஞ்சங் கண்ணாய்
ஒருமாவி லிங்குக் குரை

குணபாடம் மூலிகை வகுப்பு

3. கொன்றைப்பட்டை

1. CommonName : Kontraipattai
2. Synonyms : Kiruthamalam, Thamam, Kadukkai
3. Botanical Name : Cassia Fistula
4. Family : Caesalbinaceae
5. Parts used : Leaf, Bark, Root, Seed
6. Characters
Suvai : Thuvarppu, mild kaippu
Thanmai : Veppam
Pirivu : Kaarppu
7. Therapeutic actions : Laxative, Vermifuge
8. Uses

பாண்டரங்க பூணாய்ப் பறக்கடித்து மேகத்தை
யாண்டாங்கக கைக்குள்வச மாக்குமே காண்டற்
குதவிசில செய்துடலை யோம்புமிது நீபார்
இதழியெனுங் கொன்றை புவி யில்.

குணபாடம் மூலிகை வகுப்பு

4. முருங்கைப்பட்டை

1. CommonName : Murungai
2. Synonyms : Kizhavi, Sobanjanam
3. Botanical Name : Moringa oleifera
4. Family : Moringaceae
5. Parts used : Whole Part
6. Characters
Suvai : Kaippu, Thuvarppu, Inippu
Thanmai : Thatppam
Pirivu : Inippu
7. Therapeutic actions : Antispasmodic, Stimulant,
Expectorant, Diuretic
8. Uses

செறிமந்தம் வெப்பந் தெறிக்குந் தலைநோய்
வெறிமூர்ச்சை கண்ணோய் விலகும் - மறமே
நெருகையிலை யொத்தவிழி நேரிழையே நல்ல
முருங்கை யிலையை மொழி.

குணபாடம் மூலிகை வகுப்பு

5. சங்கம்பட்டை

1. CommonName	:	Sangam
2. Botanical Name	:	Azima tetracantha
3. Family	:	Salvadoraceae
4. Parts used	:	Root, bark, leaves, milk.
5. Characters		
	Suvai	: Kaippu
	Thanmai	: Veppam
	Pirivu	: Kaarppu
6. Chemical constituents	:	Azimine, Azcarpine, carpaine
7. Therapeutic actions	:	Diuretic, stimulant, astringent, tonic antipyretic, expectorant.
8. Uses		

சங்கம் வேர்ப்பட்டை சளியிரு மலைச் சுரத்தை
அங்கவா தக்கடுப்பை ஆடதைப்பைப் - பங்கமே
செய்யுங் கிரந்தியையுள்தீகால் கிருமியையில்
வையந் தனி லொழிக்கு மால்.

குணபாடம் மூலிகை வகுப்பு

6. வேப்பம்பட்டை

1. CommonName : Vembu
2. Synonyms : Paripathiram, Nimbam, Arittam,
Vathari
3. Botanical Name : Azadirachta indica
4. Family : Meliaceae
5. Parts used : Whole tree
6. Characters
Suvai : Kaippu
Thanmai : Veppam
Pirivu : Kaarppu
7. Chemical constituents : Tannin β sitosterol, azadirachtin
margosine, nimbin,
nimbinin, nimbidin
8. Therapeutic actions : Stimulant, Antihelmintic,
discutient.
9. Uses

ஓதரிய வேம்பை யுறைக்கிற் சுரமுடனே
வாதமறு மூலகண மாந்தம்போந் - தீதாய்
உதிருமெரி பூச்சிகுன்ம மோதா தொழியுஞ்
சிதறுமலம் போகுமெனத் தேர்.

குணபாடம் மூலிகை வகுப்பு

7. வெள்ளறுகு

- | | | |
|------------------------|---------|----------------------------------|
| 1. CommonName | : | Vellarugu |
| 2. Synonyms | : | Vallari |
| 3. Botanical Name | : | Enicostemma Axillare |
| 4. Family | : | Gentianaceae |
| 5. Parts used | : | Leaf, Seed, Unripefruit |
| 6. Characters | | |
| | Suvai | : Inippu |
| | Thanmai | : Thatpam |
| | Pirivu | : Inippu |
| 7. Therapeutic actions | : | Refrigerant, Diuretic, Demulcent |
| 8. Uses | | |

குன்மமொடு வாய்வு குடல்வாதம் சூலையிலை
சென்மம்விட் டோடிச் சிதையுங்காண் - வன்முலையாய்
உள்ளுறுகி ரந்திசொறி யொட்டிய சிரங்குமறும்
வெள்ளறுகு தன்னை விரும்பு.

குணபாடம் மூலிகை வகுப்பு

8. மெருகன்கிழங்கு

1. CommonName : Merugu
2. Synonyms : Ullakai, Kanthaputpi, Musalam
3. Botanical Name : Alocasia Indica
4. Family : Araceae
5. Parts used : Tuber
6. Characters
 - Suvai : Kaarppu
 - Thanmai : Veppam
 - Pirivu : Kaarppu
7. Chemical Constituents : Contains acicular crystals of oxalate of lime to which is acidity is due.
8. Therapeutic actions : Febrifuge, Anti vatha, Deobstruent
9. Uses

அரசனமைச்ச னதிகாரி சேனைக்
கரச னிவர்க்கிகலே யாகிப் - பொருவும்
மிருகமெனு நாயை முயல் மேல்விடு தல் போல்
மெருகடியை யேவுவினை மேல்

குணபாடம் மூலிகை வகுப்பு

9. சுக்கு

1. Common name : Chukku, Dried Ginger
2. Synonyms : Arukkan, Sundi, Athagam,
Verkkombu, Ubakullam
3. Botanical Name : Zingiber officinale
4. Family : Zingiberaceae
5. Parts used : The scraped and dried rhizome
6. Characters
Suvai : Kaarppu
Thanmai : Veppam
Pirivu : Kaarppu
7. Chemical Constituents

- Aromatic Volatile oil, Camphene, Phellandrene, Zingiberine, Cineol, boneol

- Indian Medicinal plants Vol-I.

Dr.Nadkarni.

- Glutamic acid, Aspartic acid, serine, Glycine, amino butric acid, valine, phenylalanine, proline, Leucine.

- Wealth of india Vol-XI

- B sitosterol palmitate, isovanillin, glycol mono palmitate, hexa cosanic acid, 2,3 – dihydroxy propyl ester, maleimide – 5 oxime, p-hydroxy benzaldehyde, adenine – 6- gingerol, 6 – shogalol, I (omega- ferulyl oxyceratyl) glycerols.

- www.pubmed.gov.in

8. Therapeutic actions : Stomachic, Carminative, Stimulant

9. Uses

சூலைமந்தம் நெஞ்செரிப்பு தோடமேப் பம்மழலை
மூலம் இரைப்பிருமல் மூக்குநீர் - வாலகப
தோடமதி சாரந்தொடர்வாத குண்மநீர்த்
தோடம்ஆ மம்போக்குஞ் சுக்கு

அகத்தியர் குணவாகடம்

10. திப்பிலி

1. CommonName	:	Thippili, Long pepper
2. Synonyms	:	Aargathi, Unsaram, Kaaman, Gudari, Aathi marunthu, Ambu
3. Botanical Name	:	Piper longum
4. Family	:	Piperaceae
5. Parts used	:	Dried fruit
6. Characters	:	
	Suvai	: Kaarppu
	Thanmai	: Veppam
	Pirivu	: Inippu

7. Chemical constituents :

It contains aromatic oil that is about 0.7%, piperine 4-5% pipalartine. Besides this it contains sesamin and piplasterol.

www.Aushveda.com

8. Therapeutic actions : Carminative, Stimulant

9. Uses

“இருமல் குன்மம் இரைப்பு கயப்பிணி
ஈளை பாண்டு சந்யாசம் அரோசகம்
பொருமல் ஊதை சிரப்பிணி மூர்ச்சைநோய்
பூரிக் குஞ்சல தோடம் பீலிகமும்
வரும லப்பெருக் கோடு மகோதரம்
வாதம் ஆதிமுத் தோடஞ் சுரங்குளிர்
பெரு மாலைப்புரி மேகம் பிடகமும்
பேருந் திப்பிலி பேரங் குரைக்கவே.”

தேரையர் குணவாகடம்

11. மிளகு

1. CommonName	:	Milagu, Black Pepper
2. Synonyms	:	Kari, Kayam, Malayali, Sarumabantham
3. Botanical Name	:	Piper nigrum
4. Family	:	Piperaceae
5. Parts used	:	The dried unripe fruit
6. Characters		
	Suvai	: Kaippu, Kaarppu
	Thanmai	: Veppam
	Pirivu	: Kaarppu

7. Chemical constituents :

Piperine, piperidine, balsamic volatile essential oil, chavicin, starch, Lignin, gum, fat

Indian Medicinal plants Dr. Nadkarni

It contains aromatic oil that is about 0.7% piperine 4-5% and an alkaloid % pipalartine. Besides this it contain sesamin and pipalsterol.

www.sirisimplex.com

8. Therapeutic actions : Carminative, Stimulant, Antivatha, Antidote

9. Uses

“சீதசுரம் பாண்டு சிலேத்மங் கிராணி குன்மம்
வாதம் அருசி பித்தம் மாமூலம் - ஓதுசன்னி
யாசமபஸ் மாரம் அடன்மேகம் காசமிவை
நாசங் கறிமிளகி னால.”

அகத்தியர் குணவாகடம்

“கோணுகின்ற பக்கவலி குய்யவுரோ கம்வாத
கோணிதங்க முத்திற்குள் தோன்றுநோய் காணரிய
காதுநோய் மாதர்குன்மங் காமாலை மந்தமென்றீர்
ஏதுநோய் காயிருக்கில் ஈங்கு”.

தேரையர்

12. பெருங்காயம்

1. CommonName : Perungayam
2. Synonyms : Athiyagragam, Santhunasam,
Boothanasam
3. Botanical Name : Ferula Asafoetida
4. Family : Umbelliferae
5. Parts used : Gum
6. Characters
Suvai : Kaippu, Karakarappu
Thanmai : Veppam
Pirivu : Kaarppu
7. Therapeutic actions : Stimulant, Carminative,
Antispasmodic, Laxative
8. Uses

தந்தவே தந்த மூலத்தெழும் பிணி
சருவகாளம் விருச்சிகங் கீடம்மா
மந்தம் வாதம் உதரவர்த்தம் அல்குல்நோய்
மார்பணங்கட்ட குன்மம் மகோதரம்
உந்து கெர்ப்பத்தின் வித்திரஞ் சூலைச் சூர்
உதிரப்பூச்சி சிலேத்துமத்து றும்வலி
வந்த மெய்க்கடுப் போடிவை முற்றுமே
மாயுநாறுநற் காயங்கிடைக்கி னே

குணபாடம் மூலிகை வகுப்பு

13. கறியுப்பு

1. CommonName : Kariuppu
2. Synonyms : Kadalluppu, Sottuppu
3. Chemical Name : Sodium Chloride
4. Characters
Suvai : Karippu
5. Therapeutic actions : Stomachic, Laxative, Emetic
6. Uses

“மந்தம் பொருமலறும் வாயுவும்போம் தீபனமாம்
தொந்தித்த ஐயந் தொடருமோ - சந்ததமும்
அக்கினியின் புஷ்டி அடருங் கறியுப்பால்
சிக்குகின்ற நீரிறங்குஞ் செப்பு”.

குணபாடம் தாது ஜீவ வகுப்பு

14. வளையலுப்பு

1. CommonName : Valaiyaluppu
2. Synonyms : Madavarkarathuppu
3. Characters
Suvai : Uppu

4. Uses

“துளையார் குடல்வாதத் தொந்தவா தத்தோ
டினையாச் சுவாசமறு மின்னும் - வளையலுப்பாற்
குன்மவலி சூலைவெப்பங் கூறாப்பி லீகமிவை
சென்மம்விட் போடுமெனத் தேர்.

குணபாடம் தாது ஜீவ வகுப்பு

15. கல்லுப்பு

1. Common Name : Kalluppu
2. Synonyms : Kadarkuruvi
3. Botanical Name : Sodium Chloride
4. Characters
Suvai : Uppu

5. Uses

“ஐயமுறுஞ் சூலை யரோசிடித்தஞ் சத்தியொடு
வெய்யபிணி யடடகுன்மம் விட்டேகும் - பெய்விளையே
வாதமதி தாகம் மலக்கட்டும் போமுலகிற்
கோதலுகல் லுப்பைக் கொடு”.

குணபாடம் தாது ஜீவ வகுப்பு

16. இந்துப்பு

1. Common Name : Indhuppu, Rock salt
2. Synonyms : Sindhavam, Sindhuram,
Santhiranuppu, Mathi Koormai
3. Chemical Name : Sodium chloride impure
4. Characters
 - Suvai : Uppu
 - Thanmai : Veppam
 - Pirivu : Inippu
5. Therapeutical Actions : Laxative, Carminative, stomachic
6. Uses

“அட்டகுன்ம மந்தம் அசிர்க்கரஞ்சூர் சீதபித்தந்

துட்டவையம் நாடிப்புண் டோடங்கள் கெட்டமலக்

கட்டுவிட விந்தையக் காமியநோய் வன்கரப்பான்

விட்டுவிட விந்துப்பை விள்.”

குணபாடம்-தாது ஜீவ வகுப்பு

17. வெடியுப்பு

1. CommonName : Vediuppu
2. Synonyms : Pottiluppu, Inangan, Padairasan
3. Chemical Name : Potassium nitrate, Salt Petre
4. Characters
Suvai : Uppu

5. Uses

சூதக வாயுவொடு கோணிதத்தின் வாரமும் போம்
வாடிவலி குன்மமிவை மாறுங்காண் - மீதாங்
கொடிய வயிறிழியுங் கோழைகப மேகும்
வெடியுப்புத் தன்னை விளம்பு”.

குணபாடம் தாது ஜீவ வகுப்பு

ANNEXURE II
BIO – CHEMICAL ANALYSIS OF
VATHATHIRKKU CHOORNAM

PREPARATION OF THE EXTRACT

5gms of vathathirkku chooranam was weighed accurately and placed in a 50ml clean beaker. Then 50ml of distilled water was added and dissolved well. Then it was boiled well for about 10 minutes. Then it was cooled and filtered in a 100ml volumetric flask and then, it was made up to 100ml with distilled water. This fluid was taken for analysis.

QUALITATIVE ANALYSIS

S. NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	<u>TEST FOR CALCIUM</u> 2ml of the above prepared extract is taken in a clean test tube. To this add 2ml of 4 % ammonium oxalate solution	A white precipitate is formed	Indicates the presence of calcium
2.	<u>TEST FOR SULPHATE:</u> 2ml of the extract is added to 5% barium chloride solution.	A white precipitate is formed	Indicates the presence of sulphate
3.	<u>TEST FOR CHLORIDE</u> The extract is treated with silver nitrate solution	A white precipitate is formed	Indicates the presence of chloride
4.	<u>TEST FOR CARBONATE</u> The substance is treated with concentrated HCL	No brisk effervescence is formed	Absence of Carbonate

5.	<u>TEST FOR STARCH</u> The extract is added with weak iodine solution.	Blue colour is formed	Indicates the presence of starch
6.	<u>TEST FOR FERRIC IRON</u> The extract is acidified with Glacial acetic acid and Potassium ferro cyanide.	No blue colour is formed	Absence of Ferric Iron
7.	<u>TEST FOR FERROUS IRON</u> The extract is treated with concentrated Nitric acid and ammonium thiocyanate solution.	Blood red colour is formed	Indicates the presence of Ferrous Iron.
8.	<u>TEST FOR PHOSPHATE</u> The extract is treated with ammonium molybdate and concentrated nitric acid.	No yellow precipitate is formed	Absence of Phosphate.
9.	<u>TEST FOR ALBUMIN</u> The extract is treated with Esbach's reagent.	No yellow precipitate is formed.	Absence of Albumin
10.	<u>TEST FOR TANNIC ACID</u> The extract is treated with ferric chloride.	No blue black precipitate is formed	Absence of Tannic acid
11.	<u>TEST FOR UNSATURATION</u> Potassium permanganate solution is added to the extract	It gets decolourised	Indicates the presence of Unsaturated compound.

12.	<p><u>TEST FOR THE REDUCING SUGAR</u></p> <p>5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and added 8-10 drops of the extract and again boil it for 2 mts.</p>	No colour change occurs.	Absence of Reducing Sugar.
13.	<p><u>TEST FOR AMINO ACID</u></p> <p>One or two drops of the extract is placed on a filter paper and dried it well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.</p>	No violet colour is formed	Absence of Amino Acid
14.	<p><u>TEST FOR ZINC:</u></p> <p>The extract is treated with potassium ferro cyanide</p>	No white precipitate is formed	Absence of Zinc.

Inference:

The given sample “**Vathathirkku Choornam**” contains **Calcium, Sulphate, Chloride, Starch, Ferrous iron and unsaturated compound,**

ANNEXURE III
C) PHARMACOLOGICAL ANALYSIS
ANALGESIC STUDY OF VATHATHIRKKU CHOORANAM
(In Albino rats by tail flick method)

Aim

To study the analgesic effect of Vathathirkku Chooranam in Albino rats by tail flick method.

Preparation of the test drug :-

1gm of Vathathirkku chooranam was taken and dissolved in 10ml of the hot water. This 2ml contains 100mg of test drug Vathathirkku chooranam. A dose of 2ml containing 100mg of drug was given to each rat.

Instrument :-

Hot water bath maintained at $55^{\circ} \pm 0.5^{\circ} \text{c}$ was used as the source of stimulus.

Procedure :-

Three groups of healthy albino rats on both sexes were selected. Each group having 2 rats, weighing between 100 to 150gm.

The tail was dipped into the bath, and the time taken for each rat to remove its tail from the hot water bath was noted. The rat, which taken more than 5 seconds for removal of its tail from hot water bath, was excluded from the experiment. First group was kept as control by giving distilled water of 2ml per 100 gm of body weight. The second group was given paracetamol 20 mg per 100 gm of body weight and kept as standard.

The third group was given the test drug Vathathirkku Chooranam 100 mg/100 gm of body weight.

30 minutes after medicines administration, the tail of each rat was dipped into hot water bath one by one. The time taken for each rat to remove its tail was noted. The whole experiment was repeated after 30 minutes.

The results of control group standard group and drug treated group were tabulated and compared.

Study of analgesic effect of using the drug of Vathathirkku Chooranam

Serial No.	Name of the Drug/Groups	Dose/100 Gram body weight	Initial Reading	After Drug Administration		Mean Difference	Remarks
				½ hr. Average	1 hr. Average		
1	Control (water)	2ml	2.0 secs	2.0 secs	2.0 secs	2.0 secs	
2	Standard (Parecetamol)	2mg	2.5 secs	4.5 secs	6.5 secs	6.5 secs	
3	Vathathirkku Chooranam	100mg	2.0 secs	3.5 secs	5.0 secs	5.0 secs	Moderate Action.

Inference

It is observed that **Vathathirkku Chooranam** has got **moderate analgesic action.**

ACUTE ANTI- INFLAMMATORY STUDY OF

VATHATHIRKKU CHOORANAM

BY CARRAGEENIN INDUCED HIND PAW OEDEMA METHOD IN ALBINO RATS

Aim

To study the acute anti- inflammatory effect of **Vathathirkku chooranam**.

Preparation of test drug :-

1gm of Vathathirkku chooranam was taken and dissolved in 10ml of the hot water. This 2ml contains 100mg of test drug Vathathirkku Chooranam. A dose of 2ml containing 100mg of drug was given to each rat.

Procedure :-

Six healthy albino rats weighing 100 – 150gms were taken and divided into three groups, each consisting of 2 rats. First group was kept as control by giving Luke warm water of 2ml / 100 gm of body weight. The second group was given Ibuprofen in a dose of 20 mg / 100 gm of body weight. The third group received the trial medicine Sikhamani Chooranam in a dose of 100 mg / 100 gm of body weight.

Before administration of trial medicine, the hind – paw volumes of all rats were measured. This was done by dipping the hind paw up to tibio tarsal junction, into a mercury plethysmograph. While dipping the hind paw by pulling the syringe piston, the level of mercury in the centre small tube was made to coincide with red marking and reading was noted from the plethysmograph.

Soon after the measurement, the medicines were administered orally. One hour later, a subcutaneous injection of 0.1ml of 1% (w/v) carrageenin in water was administered into plantar surface of both hind paw of each rat.

Three hours after carrageenin injection, the hind paw volume was measured once again. The difference between the initial and final volume was calculated and compared.

The method is more suitable for studying the anti – inflammatory activity in acute inflammation. The values are given in the table.

Study of Anti pyretic by yeast induced method using the drugs of Vathathirkku Chooranam

S.No	Name of Drug/Groups	Dose/100 gram body weight	Initial Temperature in centigrade	After Drug administration			Remarks
				1½ hour	3.0 hour	4 ½ hour	
1	Control (water)	2 ml	37.5	38.0	38.5	38.5	
			37.5	38.0	38.5	38.5	
2	Standard (Paracetamol)	20 mg	37.0	36.0	35.0	34.0	
			37.0	36.0	35.0	34.0	
3	Vathathirkku Chooranam	100 mg	37.0	36.0	35.5	34.0	Significant action
			36.5	36.0	35.5	34.5	

Inference

It is observed that **Vathathirkku Chooranam** has got **Significant anti inflammatory action.**

ANTIPIRETIC STUDY OF VATHATHIRKKU CHOORANAM

Aim:

To study the antipyretic activity of **Vathathirkku Chooranam** by yeast induced hyperpyrexia in albino rats.

Preparation of test drug:

1gm of Vathathirkku kchooranam was taken and dissolved in 10 ml of the hot water. This 2ml contains 100mg of test drug vathathirkku chooranam. A dose of 2ml containing 100mg of drug was given to each rat.

Yeast induced hyperpyrexia :

Six healthy albino rats of either sex, weighing between 100 – 150gm were selected. They were divided into 3 groups of 2 rats in each group. All the rats were made hyperthermic by giving subcutaneous injection of 12% of yeast in distilled water 2ml/100gm of body weight.

After 10 hours, the initial temperature (0 hr) was taken for all the 6 rats. First group of rats were given 2ml of water and kept as control. The second group received 20mg/100gm of body weight of Paracetamol and the third one received the test drug Vathathirkku Chooranam 100mg/100gm of body weight.

The mean rectal temperature for all the rats was recorded at 1½ hr, 3 hr, and 4½ hours after the drug administration.

The difference between the 3 groups are measured and compared.

Results :

The details of the experiment and results were shown in the table.

STUDY OF ACUTE ANTI-INFLAMATORY

BY HIND PAW METHOD

Using Plethysmograph using the drug on Vathathirkku Chooranam

Sl. No	Name of the Drug/group	Dose/100 Gram body weight	Initial Reading average	Final Reading average	Mean Difference	Percentage of Inflammation	Percentage Inhibition	Remark
1	Control (water)	2ml	0.55	1.4	0.85	100	-	
2	Standard (Fbu Brufen)	20mg	0.55	0.75	0.20	23.5	76.5	
3	Vathathirkku Chooranam	100mg	0.5	0.85	0.35	41.1	58.9	Mild action

Inference :

The test drug **Vathathirkku Chooranam** has got **mild anti – pyretic activity**.

ANNEXURE IV
D) PROFORMA OF CASE SHEET
GOVT.SIDDHA MEDICAL COLLEGE & HOSPITAL
Palayamkottai
Department of Post Graduate- Maruthuvam (Pothu)
Case Sheet proforma for Thandaga Vatham
[Lumbar Spondylosis]

Ward	:	Nationality	:
I.P.No.	:	Religion	:
Bed.No.	:	Date of admission	:
Name	:	Date of discharge	:
Age/Sex	:	Result	:
Address	:	Diagnosis	:
Occupation	:	Medical Officer	:
Income	:		
Complaints and duration	:		
H/O present illness	:		
H/O previous illness	:		
Personal History	:		
Family History	:		
Habits	:		

General Examination

1. Consciousness	:	9. Anaemia	:
2. Nourishment	:	10. Jaundice	:
3. Decubitus	:	11. Cyanosis	:
4. Temperature	:	12. Clubbing	:
5. Pulse rate	:	13. Generalised	
		Lymphadenopathy	:

6. Heart rate	:	14. Odema	:
7. Blood pressure	:	15. JVP	:
8. Respiratory rate	:	16. Engorged Venis	:
Congential anomaly (if any)	:	Miscellaneous	:

IN SIDDHA ASPECTS

Nilam

Kurinchi	:
Mullai	:
Marutham	:
Neithal	:
Palai	:

Paruvakaalam

Kaar	:
Koothir	:
Munpani	:
Pinpani	:
Elavenil	:
Mudhuvenil	:

Mukkunam

Sathuvam	:
Rajotham	:
Thamokunam	:

Thegi

Vatham	:
Pitham	:
Kabham	:
Thontham	:

Iymporigal

[Sensory organs]

Mei	:
Vai	:
Kan	:
Mooku	:
Sevi	:

Kosam

Annamaya kosam	:
Pranamaya kosam	:
Manomaya kosam	:
Gnanamaya kosam	:
Anathamaya kosam	:

Pira Uruppugalin Nilai

Kanmenthiriyam

[Motor organs]

Kai	:	Moolai	:
Kal	:	Iruthayam	:
Vai	:	Puppusam	:
Eruvai	:	Eraippai	:
Karuvai	:	Kalleeral	:
		Manneeral	:
		Siruneeragam	:
		Siruneerpai	:
		Karuppai	:

Muklutram

1. Vatha

Praanam	:	Naagan	:
Abaanan	:	Koorman	:
Viyaanan	:	Kirugaran	:
Uthaanan	:	Devathathan	:
Samaanan	:	Thananjeyan	:

2. Pitha

Anaripitham :
Ranjagam :
Saathagam :
Alosagam :
Praasagam :

Ealu Udarkattugal

Saaram :
Senneer :
Oon :
Kozhuppu :
Enbu :
Moolai :
Sukkilam / Suronitham :

3. Kabha

Avalambagam :
Kilethagam :
Tharpagam :
Pothagam :
Santhigam :

Envagai Thervugal

Naadi :
Sparisam :
Naa :
Niram :
Mozhi :
Vizhi :
Malam :
Moothiram :

Neerkuri

Niram :
Edai :
Manam :
Nurai :
Enjal :

Neikuri

IN MODERN ASPECTS

History

Pain	:		HT	:
Stiffness	:		DM	:
Swelling	:		PT	:
Muscle weakness	:		Br.asthma	:
Impairment	:		Allergy	:
Extra articular features:			Surgery	:
Eyes		Venereal exposure		:
Heart		Others if any		:
GIT				

EXAMINATION OF SPINE AND ITS JOINTS

I. Inspection

1. Skin over the vertebrae :
2. Deformities of the spine :
 - Kyphosis :
 - Scoliosis :
 - Lordosis :
 - Gibbus :
3. Muscular wasting :
4. Trophic changes :
5. Swelling :
6. Fasciculations :
7. Gait :

II. Palpation

1. Local Temperature :
2. Tenderness :
3. Rigidity and deformity :
4. Wasting :
5. Swelling :
6. Lymphadenopathy :
7. Fibrous Nodules :

III. Movements

1. Painful / Not painful :
2. Restricted / Not Restricted :

Patient lying supine position

Straight leg raising test (SLR) :

Patient on standing position

Schober's Test :

IV. Examination of individual joints

Cervical vertebrae

Thoracic vertebrae

Lumbo sacral joint

Shoulder joint

Elbow joint

Wrist joint

Interphalangeal joint

Hip joint

Knee joint

Ankle joint

Metatarso phalangeal joint

V. Relevant other system examination

Cardiovascular system :

Respiratory system :

Alimentary system :

Central nervous system :

LABORATORY INVESTIGATIONS

1. Blood

TC : DC : ESR :

Hb% :

Sugar :

Urea :

Serum Cholesterol :

2. Urine

Albumin :

Sugar :

Deposits :

3. Motion

Ova :

Cyst :

4. Immunological investigations

RA factor :

5. Radiographic Evaluations

Lumbo sacral and sacroiliac joints :

AP View :

Lateral view :

6. Human Leucocyte antigen test

HLA B27

7. Others

Treatment :

Diet :

GOVT. SIDDHA MEDICAL COLLEGE & HOSPITAL

Palayamkottai

Department of Post Graduate- Maruthuvam (Pothu)

Discharge Case Sheet proforma for Thandaga Vatham

Ward : **Nationality** :
I.P.No : **Religion** :
Bed.No : **Date of Admission** :
Name : **Date of Discharge** :
Age/Sex : **Result** :
Address : **Diagnosis** :
Occupation : **Medical Officer** :
Income :

Sl.No	Important symptoms	During admission	During discharge
1	Pain		
2	Stiffness		
3	Swelling		
4	Muscle weakness		
5	Restricted movements		
6	Others if any		

Place :

Date :

Universal pain assessment scale:

Pain assessment scale	Before treatment	After treatment
No pain(0)		
Mild pain(1-3)		
Moderate pain(4-6)		
Severe pain(7-10)		

D] PROFORMA OF OP CASE SHEET
GOVT. SIDDHA MEDICAL COLLEGE & HOSPITAL
Palayamkottai
Department of Post Graduate- Maruthuvam [Pothu]
Case Sheet proforma for Thandaga Vatham
[Lumbar Spondylosis]

O.P.No	:	Treatment starting date	:
Name	:	End of the treatment date	:
Age/Sex	:	Number of days treated	:
Occupation	:	Diagnosis	:
Income	:	Medical Officer	:
Permanent address :		Result	:

Complaints and Duration

H/o Pain	:
H/o Stiffness	:
H/o Swelling	:
H/o Muscle weakness	:
H/o Impairment	:
H/o extra articular Features	
Eyes	:
Heart	:
GIT	:

General Examination

Temperature	:
Blood Pressure	:
Heart rate	:
Pulse rate	:

Respiratory rate :
Anaemia :
Oedema :
Miscellaneous :

In Siddha Aspects

Nilam :
Paruvakaalam :
Mukkunam :
Thegi :
Lymporigal [Sensory Organs] :
Kanmenthiriyam [Motor Organs] :
Kosam :
Pira Uruppugalin Nilai :

Mukkutram

Vatha :
Pitha :
Kabha :
Ealu Udarkattugal :

Envagai Thervugal

Naadi :
Sparisam :
Niram :
Mozhi :
Vizhi :
Malam :
Moothiram :
Neerkuri :
Neikuri :

In Modern Aspects

History

HT :

DM :

PT :

Br. Asthma :

Allergy :

Surgery :

Venereal exposure :

Others if any :

Examination of Spine and its joints

Inspection :

Palpation :

Movements :

SLR text :

Schober's text :

BIBLIOGRAPHY

TEXTS

- ❖ அகத்தியர் குணவாகடத் திரட்டு
- ❖ அகத்தியர் கன்ம காண்டம் - 300
- ❖ அகத்தியர் வைத்தியம் பின் எண்பது
- ❖ அகத்தியர் 2000
- ❖ அகத்தியர் வைத்தியரத்னச் சுருக்கம் 500
- ❖ அகத்தியர் குருநாடி 235
- ❖ அனுபோக வைத்திய தேவரகசியம்- J.சீதாராம் பிரசாத்
- ❖ கண்ணச்சாமியம் என்னும் வைத்திய சாகரம்
- ❖ கண்ணுசாமி பரம்பரை வைத்தியம்
- ❖ குணபாடம் பகுதி I- டாக்டர். க.ச.முருகேச முதலியார்
- ❖ குணபாடம் பகுதி II & III- டாக்டர். ஆர். தியாகராஜன்
- ❖ அகத்தியர் வாக்கியம் 50
- ❖ T.V. சாம்பசிவம் பிள்ளை தமிழ் ஆங்கிலம் மருத்துவ அகராதி
- ❖ சித்த மருத்துவம் - டாக்டர்.க.ந.குப்புசாமி முதலியார்
- ❖ சித்த மருத்துவாங்கச் சுருக்கம் - டாக்டர் எஸ். உத்தமராமன்
- ❖ சிகிச்சா ரத்ன தீபம் - சி. கண்ணுசாமிப் பிள்ளை
- ❖ ஜீவ ரட்சாமிர்தம்- சுப்பிரமணிய பண்டிதர்
- ❖ தன்வந்திரி வைத்தியம்
- ❖ திருக்குறள்
- ❖ தேரையர் வாகடம்
- ❖ தேரையர் மருத்துவ பாரதம்

- ❖ தேரையர் நீர்க்குறி நெய்க்குறி நூல்
- ❖ தோற்றக் கிரம ஆராய்ச்சியும், சித்த மருத்துவ வரலாறும்- க.சு.உத்தமராமன்
- ❖ பதார்த்த குண சிந்தாமணி
- ❖ பதினெண் சித்தர் நாடி சாஸ்திரம்
- ❖ பதினெண் சித்தர் சில்லறைக்கோவை
- ❖ போகர் வைத்தியம் 700
- ❖ நோய் நாடல் நோய் முதல் நாடல் திரட்டு பாகம் I,II டாக்டர்.ம.சண்முகவேலு
- ❖ யூகி வைத்திய சிந்தாமணி
- ❖ ரோக நிர்ணய சாரம் - டி.ஆர்.மகாதேவ பண்டிதர்
- ❖ CASH'S text book of Orthopaedics and Rheumatology for physio therapists
- ❖ Davidson's principles of internal medicine – 19th edition.
- ❖ Dorland's illustrated medical dictionary
- ❖ Gray's Anatomy
- ❖ Hutchison's clinical methods -21th edition
- ❖ Harrison's principles of internal medicine. 14th edition.
- ❖ Indian Materia Medica – Nadkami
- ❖ Indian Medicinal Plants - |Arya vaidya Sala
- ❖ Manual of practical medicine – Dr. K. Alagappan M.D, FICP – 2nd edition.
- ❖ Medicinal Plants – Robert Bentley & Henry Trimen
- ❖ Mercer's orthopaedic surgery.

- ❖ Orthopaedics and Traumatology – Dr. Natarajan.
- ❖ Outline Of Orthopaedics – John Crawford Adame & David L. Hamblen
- ❖ Orthopaedics and Rheumatology – Patric Dourine Fesp
- ❖ Ortho Short practice of Surgery – Bailey and lover
- ❖ Oxford's text book of Medicine
- ❖ Robbin's Pathologic basis of disease
- ❖ Text book of medicine – PC. Doss
- ❖ Text book of orthopaedics – Dr. John Ebenezar
- ❖ Tex book orthopaedics and truma – G.S. Kulkani

Web site :-

- ❖ <http://www.arthritis.ca>
- ❖ <http://www.about.com>
- ❖ <http://www.ncbi.nlm.nih.gov/entrez/>
- ❖ <http://hed.bupa.co.uk/>
- ❖ <http://www.spondylitis.org./about/advancaillness.aspe>
- ❖ <http://www.mayclinic.com/invoke.ctm>
- ❖ [http://www.spondylitis.org./about/gldol/alternative.aspze.](http://www.spondylitis.org./about/gldol/alternative.aspze)

IP PATIENTS REPORT

S.No	I.P.No	Name	Age/Sex	Occupation	Duration of illness	Date of Admission	Date of Discharge	No. Days Treated		Total days	Results
								IP	OP		
1	2053	Sri ranga natchiyar	60F	House wife	15 days	25.06.12	18.07.12	22	10	32	Improved
2	2096	Muthammal	53F	Farmer	1 Year	27.06.12	21.07.12	25	14	39	Improved
3	2178	Amaravathy	54F	Cooly	1 Month	06.07.12	25.07.12	20	14	34	Moderately Improved
4	2310	Radhakrishnan	55M	Cooly	5 Years	18.07.12	06.08.12	20	14	34	Improved
5	2449	Mookammal	60F	Farmer	1 Year	27.07.12	17.08.12	22	14	36	Improved
6	2529	Velammal	60F	Farmer	1 1/2 Year	02.08.12	23.08.12	23	14	37	Improved
7	2600	Chinnathai	63F	House wife	1 1/2 Year	08.08.12	28.08.12	21	14	35	Improved
8	2716	Kaliraj	47M	Cooly	3 Months	18.08.12	06.09.12	20	14	34	Moderately Improved
9	2759	Thangavel	60M	Driver	2 Months	21.08.12	10.09.12	21	14	35	Improved
10	2772	Ganesan	41M	Tailor	2 Months	22.08.12	05.09.12	15	21	36	Improved
11	2845	Ponnammal	60F	House wife	1 Month	28.08.12	18.09.12	22	14	36	Improved
12	2961	Rajammal	60F	House wife	6 Months	06.09.12	21.09.12	16	21	37	Improved
13	3117	Ganapathy	65M	Cooly	6 Months	19.09.12	10.10.12	22	14	36	Moderately Improved
14	3168	Mala	37F	Teacher	1 Year	22.09.12	13.10.12	22	12	36	Improved
15	3444	Selva kumar	63M	Watchman	6 Months	05.10.12	24.10.12	20	14	34	Moderately Improved
16	3512	Lakshmana perumal	60M	Watchman	6 Months	10.10.12	31.10.12	22	14	36	Improved
17	3680	Arumugathammal	62F	House wife	6 Months	26.10.12	11.11.12	17	21	38	Improved
18	3752	Valliammal	48F	Tailor	1 Month	01.11.12	20.11.12	20	14	34	Improved
19	3937	Azhagammal	55F	House wife	6 Months	20.11.12	02.12.12	13	21	34	Improved
20	3936	Navab	60M	Cooly	1 Year	20.11.12	10.12.12	20	14	34	Moderately Improved

LABORATORY INVESTIGATIONS OF IN PATIENTS

S.No	I.P.No.	BT				AT				ESR				Hb %		URINE ANALYSIS					
		TC cells/cub mm	DC %			TC cells/cub mm	DC %			BT		AT		BT mg%	AT mg %	BT			AT		
			P	L	E		P	L	E	1/2hr	1	1/2hr	1			Alb	Sug	Dep	Alb	Sug	Dep
1	2053	9,500	71	27	2	7,900	58	40	2	20	45	15	32	11	10	Nil	Nil	2-3 epi.cells	Nil	Nil	2 epi cells
2	2096	8,700	47	45	8	9,200	64	30	6	35	55	10	14	11	11	Nil	Nil	NAD	Nil	Nil	NAD
3	2178	8,200	59	36	5	9,400	48	42	10	15	20	7	10	11.2	12	Nil	Nil	NAD	Nil	Nil	NAD
4	2310	7,800	58	34	8	8,000	62	35	3	5	10	3	10	11	12	Nil	Nil	2-3 puscells	Nil	Nil	NAD
5	2449	8,500	65	32	3	7,900	64	34	2	6	15	4	8	10	13	Nil	Nil	2-4 puscells	Nil	Nil	2-3
6	2529	8,000	59	37	4	8,600	55	35	10	40	70	10	14	10.5	11	Nil	Nil	1-2 puscells	Nil	Nil	1-2
7	2600	7,900	59	37	4	8,000	62	36	2	23	48	8	12	10.5	11	Nil	Nil	1-2 puscells	Nil	Nil	NAD
8	2716	9,900	60	37	3	9,600	60	32	8	8	17	4	13	13.2	13	Nil	Nil	Few puscells	Nil	Nil	1-2
9	2759	9,000	69	28	3	9,200	66	30	4	20	40	5	12	10.5	12	Nil	Nil	2-5 puscells	Nil	Nil	NAD
10	2772	8,300	65	32	3	8,500	60	38	2	2	5	1	3	12	13.5	Nil	Nil	1-2 puscells	Nil	Nil	1-2
11	2845	8,100	58	40	2	8,000	60	36	4	5	12	2	5	10.4	11.5	Nil	Nil	1-2 puscells	Nil	Nil	NAD
12	2961	7,000	60	37	3	7,500	60	35	5	35	70	10	13	10	10.5	Nil	Nil	3-4 puscells	Nil	Nil	1-2
13	3117	6,100	69	37	4	6,500	60	36	4	10	20	5	9	7.2	10	Nil	Nil	1-2 puscells	Nil	Nil	NAD
14	3168	6,000	56	40	4	7,000	55	38	7	9	18	4	12	10.8	11.2	Nil	Nil	1-2 puscells	Nil	Nil	1-3
15	3444	7,000	69	27	4	7,500	50	48	2	10	15	5	10	11	12.5	Nil	Nil	1-2 puscells	Nil	Nil	NAD
16	3512	7,000	69	27	4	7,600	58	38	4	15	30	5	7	12	13	Nil	Nil	1-5 puscells	Nil	Nil	NIL
17	3680	9,700	62	30	8	9,200	55	42	3	10	12	8	11	9.5	9.5	Nil	Nil	1-2 puscells	Nil	Nil	NAD
18	3752	9,200	63	34	3	9,400	62	36	2	5	8	3	9	12	12	Nil	Nil	1-3 puscells	Nil	Nil	NIL
19	3937	8,500	64	28	8	8,600	64	33	3	15	20	5	14	13	12.5	Nil	Nil	1-2 puscells	Nil	Nil	NAD
20	3936	9,100	66	27	7	9,000	68	30	2	12	30	2	9	12	12	Nil		NAD puscells	Nil	Nil	1-2

NAD - No abnormal deposits

OUT PATIENTS REPORT – OP

S.No	OP.No	Name	Age/sex	Occupation	Duration of illness	Treatment starting Date	End of treatment date	No of days treated	Results
1	45400	Malai Azhagu	50 F	Housewife	4 months	18.06.12	17.07.12	30 days	Improved
2	45768	Mariammal	60 F	Housewife	6 months	19.06.12	17.07.12	29 days	Improved
3	45127	Ahmed miral	44 F	Housewife	6 months	23.06.12	21.07.12	29 days	Improved
4	47629	Chandra	30 F	Housewife	10 days	26.06.12	23.07.12	28 days	Improved
5	47792	Murugan	60 M	Farmer	2½ years	26.06.12	23.07.12	28 days	Improved
6	49187	Prema	42 F	Saleswoman	6 months	30.06.12	28.07.12	29 days	Improved
7	49475	Thaiammal	60 F	Housewife	5 years	02.07.12	31.08.12	31 days	Moderately improved
8	50086	Subbulakshmi	49 F	Housewife	2 years	04.07.12	01.08.12	29 days	Improved
9	50104	Manoharan	50 M	Tailor	1 month	04.07.12	01.08.12	29 days	Improved
10	50115	Sakthi	36 F	Housewife	1 month	04.07.12	04.08.12	32 days	Improved
11	51044	Swarna latha	46 F	Teacher	2 months	07.07.12	04.08.12	29 days	Improved
12	51846	Ananthammal	46 F	Teacher	10 days	10.07.12	07.08.12	28 days	Improved
13	52643	Venkata Suramian	46 M	Cooly	6 months	12.07.12	09.08.12	29 days	Improved
14	54062	Subramanian	50 M	Farmer	1 year	17.07.12	14.08.12	29 days	Improved
15	54379	Selvi	33 F	Housewife	3 months	18.07.12	15.08.12	29 days	Improved
16	54842	Marimuthu	32 M	Salesman	3 months	20.07.12	16.08.12	28 days	Moderately improved
17	55731	Valli	60 F	Housewife	20 days	23.07.12	20.08.12	29 days	Improved
18	56457	Sivalingam	40 M	Electrician	6 months	25.07.12	23.07.12	29 days	Moderately improved
19	57068	Vijayalakshmi	33 F	Tailor	3 months	27.07.12	24.08.12	28 days	Improved
20	61304	Karpagavalli	62 F	Housewife	6 months	10.08.12	08.09.12	29 days	Moderately improved

S.No.	OP.No.	X- RAY FINDINGS LUMBO SACRAL SPINE AP VIEW, LATERAL VIEW	BLOOD SUGAR Cmg%		BLOOD UREA (mg%)		SERUM CHOLESTROL (mg%)		SERUM CREATININE		SERUM BILIRUBIN	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	45400	Lumbar Spondylosis	83	80	26	24	246	230	0.8	0.8	0.6	0.5
2	45768	Lumbar Spondylosis	87	85	26	20	208	190	0.9	0.8	0.5	0.4
3	47127	Lumbar Spondylosis	91	90	26	20	176	170	0.7	0.6	0.8	0.6
4	47629	Lumbar Spondylosis	85	80	28	26	148	140	0.7	0.6	0.7	0.6
5	47792	Lumbar Spondylosis	88	80	30	26	252	220	1.0	0.8	0.8	0.7
6	49187	Lumbar Spondylosis	110	100	28	26	196	190	0.8	0.7	0.8	0.6
7	49475	Lumbar Spondylosis	70	70	26	24	230	220	0.8	0.6	0.8	0.7
8	50086	Lumbar Spondylosis	120	78	28	24	211	195	1.0	0.8	0.6	0.6
9	50104	Lumbar Spondylosis	136	129	26	24	198	190	1.0	0.8	0.8	0.7
10	50115	Lumbar Spondylosis	105	77	24	20	179	170	0.8	0.6	0.9	0.8
11	51044	Lumbar Spondylosis	84	83	26	24	250	224	0.9	0.6	0.7	0.6
12	51846	Lumbar Spondylosis	97	90	24	22	154	150	1.0	0.9	0.7	0.6
13	52643	Lumbar Spondylosis	117	110	25	23	270	230	0.7	0.6	0.8	0.7
14	54062	Lumbar Spondylosis	90	88	25	22	107	160	1.0	0.9	1.0	0.9
15	54379	Lumbar Spondylosis	83	80	20	20	125	120	0.8	0.6	0.9	0.8
16	54842	Lumbar Spondylosis	80	80	24	20	145	130	0.9	0.8	0.8	0.7
17	55731	Lumbar Spondylosis	127	120	26	20	220	200	1.0	0.7	0.8	0.7
18	56457	Lumbar Spondylosis	92	90	28	26	215	210	0.8	0.6	0.7	0.6
19	57068	Lumbar Spondylosis	91	88	25	20	191	190	1.0	0.6	0.6	0.6
20	81304	Lumbar Spondylosis	130	120	24	22	135	130	0.8	0.7	0.7	0.6

S.No	IP.No.	X- RAY FINDINGS LUMBO SACRAL SPINE AP VIEW, LATERAL VIEW	BLOOD SUGAR Cmg%		BLOOD UREA (mg%)		SERUM CHOLESTROL (mg%)		SERUM CREATININE		SERUM BILIRUBIN	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	2053	Lumbar Spondylosis	102	100	26	24	217	190	0.9	0.1	0.7	0.3
2	2096	Lumbar Spondylosis	79	75	23	20	267	240	0.8	0.7	0.6	0.4
3	2178	Lumbar Spondylosis	108	100	26	22	189	180	0.7	0.6	1.0	1.0
4	2310	Lumbar Spondylosis	70	70	24	23	165	160	1.0	1.0	0.9	1.0
5	2449	Lumbar Spondylosis	150	130	28	26	179	175	0.6	0.4	0.9	0.8
6	2529	Lumbar Spondylosis	78	70	26	25	254	234	0.9	0.8	0.7	0.6
7	2600	Lumbar Spondylosis	118	80	26	25	158	150	0.8	0.9	1.0	1.0
8	2716	Lumbar Spondylosis	123	120	25	24	195	192	0.4	0.4	0.6	0.7
9	2759	Lumbar Spondylosis	60	63	30	28	158	150	0.2	0.2	0.7	0.4
10	2772	Lumbar Spondylosis	122	116	24	23	168	165	0.9	0.9	0.8	0.6
11	2845	Lumbar Spondylosis	127	103	31	28	232	228	0.8	0.7	0.9	0.6
12	2961	Lumbar Spondylosis	69	69	26	24	211	189	0.9	0.9	0.5	0.4
13	3117	Lumbar Spondylosis	110	95	25	24	168	154	0.6	0.7	0.8	0.7
14	3168	Lumbar Spondylosis	88	85	18	18	227	210	0.8	0.7	0.7	0.6
15	3444	Lumbar Spondylosis	110	95	47	33	160	160	0.7	0.6	0.9	0.7
16	3512	Lumbar Spondylosis	80	80	47	33	195	190	0.7	0.7	0.6	0.4
17	3680	Lumbar Spondylosis	92	90	26	24	230	195	0.9	0.8	0.5	0.4
18	3752	Lumbar Spondylosis	126	120	28	26	180	168	0.4	0.4	0.6	0.6
19	3937	Lumbar Spondylosis	116	110	33	30	190	165	1.0	1.0	0.4	0.3
20	3936	Lumbar Spondylosis	80	78	36	32	195	188	0.9	0.8	0.6	0.4

X- RAY OF LUMBAR SPONDYLOSIS



IP NO : 3168
NAME : Mala
A / S : 37 / F



IP NO: 2053
NAME : Sriranga Natchiar
A / S : 60 / F

VATHA NEER

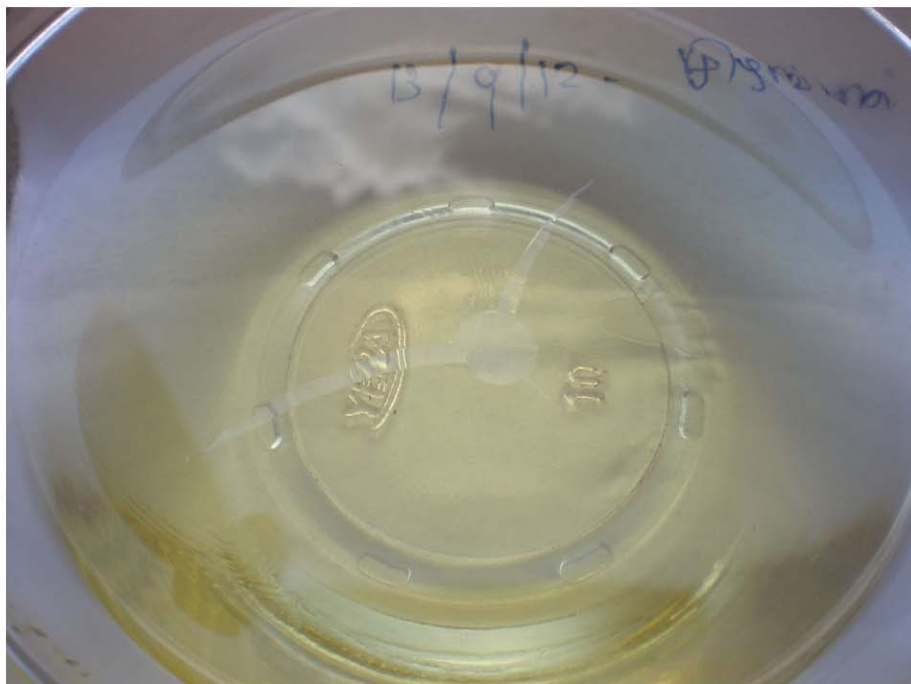
IP.NO: 2759

THANGAVEL 60/M

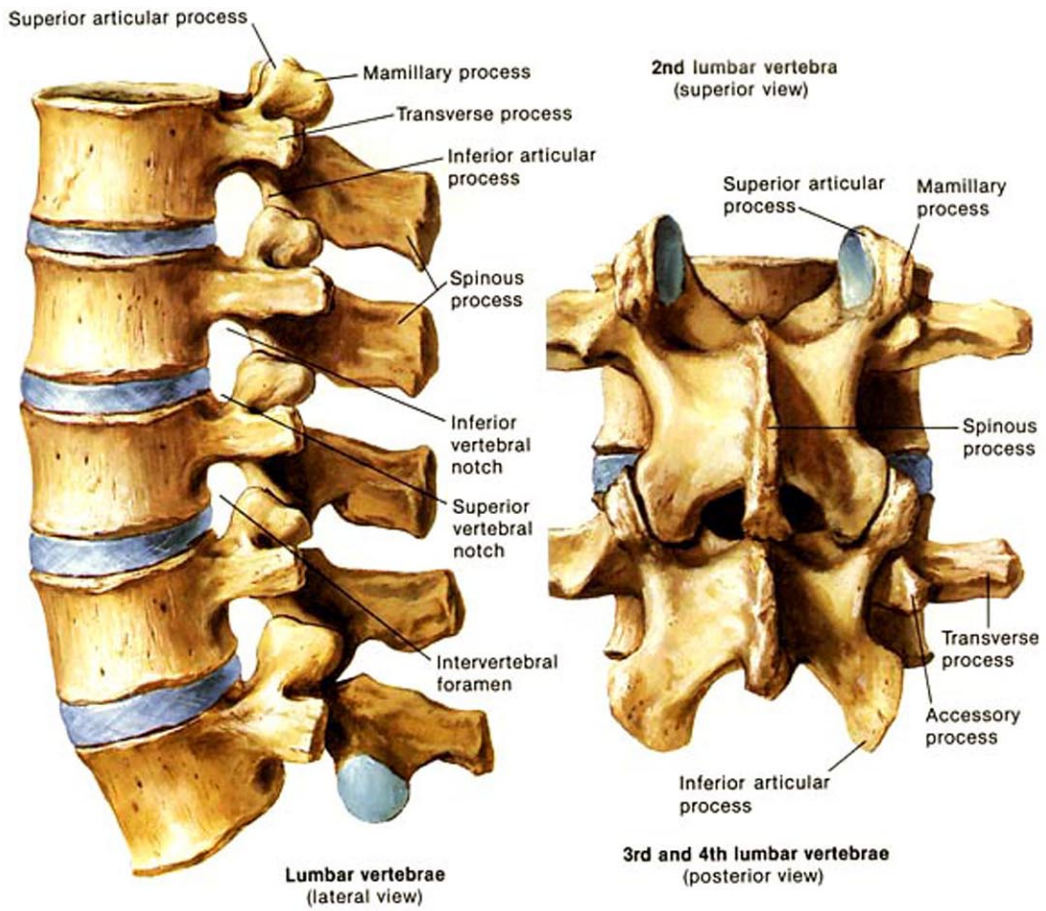


IP.NO: 2961

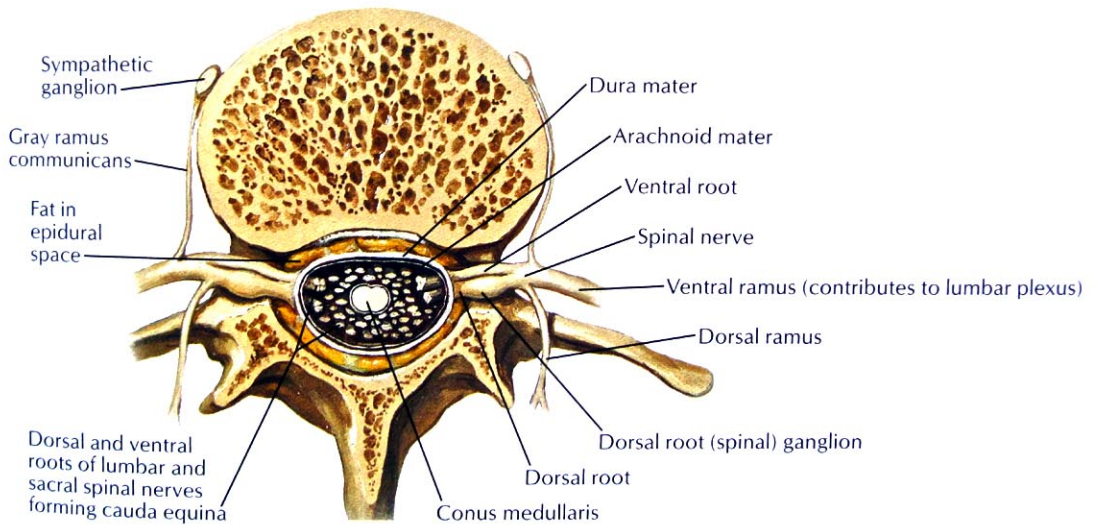
RAJAMMAL 60/F



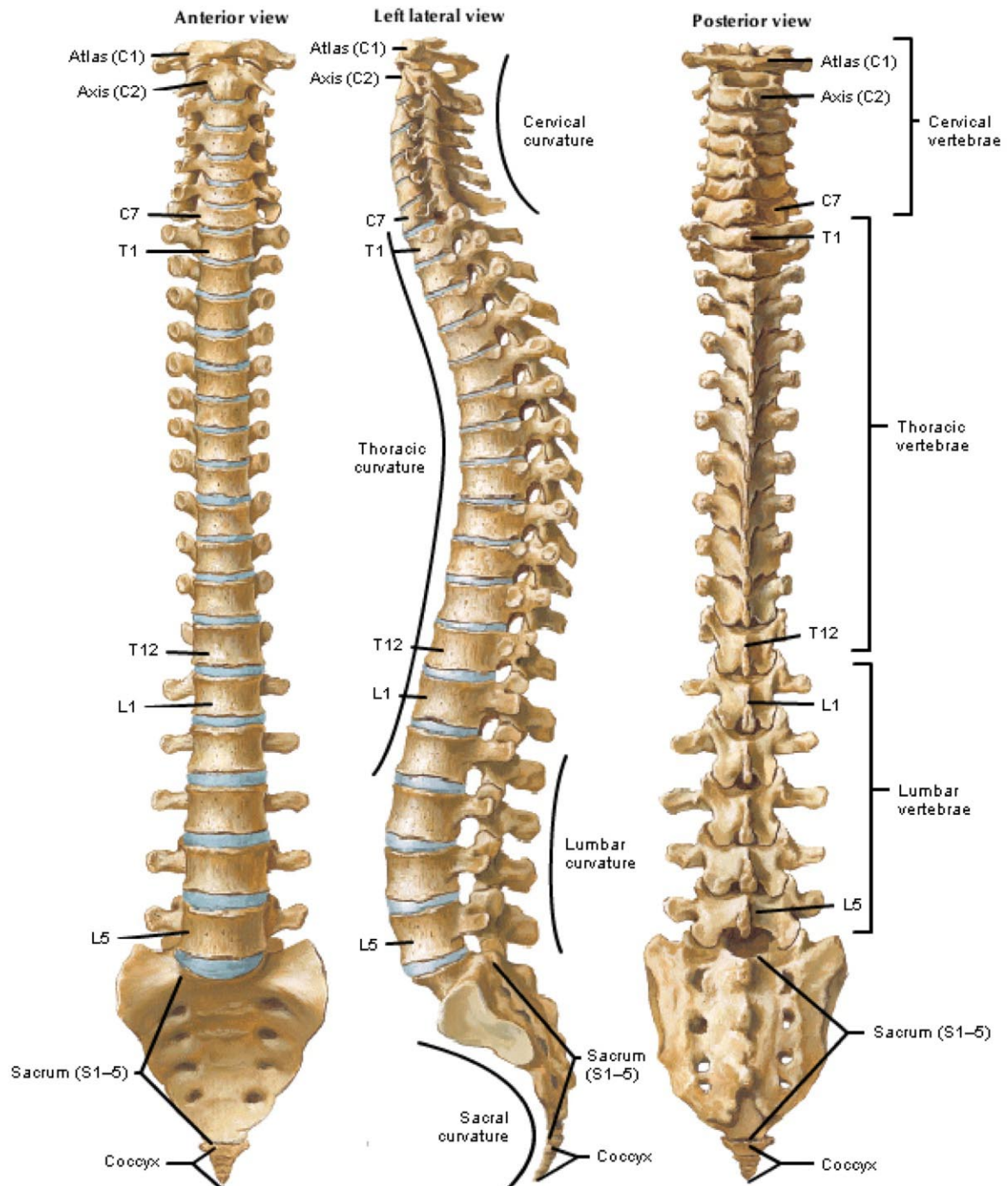
LUMBAR VERTEBRA



CROSS SECTION VIEW



VERTEBRAL COLUMN



வாதத்திற்குச் சூரணம் - சேரும் சரக்குகள்



கறிஉப்பு



இந்துப்பு



வெடியுப்பு

வாதத்திற்குச் சூரணம்



வாதத்திற்குச் சூரணம் - சேரும் சரக்குகள்



வெள்ளறுகு



மெருகன்கிழங்கு



சுக்கு



திப்பிலி



மிளகு



பெருங்காயம்

வாதத்திற்குச் சூரணம் - சேரும் சரக்குகள்



சித்திரமூலம்



மாவிலிங்கப்பட்டை



கொன்றைப்பட்டை



முருங்கைப்பட்டை



சங்கம்பட்டை



வேப்பம்பட்டை