A STUDY ON

SANTHU VATHAM

(DISSERTATION SUBJECT)

For the Partial fulfillment of
the requirements
to the Degree of

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Contents

Introduction

INTRODUCTION

Pura naanuru Quoting, Tamilans are the ancient people than others while Tamil groups Siddha system of medicine had also flourished in a very sophisticated manner.

In the past, this system of medicine had been bestowed by our great spritual scientists called siddhars to the human society. One who developed “Siddhi” are called “Siddhars”. “Siddhi” means a perfect and purified life. If any body attained siddhi there should be perfect and purified life.

According to Siddha system our human body is made up of pancha puthams. It leads to 96 thathuvams. Moreover, the entire universe is also made up of pancha puthams. So any change in the cosmos will reflect in the human body. This was quoted in **Sattamuni Gnanam** by Sattamuni as follows.

“அண்டத்தில் உள்ளதே பிண்டம்
பிண்டத்தில் உள்ளதே அண்டம்
அண்டமும் பிண்டமும் ஒன்றே
அறிந்து தான் பார்க்கும் போதே”

\- *சட்டமுனி ஞானம்*

The whole body is governed by the three vital forces or humours called Thrithathus namely vatham, pitham and Kapham, held in the ratio 1 : ½ : ¼ respectively. If these thathus are provoked by any external and internal factors, it will result as diseases. At this condition these thathus are called Thridhosas or Thridhodam.

Vatham is formed by Air and space
Pitham is formed by fire
Kapham is formed by Earth and water.

Moreover, the diseases can be formed due to changes in the mind also. Mind is influenced by various stresses in our day–to–day life. But Siddhars quoted very anciently that many of the diseases were caused by psychosomatic problems. So that they had advised to control one's mind to get rid of stress. This was quoted by Agasthiyar as follows.

"மனமது செம்மையானால் மந்திரஞ் செபிக்க வேண்டா
மனமது செம்மையானால் வாயுவை உயர்த்த வேண்டா
மனமது செம்மையானால் வாசியை நிறுத்த வேண்டா
மனமது செம்மையானால் மந்திரஞ் செம்மையாமே"

- ஞான பாடல்

Siddhars classified the diseases into 4448. Siddhars diagnosing the diseases by means of envagai thervu, which includes naadi etc, neerkuri and neikuri, the **'precise diagnostic tool'** of siddhars. The treatment aspect involves the neutralisation of affected humours.

"விரேசனத்தால் வாதம் தாழும்"
"வமனத்தால் பித்தம் தாழும்"
"நசிய அஞ்சனத்தால் கபம் தாழும்"

- நோய் நாடல் நோய் முதனாடல் பாகம் - I.

By giving viresanam (purgatives), vatha kutram is neutralised. By giving vamanam (emetics), pitha kutram is neutralised. By giving Anjanam and Nasiyam (application of medicine in the eyes and nose), Kapha Kutram is neutralised.

The unique feature of Siddha medicine is the removal of the root cause of the disease and giving remedy for mind and soul. Siddhars have enumerated ways that are to be followed to maintain the body without being affected by any disease and to maintain sound mind which are called Karpamuraigal.

"Medicine" is defined as one which removes distress and leads an individual to perfect happiness.

"வேர்பாரு தலைபாரு மிஞ்சினக்கால் மெல்ல மெல்ல
பற்ப செந்தூரம் பாரே"
- அகத்தியர் வைத்தியம் பின் எண்பது
பதினெண் சித்தர் பாடிய சில்லரைக் கோவை

From the above quoting, it is ideal to choose herbals initially, if no improvement then parpam and chenduram are to be used.

Among the 80 types of vatha disease, the Author has selected the **"Santhu Vatham"** for his research subject.

According to this study, "Santhu Vatham" is correlated with "Arthritis" in modern medicine.

Arthritis means ever increasing pain and stiffness with ever decreasing physical competence, bodily joy and ease. When more than one joint involved it is known as "oligo Arthritis" and "Poly Arthritis".

Thorough knowledge of important aspects of this disease in Siddha and modern concepts namely the aetiology, pathology, symptomatology and biochemical mechanisms will be helpful to conduct the study with perfect understanding.

The Author has selected **"Ichchura Mooli Choornam"** as internal medicine and **"Erivatha thylam"** as external medicine for research. The reason for choosing above medicines is their efficacy mentioned in siddha therapeutics and the easily available ingredients.

The Author believe that the dissertation work might arise new horizons in their field especially in the treatment of "Santhu vatham".

Aim and Objectives

AIM AND OBJECTIVES

The disease "Santhu Vatham" produce tremendous pain, discomfort and more complications to the patients. The main objective of the present study is to create an awareness about the siddha field and to high light the efficacy of siddha drugs among the public. With this basic intention in mind the following specific objectives have been undertaken.

- To collect various siddha literatures and modern text books as literal evidences regarding the disease "Santhu Vatham".
- To expose the talent of siddhars in diagnostic principle, to know how the disease Santhu vatham alters the normal conditions under the topic Mukkutram, Poripulangal, Udal Kattugal and envagai thervugal.
- To study the clinical course of the disease "Santhu vatham" with keen observation on aetiology, pathology, diagnosis, prognosis, complications and the treatment by making use of Siddha concept.
- To know the extent of correlation of aetiology, classification, signs and symptoms of "Santhu Vatham" in Siddha aspect with "polyarthritis" in modern science.
- To have an idea of an incidence of "Santhu Vatham" with reference to Age, Sex, Socio-economic Status, habits, family history and climatic conditions.
- To have a detailed clinical investigations.

- To have a clinical trial on **“Santhu Vatham”** with **“Ichchura Mooli Choornam”** internally and **“Erivatha thylam”** externally.
- To evaluate the biochemical and pharmacological effects of the trial medicines.
- To use modern parameters to confirm the diagnosis and prognosis of the disease.
- To study the importance of thokkanam, exercises along with the administration of external and internal medicines.
- To have a plan for further studies on this disease.

Abstract

ABSTRACT

The author had chosen the disease "**Santhu Vatham**" for his dissertation subject, because it is one of the disorders, which affects the individuals in higher incidence. It is increased occurrence in recent times.

Twenty In Patients and Twenty Out Patients of either sex had been selected by the author and they were administered with the trial medicines, **Ichchura Mooli Chooranam** 1-2gms bd with Hot water internally and **Erivatha Thylam** externally. The trial medicines are subjected to bio-chemical and pharmacological analysis.

At the end of the trial study 35% of In Patients showed good clinical improvement and 60% of In Patients showed fair clinical improvement and 5% of In Patients showed poor clinical improvement. 30% of Out Patients showed good clinical improvement, 55% of Out Patients showed fair clinical improvement and 15% of out patients showed poor clinical improvement.

Review of Literatures

Siddha Aspect

LITERATURE SURVEY
SIDDHA ASPECTS

Definition of Vatham :

Among the five elements (Panchapoothas) vatha is formed by the vayu and akash. This is one of the three humours (vatha, pitha, kapha). The two other dhosas are set in motion by the vatha. In a healthy man the existance of three humours are in the ratio of 1:½:¼ respectively. This ratio is altered when there is a disturbance to the vatha by environmental factors, diet, habits etc., vatha may be increased or decreased. When the equilibrium state is disturbed, vatha is altered, the other two also altered and leads to vatha disease.

Formation :

"ஆமெது நாடி நரம்பு யெழுபத்தீராயிரம்
இருப்பான நாடி எழுபதோரோ
யிரமான தேகத்தில் ஏலப்பெரு நாடி
ஏக்கச் சமத்தொழில் ஊக்க தசவாயுக்கள்
தக்காடி என்றே சாரும்" - *யூகி சிந்தாமணி*

"இருப்பான நாடி எழுபதோடிரூர்
யிரமான தேகத்தில் ஏலப் - பெருநாடி
ஒக்கத சமத்தொழிலை யூக்கதசவாயுக்கள்
தக்கபடி யென்றே சாரும்." - *நோய் நாடல் நோய் முதனாடல்*

"சாருந் தசநாடி தன்னில் மூலம் மூன்று
பேருமிடம் பிங்கலையும் பின்னலுடன் - மாறும்
உரைக்க விரற் காற்றொட்டுணர்த்துமே நாசி
வரைச் சுழியோமையத்தில் வந்து"

"வந்த கலை மூன்றில் வாயுவாம பானனுடன்
தந்த பிராணன் சமானனும் சந்தமுறக்
கூட்டுறவு ரேசித்தல் கூறும் வாதம் பித்தம்
நாட்டுங் கபமேயாம் நாடு" - *கண்ணுசாமியம்*

According to this the human body is composed of 72,000 naadi narambukal. Among this 72,000 the ten are prominent naadies (Dasa naadies). Of these ten naadies, Idagalai, pingalai and suzhumunai are known as moolathara naadies.

Among the ten vayus five are more important. They are piranan, abanan, viyanan, uthanan and samanan.

Abanan in conjunction with idagalai to produce vatha.

Piranan in conjunction with pingalai to produce pitha and samanan in conjunction with suzhumunai to produce kapha.

These three humours or thadhus, ie., vatha, pitha and kapha are the functional principles in the composition and substance of the body.

Locations :

Vatham lives in,

- Abanam
- Stools
- Idakalai
- Undhiyin keezh moolam

- Kaamakodi
- Hip bone
- Skin
- Nerves
- Joints
- Hair follicles and
- Muscles

Natural properties of vatham :

Physiologically,

- Giving briskness
- Inspiration and expiration
- Functioning the mind, thoughts and body
- Regulation of the fourteen physiological reflexes (Vegams)
- Uniform function of the seven udal kattugal
- Protection and
- Strengthening of the five sensory organs.

Agonist qualities of vatham :

Normal qualities of vatha are,

- Dry
- Cold
- Subtle
- Rough
- Unstable
- Light

Antagonist qualities of vatham :

- Unctuous
- Hot
- Solid
- Soft
- Stable
- Heavy

Signs of Hypervatham :

- Constipation
- Abdominal disturbances
- Fatigue
- Depression of sense organs
- Giddiness
- Incoherent speech
- Rigors
- Insomnia
- Fond of eating hot food items
- Emaciation of body with blackish discolouration
- Loss of vigour.

Signs of Hypovatham :

- Vague pain all over the body
- Low-pitched voice.
- Difficulty to do any work
- Reduction of intelligence
- Syncope
- Symptoms of hyperkapha

Relationship between vatham and suvai :

Aggravating tastes :

"புளிதுவர் விஞ்சுங்கறி யாற்பூரிக் கும்வாதம்
ஒளி யுவர்கைப் பேறில் பித்துச் சீறும் - கிளிமொழியே
கார்ப்பினிப்பு விஞ்சிற் கபம்விஞ்சு ஞ்சட்டிரதச்
சேரப்புனர் நோயணுகாதே"

- கண்ணுசாமியம்

According to this poem the sour and astringent tastes increase the vatha humour.

Neutralising tastes :

"வாத மேலிட்டால் மதுரம் புளியுப்பு
சேதமுறச் செய்யுஞ் சிறையம் - ஓதக்கேள்
காரந் துவர்கசப்புக் காட்டுஞ் சுவையெல்லாம்
சாரப் பரிகாரஞ் சாற்று"

- கண்ணுசாமியம்

According to this above poem sweet, salt and sour can neutralise the vitiated vatha humour.

Normal Signs (Thannilai) :

It is defined as the state of normal character of tridosham. But under pathological condition, the three thathus can be changed in the following aspect.

For eg : vatha is normal in Koothirkalam.

Aggravation signs (Thannilai valarchi) :

It is defined as provocation of any humour in its own position (primary)

Signs :

Rejecting the agonist characters. Adopting the antagonist characters.

For eg : vatha is aggravated in the mudhuvenil kaalam.

Displacement of Aggravation (Vetrunilai valarchi) :

Provoked tridhosas can be aggravated and displaced from its own position to the other.

Signs :

The humours can be provoked and its features are reflected in the seven Udal Kattugal.

For eg : vatha can be aggravated and displaced in kaarkaalam.

Fate of three humours :

"அறிந்திடும் வாதமடங்குமலத்தினில்
பிறிந்திடும் பித்தம் பேராஞ்சலத்தினில்
மறிந்திடுமையம் வசிக்கும் விந்துவில்
உறைந்திமிம்மூன்றுக் குறவாந்த லமிதே"
- திருமூலர்.

From the above quoting, it is clear that the three humours can be discharged through the following routes.

- Vatha : Faeces
- Pitha : Urine
- Kapha : Semen / suronitham

Classification of vatham :

Vatha can be classified into ten types. This has been said in **Yugimuni 800** as follows,

"முறையாம் பிராணனோ டபானன் வியானன்
மூர்க்கமா முதானனொடு சமான னாகம்
திறமை யாங் கூர்மனொடு கிருகரன்றான்
தேவ தத்த னாடு தனஞ் சயனுமாகும்"

- யூகி வைத்திய சிந்தாமணி.

- Piranan
- Abanan
- Viyanan
- Samanan
- Nagan
- Udhanan
- Koorman
- Kirugaran
- Devadhaththan
- Dananjeyan

Each one is responsible for various actions within the body.

1. Piranan : (Heart Centre)

It refers to the chest and it regulates the respiratory system and helps the digestive system.

2. Abanan : (Muladhar Centre)

The type of vaatha corresponds to the pelvic and it is the seat of kundalini energy and controls excretions such as sweating, evacuation of stools, ejaculation of sperms, micturition, menstruation and parturition. (delivery of child).

Abana vaayu is one of the 14 physiological reflex actions (Vegas) of the body. When its expulsion is partially or completely obstructed it leads to diseases like vaayu gunmam, kudal vatham, vali vaatham.

3. Udhanan : (Throat Centre)

This corresponds to the pharyngeal plexus in the throat region and controls breathing and speech. It is also responsible for the physiological reflex actions like vomiting, hiccough, cough etc.

4. Vyanan :

It helps in the circulation of energy through the entire nervous system and helps in the movement of various parts of the body. It is responsible for the recognisation of various sensations.

5. Samanan : (Navel Centre)

This corresponds to the solar plexus etc. by balancing the other vayus, the six tastes, water and food. If any one of the vaayus gets affected, this samanan is also affected.

6. Naagan :

It is responsible for the intelligence of an individual. It helps in learning different arts, singing of good songs etc. It is responsible for blinking, opening of eyes and eye-brow raising.

7. Koorman :

This is responsible for yawning, closing of mouth, yielding strength and also blinking. It helps in closing and opening of the eyes and shedding of tears. It is responsible for the vision.

8. Kirukaran :

It is responsible for the salivation in the oral cavity and mucous secretion in the nasal cavities. It is responsible for good appetite. It helps in meditation. It produces cough and sneeze.

9. Devadhaththan :

It is responsible for the lazziness and also lassitude while waking up. It helps in the movements of the eyeball in various directions. It is responsible for begging, quarrelling, arguing etc., and also for much anger.

10. Dhananjeyan :

It is responsible for the swelling all over the body. It produces sensation of roaring like the sea in the ears. It leaves the body by blowing up the cranium on the 3rd day after death.

Classification of Vatha Diseases :

In classification we can find different views regarding the number. In **Yugi Vaithya Chinthamani**, Yugi says.

"என்னவே வாதமது எண்பதாகும்"

While ending a verse describing the names of the types of vatha, Yugi again says the number as 80.

"தாக்கான வாதந்தான் எண்பதாகும்"

But in the concluding section of the Yugi Vaithya Chithamani, the number of vatha diseases has been given as 84.

"ஆமப்பா வாதம தெண்பத்து நாலு
அதினுடைய குணா குணங் களடங்கலக"

But **"Siddha Maruthuvam"** says the number as 85. While in description and in the following books as,

Astanga sangiraham
Noi nadal noi muthual naadal – part II
Thanvanthri vaithyam and in
Jeeva Rakshamirtham,

The vatha disease is classified in to 80 types.

In **Agasthiar 2000**,

"எண்பது வாதமிகு மிருவகைப் படுத்துக் காணில்
நண்புறு அரைக்கு மேலே நாற்பது வாதமாகும்
பண்சேரரைக்குக் கீழே பத்துநான் காகுமென்று
வண்டுசேர் குழலினாளே! வாதத்தின் கூறு தானே"

ie, 40 types of vatha disease are in the upper half and 40 in the lower half of the body and the total number is 80.

Signs and Symptoms of Vatha Disease :

- Pricking pain
- Dull pain
- Aching pain
- Tremors
- Palpitation
- Spasm
- Dryness or dehydration
- Dislocation of joints
- Weakness of the body
- Paralysis
- Constipation
- Oliguria
- Excessive thirst
- Astringent taste predominantly in the mouth
- Excretions like stools, urine, lacrimation, sweat, becomes black in colour.

Piniyari Muraimai :

Diagnostic methods adopted in siddha system of medicine are formed as “Piniyari Muraimai”. It is based on the following principles,

- Poriyal arithal
- Pulanal arithal
- Vinathal

Pori and pulan are the five organs of perceptions and their senses respectively. Nose-Smell, Tongue-taste, Eyes-Vision, Ears & Skin-Auditory & touch. Porigal of patient and Doctor are used by the physician as instruments.

Vinathal is a method of enquiring about the details of patient's complaints from his own words or from their attendant.

The above mentioned principles can be compared to that of interrogation and inspection, percussion & palpation, auscultation.

The important method adopted to diagnose the disease is by means of **"Envagai Thervugal"**.

"நாடிப்பரிசம் நாநிறம் மொழிவிழி
மலம் மூத்திரமிவை மருத்துவராயுதம்"
- நோய்நாடல் நோய் முதனாடல் பாகம் I

It is considered to be physician instruments and this can be understand by following stanza,

"தொடுக்கலுற்றறு அட்டவிதப் பரீட்சை தன்னை
துலக்கமுறும் பண்டிதரே தெளி வதாகப்
பகுக்காய நாடியை நீ பிடித்துப் பாரு
பகர்கின்ற வார்த்தை பார் நாவைப் பாரு
வகுக்கரிய தேகமென்றத் தொட்டுப் பாரு
வளமான சரீரத்தின் நிறத்தைப் பாரு
சகிக்கரிய மலத்தைப் பார் சலத்தைப் பாரு
சார்ந்த விழிதனைப் பார்த்து தெளிவாய் காணே"
- அகத்தியர் வைத்திய வல்லாதி 600.

Envagai thervugal Includes :

Naadi, sparisam, naa, niram, mozhi, vizhi, malam, moothiram.

The fact regarding envagai thervugal suggests that it is mostly used method of diagnostic standard in siddha system and more concentration should be given to get proficient knowledge.

Naadi – (Pulse) :

"அறிந்து பார் வாதமே தனித்த தானால்
அன்னம் போல் நடக்குமப்பா நாடி பாரு
சரிந்திடவே கால் முடக்கும் போது காட்டும்"
- அகத்தியர் ரத்தின சுருக்கம்

Vitiated vatha causes difficulty in walking or impaired function of lower extremities. The examination of naadi has been recognised as one of the principle means of diagnosis and prognosis of disease from times immemorial.

Sparisam (Skin) :

Skin examination can be made out by touch and reveals about warmness / chillness / dry / weeping skin / rough / smooth / soft / hard, tenderness or presence of ulcers, swelling, wrinkles, hair, pigmentation etc.,

Naa – Tongue :

The colour, character and condition of the tongue changes according to the changes in mukkutram.

Niram (Colour) :

As vaatha is the root cause the colour of the patient's skin, tooth, etc., should be dark or black in colour.

Mozhi (Speech) :

Speech in vatha patients may vary according to the deranged Dhosas and grade of the disease.

Vizhi (Eye) :

In the diseased condition both motor and sensory disturbances of the eye can be expected. Burning of the eyes, lacrimation, irritation, colour changes are also noticed under this group.

Malam (Stools) :

In vatha diseases stools should look in colour with constipation.

Moothiram (Urine) :

"உறைந்த நீருங் கரு கருத்து
முறையாய் ரோகமு முண்டாமே"
- அகத்தியர் நாடி.

Its examination regarding

Neerkuri :

- Niram – colour of the urine.
- Manam – smell of the urine.
- Edai – specific gravity of the urine.
- Nurai – frothy nature of the urine voided.
- Enjal – indicates the quantity of the urine voided.

Neikuri :

"அருந்து மாறிரதமும் அவிரோதமதாய்
அ.ஃகல் அலர்தல் அகாலவூண் தவிர்ந்தழற்
குற்றளவருந்தி உறங்கி வைகறை
ஆடிக்கலசத் தாவியே காது பெய்
தொருமுகூர்த்தக் கலைக்குட்படு நீரின்
நிறக்குறி நெய்க்குறி நிருபித்தல் கடனே"
– தேரையர்

Method :

Prior to the day of urine examination the patient is advised to take balanced diet and the quantity of food must be proportionate to his appetite and he should have a good sleep. After waking up in the morning, urine voided first, was collected in a glass container and was subjected to analysis with in 1½ hours. A drop of gingelly oil is dropped without shake, the nature of the Neikuri should be noticed in direct sunlight.

Character of different neer :

"அரவென நீண்டிடின.ஃதே வாதம்"

When the oil drop spreads like a snake, it indicates vathaneer,

"ஆழி போற்பரவின் அ.ஃதே பித்தம்"

If the oil drop spreads like a ring, it indicates pitha neer.

"முத்தொத்து நின்றின் மொழிவதென்கபமே"

If the oil drop remains as that of pearl, it indicates kapha neer.

Along with the above mentioned eight types of examination another principle in siddha medicine, the man is composed of 5 elements like universe.

"அண்டத்தி லுள்ளதே பிண்டம்:
பிண்டத்திலுள்ளதே அண்டம்:
அண்டமும் பிண்டமும் மொன்றே
அறிந்துதான் பார்க்கும் போதே"

- சட்டமுனி ஞானம்

Time, place, nature of body (pirakiruthi) and environmental change have interrelations among them.

So besides envagai thervugal, paruva kalangal and Thinai also should be taken in consideration to arrive the perfect and correct diagnosis.

Thinai (Land and Place) :

The geographical distribution of the land is classified into five regions.

- Kurinji - Mountain and its surroundings
- Mullai - Forest and its surroundings
- Marutham - Field and its surroundings
- Neithal - Sea and its surroundings
- Paalai - Desert and its surroundings

Each region has its own characters, which influences the inhabitants, physical, mental, economic, occupational and cultural activities. In each region some ailments are endemic based on the climatic conditions. Accordingly, vaatha diseases are common in neithal nilam. Palai nilam – common places for all types of diseases. Marutha nilam – is good for all types of treatment and health.

Neithal Nilam :

"நெய்தனில மேலுப்பை நீங்கா துறினுமது
வெய்தனில மேதங்கு வீடாகும் - நெய்தல்"

- பதார்த்த குண சிந்தாமணி

Paalai Nilam :

"பாலை நிலம் முப்பிணிக்கும் மில்லம்"

- பதார்த்த குண சிந்தாமணி

Marutha Nilam :

"மருதநிலம் நன்னீர் வளமொன்றைக் கொண்டே
பொருதனில மாதியநோய் போக்கும் - கருதநிலத்
தாறிரதஞ் சூழ அருந்துவரென் றாற்பிணியெல்
லேறிரதஞ் சூழ்புவிக்கு மில்"

- பதார்த்த குண சிந்தாமணி

Kalam :

Generally speaking medicine was formed upon the particular country's individual and special aspect, in the same way siddha medicine is based on southern peninsula's (the cradle of human race), civilization, culture and climatic changes. According to siddha system the year is divided into six seasons with reference to the position of earth and sun.

- Kaarkalam - August, September
- Koothirkalam - October, November
- Munpanikalam - December, January
- Pinpanikalam - February, March
- Ilavenilkalam - April, May
- Muduvenilkalam - June, July

In every season, changes will occur in the land, water, plants, animals and human beings, which will change human body, vital humour and affect udalthathukkal and make them susceptible to certain specific diseases likely to occur in that season.

Muthuvenil paruvam :

"பதுமத்தைப் பூக்கவைக்கும் பானுமிகக் காயும்
முதுவேனி லிற்புவிநீர் முற்றும் - கதுமென
வற்றும் கபம.்கும் வாயுமிகும் வாழ் மாந்தர்க்
குற்ற நலிக் கேதிதென்றோது"

- மருத்துவ தனிப்பாடல்

Kaarkalam :

"வெளிச் சுழல் தட்பத்தை விஞ்முட் சூட்டை
அளித்துரிக்கு நேர்செயுமால் யாக்கைக் - களி செரி
வன்னிய.ஃகும் காணத்தால் வாதாதி முத்தோடம்
நன்னிலையில் நில்லா நவில்"

- மருத்துவ தனிப்பாடல்.

These above mentioned poems stated that the kaar and koothir kalam are seasons for vatha diseases.

Udalvanmai :

It means strength and vitality of the body. It is classified into three types.

- Eyarkai vanmai - Inherited immunity
- Kaala vanmai - Age, season and time
- Seyarkai vanmai - Improvement of 3 vitality obtained by diet, day-to-day habits and physical exercises.

SANTHUVATHAM

Santhuvatham is one of the vaatha diseases, which is described in **"Yugi Vaithya Chinthamani"**.

Definition :

The term Santhuvatham denotes all kinds of joint disease caused by the derangement of one of the uyirthathus "Vatham".

In the same literature it is mentioned such type of joint disease as megasoolai under the chapter of "Soolai Noikal". In some other literatures, Santhu Vatham was mentioned in different names

> as Santhuvali, moottuvali, megasoolai, mudakkuvaayu, Ama vaatham, Keelvayu.
>
> **- Siddhamaruthuvam**

> Santheegasileshmarogam, Santhu Vatham, Soolaikattu, Vatha Soolai, Vayu rogam.
>
> **- Vaidya Sara Sangiraham**

In **Vaidya Sarasangiraham**, alias **Agasthiyar Vaidhya Kaviyam**, **Agasthiyar Gunavahada Thirattu** and **Thirumoolar karukkidai Vaidhyam 600**, Santhu Vatham was explained in the name of Soolai, because of excruciating pain caused by such diseases.

Since it causes pain in the Santhu or Moottu, it is called as **moottuvali or Santhuvali**.

Restriction of movements and in some cases even immobility of the joints can occur, so it may be named as **Mudakkku Vaayu or Mudakku Vaatham**.

Thus the terms of this disease are named according to the cause, derangement of the Uyirthathu, Kurikunam, site of lesion, complication etc.

They are as follows :

Cause	:	Mega Soolai
Derangement of the Vatha Uyirthathu	:	Vatha Soolai, Santhu Vatham
Derangement of the Kapha Uyirthathu	:	Santheega Sileshma rogam
Kurikunam	:	Soolai Kattu
Site of lesion	:	Moottuvali, Santhuvali, Keelvaayu
Complication	:	Mudakku Vatham

In **TV Sambasivampillai medicinal dictionary** Santhuvatham is described as,

"சந்துவாதம் - பொதுவாக அழற்சியினால்
உடம்பில் முழங்கால் முதலிய பொருத்துகளை
தாக்கி வீக்கம் கண்டு, வலியுடன் கீல்களை
சுற்றியுள்ள சவ்வுக்கு காணும் ஓர் வாத நோய்"

A form generally employed to inflammatory disease acute or Chronic of the whole or greater part of the fibrous structures that constitute the formation of a joint-Arthritis.

"சந்துகள் மிக திமிர்த்து உடம்பெல்லாம்
மிக நொந்து, மயக்கம், வாய் நீரூறல், கை கால்
பூமியில் தரிக்கவொண்ணாது வலியை உண்டாக்கும்
வாதநோய்".

"Rheumatism is characterised by inflammation with the thickening of the fibrous tissues, bodily suffering, giddiness, salivation and unbearable pain in the limbs rendering the patient unable to stand firmly". As mentioned in the text of **Yugimuni Vaidya Chindamani**.

"செய்கைதான் சந்துகளு மிகத்திமிர்ந்து
செடமெங்கு நொந்துமே மிகவழற்றி
நைகையாய் நளுத்துமே மயிர்க் கூச்சிட்டு
நாணியே முன்போல நடை கொடாது
மைகைதான் மயக்கமொடு வாய்நீறும்
வரண்டிடுமே நாவுதான டிக்கடிக்கு
கைகால்தான் றரணிதனிற் றரிக் கொணாது
சஞ்சலிக் குஞ்சந்துவாம் வாதங்கேளே"

Santhuvatham is a disease characterised by, difficulty in walking and inability to do the works with hands and legs as usual due to stiffness of joints and pain of the body. Extra articular symptoms associated with this disease are excessive salivation, dryness of tongue, lassitude and lethargy. According to **siddha maruthuvam** (text book)

This Santhuvatham is mentioned as Keelvayu.

"நாற்றிசைய .....
..... சிதைத்துவிடு முடக்குவாத சூலை போமே"
- யாகோபு சிந்தாமணி

"போந்தானே கால் முடக்கு கை முடக்குப்
பொல்லாத நோய்கலெல்லாம் போகுஞ் சொன்னேன்"
- சித்த வைத்தியத் திரட்டு

"ஈர்த்திடவே சூலை மகோதரங்களுக்கு .....
..... தோய்ந்திடவே வலிவாதம் முடக்குவாதஞ்
சொற்பெரிய கமர் வாதத்தில் வாம்"
.....
- சித்த வைத்தியத் திரட்டு

We can infer that the disease of santhuvatham was mentioned by various names, from above siddha literature evidences.

The disease Santhuvatham is characterised by difficulty in walking, inability to do work and is a disorder of joints (Santhu) where bone, muscles, tendons and associated structures binds together, for the purpose of locomotion of the body, caused by deranged humour vaatha. Many literature references reveals above mentioned conditons associated with pathological conditions of vaatha derangement.

"வாதமே வாயுவாகும் வாதமே காலிற்சேரும்
வாதமே கன்னியோடு மருவிடில் வலிவுமுண்டாம்"

- பரராச சேகரம்

"வாதத்தின் குணமே தன்னால்
வயிறது வீங்கிக் கொள்ளும்
தாதத்தில் மேனி கைகால்
சந்துமே கடுப்புத் தோன்றும்"

- குறியடையாள நாடி.

"வாதமே ககித்த போது வாயுவ மெழுப்பு மீரும்
சொல்லவே வாதமது மீறிற்றானால்
சோர்வடைந்து வாயுவினால் தேகமெங்கும்
மெல்லவே கைகால்கள சதியுண்டாம்
மெய்முடங்கும் நிமிரவொண்ணாத் திமிருண்டாகும்
மெல்லவே யுடல் பொருமுன் வயிறுளைக்கும்
விரும்பிய ன்னஞ் செல்லாது விந்து நட்டம்
கொல்லவே நாப்புக்கும் காய்சலுண்டாம்
கூறினார் மாலையமுனி கூறினாரே"

- அகத்தியர் சிகிச்சா ரத்தின தீபம்.

Manifestations of vaatha vitiations are pain in extremities & joints, abdominal distension, swelling, immobilization of body & stiffness, perverted taste, anorexia, fever etc.

“அறிய விம்மூன்றின் தாண்மை சொன்னார் நந்தி
எறிய நல்வாதமெறிக்குங் குணங்கேளு
குறியெனக் கைகால்குளச்சு விலாச்சந்து
பறியென நொந்துடற் பச்சைப் புண்ணாகுமே”

- திருமூலர் வைத்தியம்.

This also denotes that the character of vaatha vitiation as aches and pain of joints, arms & legs along with the pain of ribs.

“காணப்பா வாத மீறல்
கைகால்கள் பொருந்தி நோகும்
பூணப்பா குடல் புரட்டும்
மலஞ் சலம் பொருமிக்கட்டும்
ஊணப்பா குளிரும் காய்ச்சல்
உடம்பெல்லாம் குத்தும் வாய்வு
வீணப்பா குதமிறுக்கும்
வியர்வையும் வேர்க்கும் தானே”

- அகத்தியர் ரத்தின சுருக்கம்.

With the joint pain, fever, nausea, body aches, pain and constipation are mentioned with excessive sweating

“வாத வீறுள அன்னமிறங்காது கடுப்புண்டாம் வண்ணமுண்டாம்
மோது கட்டுரோகம் சுரமுண்டா மிருமலுண்டாமிருமலுமா முறங்காதென்றும்
.....
தீ தெனவே நரம்பிசித்து சந்துகள் தோறும் கடுக்குந் தினமும் தானே
சந்திர வாத முடம்பு குளிர்தெழுந்தே நடுங்குங் சீதவாய்வாம்
முந்திய குத்தி சிவாஞ் சந்துகள் தோறும் குறைந்து மொழிகள் வீங்கும்
வந்திய தொந்த வாதம் நரம்புகளெல்லா மிசிந்து மலம் விடாது
அந்து அவ்வாகு வாதம் வீக்கமுண்டா முடலிற் றிமிருண்டாமே”

- தேரையர் வாகடம்

Along with above mentioned conditions this stanza indicates vatha vitiation causes cough, loss of sleep and swelling of interphalangeal, tarsal, metatarsal joints and bony prominents & stiffness of the body.

"தக்கவாயு கோபித்தால் சந்து உளைந்து தலைநோவா
மிக்க மூரி கொட்டாவி விட்டாங்கெரியும் - மலங்கட்டும்
ஒக்க நரம்புதான் முடங்கு முலர்ந்து வாய் நீருறிவரும்
மிக்க குளிரும் நடுக்கமுமாம் மேனி குன்றி வருங் கானே"
- தேரையர் வாகடம்

Excessive salivation is additionally mentioned here. In Santhuvatha disease mostly affected types of pitham are sadhakam, Ranjakam, Prasaga Pitham.

In **Gunavagadam Noyin saram** stated,

"திருத்தமாம் வாதத் தோடே தீங்கோடு பித்தம் சேரில்
பொருத்துகள் தோறும் நொந்து போகவேயிடிக்கும் சூலை"

When pitha dhosha associated with vatha causes joint pain. Other factor is kapha, kapha mainly regulates the fluid balance and structural component in all the tissues and organs.

"கூறினோம் சிலேத்மமது சமான வாய்வைக்
கொழுத்தியே சுழிமுனையைப் பற்றி விந்தில்
கீறியே சிரசிலாக்கினையைச் சேர்ந்து
சிங்குவை யுண்ணாக்கு நிணமச்சை ரத்தம்
மீறியே நிறங்கோண நரம் பெலும்பில்
மேவியதோர் மூளை பெருங்குடலில் கண்ணில்
தேறியதோர் பொருத்திடங்களெல்லாஞ் சேர்ந்து
சிலேத்மமது வீற்றிருக்குந் திடங்கண்டாமே"
- மருத்துவ தனிப்பாடல்

When Vathakapha gets deranged,

"வளிமையுந் தன்னிலை கெட்டு
வலியுடன் வீக்கச் சுரமும் காய்ந்து
மூட்டுகள் தோறும் முடுக்கியே நொந்து
மூட்டுகள் தன்னில் நீரும் சுரந்து
தாங்கொணா வலியுடன் நொந்திடுமம்மே"

Its manifestation are pain, swelling and fever will associated with unbearable pain of the joints and increased secretion of synovial fluid.

Aetiology of Santhuvatham :

In **Yugi** we cannot find any specific aetiology for santhuvatham, but causes for all types of Vatha disease in general have been described,

"என்னவே வாதம்தா னெண்பதாகும்
இகத்திலே மனிதர்களுக் கெய்யுமாறு
பின்னவே பொன்தனையே சோரஞ்செய்து
பெரியோர்கள் பிராமணரைத் தூஷணித்தும்
வன்னவே வச்சொத்திற் சோரஞ் செய்து
மாதா பிதா குருவைம றந்த பேர்க்கும்
கன்னவே வேதத்தைநிந்தை செய்தால்
காயத்திற் கலந்திடுமே வாதந்தானே"

- யூகி வைத்திய சிந்தாமணி

Since Vatha is responsible for nervous function, injudicious actions like, theft, unreligiousness, unlowyality, will affect the mind and soul will cause disturbance of Uyirthathu – Vatham

"தானென்ற கசப்போடு துவர்ப்புறைப்பு
சாதகமாய் மிஞ்சுகினுஞ் சமைத்தவண்ணம்
ஆனென்ற வாறினது பொசித்தலாலும்
ஆகாயத் தேறலது குடித்தலாலும்
பானென்ற பகலுறக்க மிராவிழிப்பு
பட்டினியே மிகவுறுதல் பாரமெய்தல்
தேனென்ற மொழியார் மேற்சிந் தையாதல்
சீக்கிரமாய் வாதமது செனிக்குந் தானே"

- யூகி வைத்திய சிந்தாமணி

And also stated that imbalanced diet like increased tastes of bitter, sour, hot and rotten meals, starvation, inappropriate habits, disturbed mind are readily affect vatha and cause disease.

According to **Siddha Maruthuvam (Sabapathy Kaieyedu) :**

"வளிதரு காய் கிழங்கு வரைவிலா தயிலல்கோழை
முளிதயிர் போன்மி குக்கு முறையிலா வுண்டி கோடல்
குளிர்தரு வளியிற் றேகங் குனிப்புற வுலவல் பெண்டிர்
களித்தரு முயக்கம் பெற்றோர் கடிசெயல் கருவியாமால்"

- சித்த மருத்துவம் - சபாபதி கையேடு.

Indicated excess intake of carbohydrate diet, curd, inappropriate diet, exposure to cold increased sexual action will disturb vatha & thus cause vatha diseases.

According to **Pararasa Sekaram :**

"பாரினிற் பயப்பட்டாலும் பலருடன் கோபித்தாலும்
காரெனக் கருகியோடிக் கழுமரத்துரத்தினாலும்
ஏர்பெறு தனது நெஞ்சின் மிகத்துக்கமடைந்திட்டாலும்
பாரிய காற்றினாளும் படரீனும் வாதங்கானும்"

The book of Pararasa sekaram denotes mental disturbances such as fear, anger, Sorrow and excess manual work like – running, climatical changes also cause for the disturbance of Vatha.

According to **Mani Manthira Vaithya Sekaram :**

"கூறுமொன்று மூன்றுடன் குலவு நாலைந்தேழினும்
குற்றமாம் நலத்தினும் கொடூரம் பண்ணிரண்டிலும்
சேரவே பதன் தானுமோ சீரியம்மனை நின்றிழல்
செப்பொனாத தீமையொடு செய்யு பச்சந்தானும்
நெடுந்துக்க மிக்கவாம் நடக்குந்தாது தொழில் தாம்
நிந்தையாகுங் கீல்பிடிப்பு நீடுமெய்யில் தோன்றுமாம்
காரியங்கள் சேமதாங் கல்வயது குறையுமாம்
கண்டுணர்ந்து கணிதவல்லோன் கருத்துடன் செப்பினாரோ"

- மணி மந்திர வைத்திய சேகரம்

Ref-Heritage of the Tamil siddha medicine

Certain position of planets at certain period of human life will produce keelpidippu and cause vatha vitiation.

According to **Agathiyar Kanma Kandam 300 :**

"நூலென் வாதம் வந்த வகைதானேது
துண்மையாய்க் கன்மத்தின் வகையைக்கேளு
காலிலே தோன்றியது கடுப்பதே
கைகாலில் முடக்கியது வீக்கமது
கோலிலே படுகின்ற விருட்சமான
குழந்தை மரந்தனை வெட்டமேல் தோல்சீவல்
நாலிலே சீவசெந்து கால் முறித்தல்
நல்ல கொம்பு தழை மறித்தல் நலித்தல் காணே"

- அகத்தியர் கன்ம காண்டம் 300. பாடல் - 56.

In Siddha system many disease are due to Kanmam which means the deeds or bad committed by an individual in his previous and the present births. The genetic disposition of certain disease are probably the result of Kanmam. Kanmam may also precipitate Vatha disease according to **"Agasthiar Kanma Kandam 300"** verse 56.

Cutting of young green living trees, breaking the legs of living beings, cutting the branches of a living tree etc. leads to vatha disease. These deeds are detrimental to the fellow beings and such Psycosocial aspect of an individual implies psycogenesis of the vatha disease.

Pathology of Santhuvatham :

"சூலை வரலாறு தன்னைச் சொல்லக் கேண்மோ
சுற்றியதோர் விசை நரம்பில் வேவுகொண்டு
காலையுமே யூடுருவித தமரு விம்மிக்
களிப்பது போல் மாசுபற்றி ரத்தஞ்செத்து
மாலையது போற்றெடுத்து நரம்பின் மீதே
வகையான விசை நரம்பை மடக்கிகக் கொள்ளும்
கோலை விட்ட குருடரைப் போல் திடமிழந்து
குடி கெடுக்குஞ் சூலையது குறிகண்டீரே"

- குறுநாடி நூல்

Increased vaayu (one of the panchapootha elements in spinal nerves affects the functional humour of vatha, as a result blood detoriation and vascular changes occur. Ultimately further affection of spinal nervous function takes place.

"திருத்தமாம் வாதத்தோடே தீங்கொடு பித்தம் சேரில்
பொருத்துகள் தோறும் நொந்து போகவேயிடிக்கும் சூலை"

- குணவாகடம் நோயின் சாரம்

When pitha dhosha associated with Vatha, joint pain and soolai noi will arise.

Clinical features of Santhuvatham :

"கைகால் பொருத்துகளில் கரடுகட்டி மேனியெல்லாம்
தடித்துப் புண்ணும் வாத பித்த சூலை எனப்படும்"
- வைத்திய சார சங்கிரகம்

Vatha Pitha Soolai causes ankylosis of the joints along with some extra articular lesions like thickening of the skin, ulcers etc.

"நிலையான வாதத்தில் நின்றில் சூலைதான்
குலையான கைகால் குளைச்செல்லாம் புண்போல்
காலையால் வலித்துக் கனத்திடும் கீழ்வயிறு
தலையான மேனிதான் இளைத்திடுமே"
- திருமூலர் கருக்கிடை வைத்திய காவியம்

The condition of Vatha Soolai characterised by aches and pain of upper and lower limb joints, swelling, abdominal pain are associated with emaciation.

"வாதபித்தக் கீழ்வாயுவின் வருங்குறி சாற்றக் கேளாய்
ஏதமார் மந்த மேப்பம் இரைச்சலும் வயிற்றில் நாணும்
ஓதருங் குத்தல் வீக்கம் ஓய்தலின் எரிச்சலுண்டாம்
காதறுமுறக்க மின்மை காய்சலுங் காணுங் கண்டாய்"
- சபாபதி கையேடு

- Indigestion (Mantham)
- Eructation – yeppam
- Borborygmus of the abdomen
- Pricking pain
- Burning Sensation
- Swelling of the affected joints, fever, insomnia and lazziness.

Classification of santhuvatha diseases :

There are 80 types of vatha diseases are explained in **Yugimuni Vaidhya Chindhamani**, among them, **11 types** of vatha diseases are associated with **Poly arthritis**.

They are

- Santhuvatham
- Vatha suronitham
- Kalanjaga Vatham
- Uthira Vatha Suronitham
- Narithalai Vatham
- Malaitha Kambha Vatham
- Vatha Upakatham
- Kumba Vatham
- Thandaga Vatham
- Sagana Vatham

In **Agasthiyar Vaidya Kaviyam** 5 types.

- Vatha Soolai
- Vatha Azhal Soolai
- Marbil Soolai
- Azhal Soolai
- Amavatha Soolai

In **Jeva Rackchamirtham** 7 varieties are explained as vatha, pitha, kapha & Mukkuttra Soolai, Ama Soolai, Sankara Soolai, Gunma Soolai.

There are additional 2 types in **Anubava Vaidya Devaragasiam**

They are Mega Soolai and Muri Soolai

In **Athmarakshamirtha Vaidya Sara Sangiraham**,

The joint diseases are classified into 25 varieties. In **Thirumoolar Karukkidai Vaidyam – 600** 5 types

- Vatha Soolai
- Pitha Soolai
- Kapha Soolai
- Vatha Pitha Soolai
- Seezhmega vayu Soolai

In Agasthiyar Gunavakadam

- Vatha Soolai
- Vatha Azhal Soolai
- Azhal Soolai
- Iya Azhal Soolai
- Seezhmega Soolai

Thus many litratures mentioned joint disorders under the name of Soolai. In the text book of Siddha Maruthuvam, synonym of Santhuvatham is denoted as Keel vayu accordingly santhuvatham can be classified as follows.

Valikeel Vayu :

"வலிக்குத்தல் வீக்கங் காணும் வாய் தொண்டை வரட்சிகாய்ச்சல்
தலைவலி மார்து டிப்புத் தாங்கொணா வலிவீக் கந்தான்
நிலவுகாற் கணுக்கு றங்கு நீகுதோள் முழங்கைக் காற்காம்
மலக்குடற் கட்டு வேர்வை வாதத்தில் வாய்வி தாமே"

- சபாபதி கையேடு

It is characterised by gnawing pain and swelling of joints, dryness of mouth and throat, fever, headache, palpitation of the heart, intolerable pain of the major joints like knee, ankle, hip, wrist, elbow and shoulder joints associated with constipation and excessive sweating.

Azhal Keel Vayu :

"பித்தக்கீல் வாய்வு தன்னாற் பிறங்குகீல் முட்டு வீங்கிச்
சித்தர்செய் மருத்துவத்துஞ் சீர்படாத் தன்மைத் தாகித்
தக்கற காய்ச்சல் கண்டு சாலவே தனைதான் தந்தே
மெத்தறு சிகிச்சை தன்னால் மென்மெல நீங்குமப்பா"

- சபாபதி கையேடு

As pitha increases, kapha in the joint decrease and hence dryness occur. So during flexion of the joint crepitation sound "Kaluk Kaluk" is produced. In advanced cases it produces ankylosis of the joints and hence restriction of the joint movements results.

Kapha Keel Vayu :

"கருதருங் கபக்கீல்வாயு கண்டிடின் உடலிளைக்கும்
உருமெலி வாக்குங் கொள்ளும் உண்டியைச் சுரக்கும் இன்பந்
தருதுயில் நீங்கு முட்டிற் றாங்கொணா வலவையாக்கும்
இருமலே விக்கல் வாந்தி சோபை பாண்டெழுப்பும் பாரே"

- சபாபதி கையேடு

It is characterized by severe pain in the joints associated with emaciation of the body, anorexia, insomnia, cough, hic-cough, vomiting, anaemia and dropsy.

Vali Azhal Keel Vayu :

"வாதபித்தக் கீல்வாயின் வருங்குறி சாற்றக் கேளாய்
ஏதமார் மந்த மேப்பம் இரைச்சலும் வயிற்றிற் காணும்
ஓதருங் குத்தல் வீக்கம் ஒய்தலின் எரிச்சலுண்டாம்
கூதறும் முறக்கமின்மை காய்ச்சலும் காணுங்கண்டாய்"

- சபாபதி கையேடு

Vali Azhal Keel Vayu has the Symptoms of indigestion like mantham, yeppam (Eructation), iraichal (Gurgling noise of the abdomen-borborygmi)

This disease occurs due to excessive intake of certain foods, which increase vatha and Pitha. (eg. Mutton, egg, fish and potato). In the disease eructation occurs due to indigestion. Then gas form in the abdomen and constipation developed.

Vali Iya Keel Vayu :

"ஐயினை விலைக்கு முண்டி யயிறலே கூதிர்க்காற்று
மெய்யினை யலைக்கு மாங்கண் மேவலா டோதஞ் சார்ந்த
வையத்தின் உறங்கன் மாரி பணியினான் வாட்ட மெய்தல்
மெய்யயர் வுறவு ழைத்தல் கவலையான் மேவு மிந்நோய்"

"வயங்வா தக்க பக்கீல் வாயுவான் வலிமி குந்தே
உயங்குநீர் கோத்துக் கீல்கள் ஓரியின் தலைபோற்காணும்
நயங்கொள முடக்கல் நீட்டல் நண்ணிடா மெய்யுங்காயும்
மயங்குறு முறக்க மின்னாம் மன்னிய நெரிக்கட்டாமே"

"உடலது வெதும்பிக் கையால் உடலது கடுத்து நொந்து
கடலுதரங் கால்கரங்கள் கனத்தாற்போ லுயர்ந்துகாணும்
சடமது விழுந்த தாகுஞ் சலங்கெட்டு தோடமுண்டாம்
முடமதாங் கைகால் தானு முயங்கின வாதமாமே"

- சபாபதி கையேடு

It is characterized by pain in the joints associated with effusion of joint fluid and swelling, restricted joint movements, pyrexia, fainting, insomnia, lymphadenopathy, generalized malaise, atrophy of the affected limb etc. The affected joint looks like "Fox's head".

Pitha Vatha Keel Vayu :

"வெயிலைடைத் திரிதல் பித்த மிகுமுண வருந்தலுள்ளம்
பயிலுறு கவலையாதிப் பண்பினால் பித்தவாதம்
கயிலுறு வாய்வு தோன்றிக் கைப்புடன் மயக்கம் வாந்தி
இயலுறு பல்லிற் செந்நீர் இறங்காறால் நோக்கங் கொள்ளும்"

- சபாபதி கையேடு

It is characterized by pain and swelling of the joint associated with bitter taste, vomiting, fainting, bleeding from the gums, malena, haematemesis. The common site is ankle joint. Pain, swelling, redness may also present.

Pitha Kapha Keel Vayu :

"மிதமிலாக் கல்வி யையை மிகுவிக்கு முன்டி பித்தக்
காமுறு செயவி வற்றிற் காண் பித்தக் கபக்கீல்வாயு
இதமுறு மயக்கம் வாந்தி எரிசுரந் தலைநோய் வீக்கம்
மதகரி நனயின் மார்பு துடிப்புடன் எரிவும் செய்யும்"

- சபாபதி கையேடு

It is characterised by pain and swelling of the joints associated with fainting, vomiting, hyperpyrexia, headache and palpitation. Common sites are elbow and knee joints.

Kapha Vatha Keel Vayu :

"ஐவளிப் பெருக்கு முண்டி அணங்குடன் கலவிமற்று
ஐவளி வினை முழக்கே அளவிலா மதுவருந்தல்
மெய்யுறுமேக வாதக் கோழையின் மிகுதி காணல்
ஐவகை காவா தக்கீல் வாயுவின் அறிகூறாமல்"

"நரித்தலை வாத நரம்புகள் வாயு கோபித் தொன்றாய்
அரிந்திடுந் தலைமேல் கைகால் அங்கமொடு உளைந்து வெதும்பி
முரித்தது இறங்கி வந்து முழங்கால் கைகால்கடுக்கும்
நுரித்தலை வாதமென்று நவின்றனர் முனிவர் தாமே"

- சபாபதி கையேடு

This clinical entity mainly involves the knee joints with accumulation of blood in the joint, which result in immobilization of the joint with stiffness of periarticular structures. So the swelling resembles the fox head and palpitation may occur.

Kapha Pitha Keel Vayu :

"ஐயினைப் பெருக்கு முண்டி யயிலலாற் குளிருங் காற்றால்
மெய்யுறு கோழை மிக்கு மிகுவலி தொண்டை கட்டல்
ஐயுறு காய்ச்சல் வாந்தி அயர்வுடன் இருமல் வீக்கம்
செய்யுங்கீல் மடக்கல் நீட்டல் செய்திடாத் துயருண்டாமே"

- சபாபதி கையேடு

It is characterised by excruciating pain in the joints associated with increased sputum, laryngitis, pyrexia, vomiting, drowsiness, cough, oedema and restricted joint movements etc.

Mukkutra Keel Vayu :

"மிக்குற வியர்த்தல் மூச்சு மேலிடல் தலை கிறுத்தல்
மக்குறு மயக்கந் தோன்றல் வாந்தியே வாய்பி தற்றல்
பொக்குறு மலநீர் கட்டல் பொருமிய வீக்கங் காணல்
முக்குற்றக் கீலின் வாயு முகிழ்த்திடுங் குறிகளாமே"

- சபாபதி கையேடு

It is a chronic one, characterised by pain & swelling of the joints which increases day by day, suppuration of the surrounding structures, associated with excessive sweating, dyspnoea, giddiness, syncope, vomiting, delirium, constipation, anuria, oedema etc. It this is not treated properly it may leads to fatal termination.

Complications of Santhuvatham :

As the disease progresses, joint diseases leads to deformity and immobilization of the limbs. In Siddha system such conditions are named as mudakku Vatham.

"பத்திய வாதநந்துயத்து பாகுமே பயித்தியத்தால்
எத்திய நரம்பிமுத்து மேலதுஞ் சுருண்டு கொள்ளும்
குத்தியே துளைத்தாற் போல குடைந்து காலடைந்துகாணு
மற்றிது முடக்கு வாதமா மெனக் கருதலாமே"
- யூகி முனிவர் பெருநூல் வைத்திய காவியம் -1000

It denotes, in Mudakkuvatha condition body will bend forward and rounding the shoulder probably due to vertebral column deformity (Hang dog position).

"முட்டது கடுகடுத்து முறித்துடன் தறிநாப்போல்
கட்டுற நடக் கொண்ணாது கவிழ்ந்தது கவிழ்ந்தாப்போலே
மிட்டவே வெறுத்து நேர்வாயுதின் குணங் கண்டதாகில்
தொட்டுற முடக்குவாத குணமெனச் செப்பலாமே"
- யூகி முனிவர் பெருநூல் வைத்திய காவியம் -1000

Same book says due to Mudakkuvatha affliction one cannot straighten his body after bending and also inability to walk with joint pain.

In **Chikitcharathna Theepam** hand involvement also stated, where there is disability of hand, fever & swelling are described as Kaimudakku Vatham.

"கரமதுதனை முடக்கி விழுந்திடும் காயும்பின்னர்
உரனுறவுளைந்துக் குத்தி வீக்கமுண்டாமீது
விரவு கைமுடக்குவாத குணமென விளம்பிவைத்தார்"

Prognosis :

Through a full of knowledge about prognosis will save the patient as well as the physician from considerable difficulties. The knowledge of prognosis is most important for a physician to have a perfect and proper line of treatment and prevention.

In santhu vatham the course of the disease is depend on the pirakiruthi, disturbed vatha, pitha, kapha and kaalavanmai, seyarkai vanmai and stages of the disease. Prognosis mainly depends up on the affected thridoshas. Commonly, it is difficult to yield permanent cure, in later stage of the disease produce ankylosis. Gradually all movements of the joints becomes restricted.

In **Agasthiyar Gunavagada Thirattu**,

"ஆகாத வாதமும் பித்தமும் சூலையாம்
வாகான கைகால் வளமாய்க் கரடேறவும்
தாகான மேனிதனில் வெடிப்பும் புண்ணாகும்
போகாமனின்று புணர்ச்சியால் கொல்லுமே"

It denotes a complicated course of the disease, which is hardly curable.

In advanced stage it produces ankylosis of the joints, in upper and lower limbs, and it results in restriction of movements.

Treatment : (Parikaram / Pini neekam)

Siddha system of medicine has a sophisticated treatment modality. It not only cures the disease but it corrects the causative factors and insists to advise certain life style modification in order to prevent the disease again.

So it clarifies the treatment as follows,

- Kaappu (Prevention)
- Neekam (Treatment)
- Niraivu (Restoration)

Kaappu :

It means prevention of human beings from disease. As per siddha system the vinaipayan (Kanmam) is transferred to the fertilized embryos at the time of conception. This vinai payan produces certain incurable chronic disease according to siddhars. More over one should try to neutralize the vinai payan before his life time because, his negative effects are transferred to his hereditary.

One should simply eliminate the vinai payan through some simple life style modification or regulations. Further the physician must advise all the patient to follow the following habits.

- Living with good moral habits.
- Avoid excessive sex with many persons
- Avoid stress, fear and anxiety
- Always follow good dietary pattern
- Avoid exposing chill weather and rain.
- Take oil bath regularly
- Avoid in-take of Alcohols
- Avoid kapha producing foods
- Always do some simple yogas & meditation
- Always have good positive thoughts.

Neekam :

A good physician should know the deranged kutram and should treat the patients according to the vitiated kutram. So the treatment is based on

(i) To bring down the thridosham normal

(ii) To give internal as well as external medicines, according to the symptoms of the diseases.

For normalizing thrithodam :

"விரேசனத்தால் வாதம் தாழும்"

From the above poem, siddhar's had advised to prescribe purgatives (or) laxatives to bring back normal vatham.

In santhu vatham 10gms of Nilavagai chooranam with luke warm water was administered at bedtime, before starting the specific treatment.

Administration of Medicines :

Perhaps there are varieties of medicines available in various siddha literatures but the author had selected the following medicines as test medicines.

Internal Medicine :

Medicine : **Ichchura Mooli Chooranam**
Dose : 1-2gm, Two times a day
Adjuvant : Hot water

External Medicine :

Medicine : **Erivatha thylam**

Massage Therapy or Thokkanam :

"தொக்கணத்தின் லிரத்தந் தோல் ஊனிவைகளுக்கு
மிக்க சவுக்கியஞ் சமீரனும்போ மெய்க்கதிகப்
புட்டியுறக்கம் புணர்ச்சியிவை கதிக்கும்
பட்ட அலைச்சலும் பார்"

- தேரன் தருபாடல்

Chronic diseases like (Hemiplegia, Paraplegia) Pakkavatham, Arunavatham, Santhuvatham (Arthritis), Sirakampa vatham (Cerebral palsy), Mugavatham, (Facial paralysis) etc take too long period to cure.

Thokkanam is very useful in muscular, bony or nervous disorder, for such diseases Thokkanam can be done after applying medicated oil or without application of oil.

There are 9 methods in Thokkanam. They are,

- Thattal
- Irukkal
- Aluthuthal
- Kaikattal
- Izhuthal
- Pidithal
- Murukkal
- Mallathuthal
- Asaithal

Among the 9 types of Thokkanam, the following 2 types of Thokkanam (Massage) are mainly employed.

- Pidithal (effleurage and petrissage)
- Aluthuthal (Friction)

Pidithal is a process in which strokes are slided smoothly and by kneading.

Aluthuthal is a process in which friction or compression is performed.

Pathiyam – Diet and Regimen :

During the course of treatment according to the drug administered to the patient, and nature of the disease, the patient is advised to follow certain precautions regarding diet and physical activities. This form of medical advise in siddha system of medicine is said to be as pathiyam.

Pathiyam for vatha diseases mentioned in **Pathartha Guna Chinthamani** is as follows.

"செங்கழு நீர் கோடைந் தேன்மிளகு நல்லெண்ணெய்
தங்கு பெருங் காயந் தழுதாழை - ஓங்கெங்கும்
கூட்டு சிறுமுத்து நெய் கோதில் உழுந்திவைகள்
வாட்டு மனிலத்தை யறி"

சேர்க்கத்தக்கவைகள் :

"செங்கழுநீர் கிழங்கு கோஷ்டம், குறிஞ்சித்தேன்,
மிளகு, எள்நெய், பெருங்காயம், தழுதாழைஇலை
சிற்றாமணக்குநெய், உளுந்து"

நீக்க வேண்டியவைகள் :

புளிப்பு, துவர்ப்பு சுவையுள்ள உணவு வகைகள்

அபத்திய தோஷம் :

"ஆச்சடா அபத்திய தோஷம் சொல்லக் கேளு
அழகான சோம்பலுடன் மூர்ச்சை தாகம்
போச்சுடா பிரமையுடன் மார்பு நோவு
பொல்லாத பிரலாபம் செய்வான் பாரு
காச்சடா இதற்குத்தான் சொல்லக் கேளு
கனமா லங்கனங்கள் செய்த பின்பு
வீச்சடி திரிகடுகு கியாழ மீய்ந்தால்
விதமான தோஷந்தான் தீருந்தானே"

- அகத்தியர் குணவாகடம் (1033)

In siddha system, the specific medicines and certain pathiyams when not followed it may sometimes leads to the following clinical manifestations.

- Lethargy
- Unconsciousness
- Thirst
- Psycosis
- Chest pain
- Delirium

If any one of the above manifestations occurred in any patient they were advised to take **Thrikadugu Kiyazham**.

Niraivu :

Reassurance of disease recovery were given to all the patients.


Modern Aspect

MODERN ASPECT

Joint :

A joint is a meeting point of two or more bones.

Classification :

- ❖ Immovable-Skull type of joints.
- ❖ Slightly movable – Vertebral type of joints
- ❖ Highly movable – limb type of joints

Immovable joint :

They are classified according to the type of tissue found between the articulating bones.

- ❖ Sutures – Found between membrane bones.
- ❖ Synchondrosis – Found between cartilageous bones.

Sutures :

In between two bones there is a membrane. The membrane persists even in adult life.

(eg) coronal suture, sagital suture etc.

Synchondrosis :

A layer of cartilage is found in between the articulation bones. These bones are embryologically developed as cartilageneous bones.

(eg) : Spheno occipital synchondrosis,

Spheno ethmoidal synchondrosis.

Synostosis :

Suture or synchondrosis ossify the joint disappears.

Slightly movable joints :

Vertebral type of joints (Amphiarthrosis). They are the cartilagenous joints. They are slightly movable joints.

They are classified into the following types.

- ❖ Primary cartilagenous joint.
- ❖ Secondary cartilagenous joint.

Primary cartilagenous joints :

They are temporary cartilagenous joints. The cartilage disappears after some years of life. So they are temporary cartilagenous joints. (eg) joints found between the diaphysis and epiphysis of the long bones.

Secondary cartilagenous joints :

They are classified into following types.

- ❖ Symphysis
- ❖ Syndesmosis

A symphysis is a joint, where the articular surfaces are covered by hyaline cartilage. Ligaments unite the bones. Joint cavity is actually absent.

(eg)

- ❖ Pubic symphysis
- ❖ Joints between bodies of vertebrae
- ❖ Manubrio sternal joint etc.
- ❖ The symphysis type of joints are found along the midline.

Syndesmosis :

The articulating bones are kept at a distance but united by strong ligaments.

(eg)
- Inferior tibio fibular syndesmosis
- Joint between coracoid process and clavicle
- Joint between vertebral arches.

So a typical vertebra takes part in three types of joints.

- Symphysis
- Syndesmosis
- Synovial joints

Synovial Joints (Limb type of joints) (Highly movable joint) :

They are highly movable joints. The articulating surfaces are covered by the articular hyaline cartilage. The bones are held together by a fibrous capsule. This casule is thickened to form collateral ligaments. The inner surface of the capsule is lined by a silky synovial membrane. The synovial membrane lines the capsule is reflected to the borders of the articular cartilage. The synovial membrane does not line the articulating surfaces. The cavity of the joint is filled with the synovial fluid. This fluid is a dialystate of plasma and it contains hyaluronic acid.

Fatty pads are present in some synovial joints. These fatty depots are situated between the synovial membrane and capsule or between the capsule and bone. (eg) knee joint.

Ligaments :

In the large joints, they are formed from the capsule as a specialized part of the capsule.

(eg) Ligaments of the knee joint

Here the ligaments are formed of non-elastic collagenous tissue. Some ligaments are made up of elastic tissue.

(eg) Spring ligaments in the foot.

Bursae :

This is a sac of synovial membrane surrounded by fibrous tissue. They facilitate movements. They may be continuous with the joint cavity.

(eg) Supra Patellar bursa of knee joint.

Articular disc :

In some joints there may be fibro cartilagenous pads. They divide the joint cavity into two components.

(eg)

- Sterno clavicular joint
- Temporo Mandibular joint
- Knee joint

Synovial Membrane :

Synovial membrane lines non-articular areas in synovial joints, bursae and tendon sheaths, all regions where movement occurs between opposed surfaces, which are lubricated by a fluid superficially like egg albumin (synovia) secreted and absorbed by

the membrane. It lines fibrous capsules and covers exposed osseous surfaces, intra capsular ligaments and tendons.

Synovial Fluid :

Synovial fluid is a clear, viscous, pale, yellow fluid, with a specific gravity of 1008 to 1015, which fills the synovial cavity. It is a dialysate of the blood plasma with mucin and hyaluronic acid added to it as secretions from the synovial cells.

Functions :

The main functions of the synovial fluid are lubrication and nourishment of the articular cartilage.

Synovial Fluid includes provision of a liquid environment, small in range of pH, for joint surface nutrition of articular cartilages, disc and menisci lubrication and reduction of erosion.

Synovial membrane not only produces fluid but also removes materials from the articular cavities.

The Synovial Cavities :

The joint cavities and the bursae are known as synovial cavities. The synovial membrane at all, but only a collection of dense fibrous tissue cells that lines the surface between the interstitial spaces and cavities. For this reason these cavities might be considered to be nothing more than enlarged tissue spaces. However the synovial cavities do contain large amounts of muco poly saccharides much than normally present in the interstitial fluid. The origin is not known, though presumably it is secreted by the surrounding connective tissue cells.

In the synovial cavities, excess proteins are likely to collect in the potential spaces and these must be returned to the circulatory system through the lymphatics, otherwise the space swells. Since the synovial membrane offers little or no barrier to the transfer of fluid into the surrounding tissues, the protein can flow into the lymphatics of the area.

Classification of Synovial Joints :

- Plane Joints
- Uniaxial Joints
- Hinge Joints
- Pivot Joints
- Biaxial Joints
  - Condyloid Joint
  - Elipsoid joint
- Multi Axial Joints
  - Ball and socket joint
  - Saddle joint

Disease of Joints :

The most common cause of arthritis in India is due to the prevailing infections of various types.

Classification :

Joints are subject to various types of disease and disorders. Although the etiology of many of these has been recently understood, there are still many conditions where the exact etiology is not yet clear. Many lesions which are not strictly inflammatory are still loosely termed as arthritis.

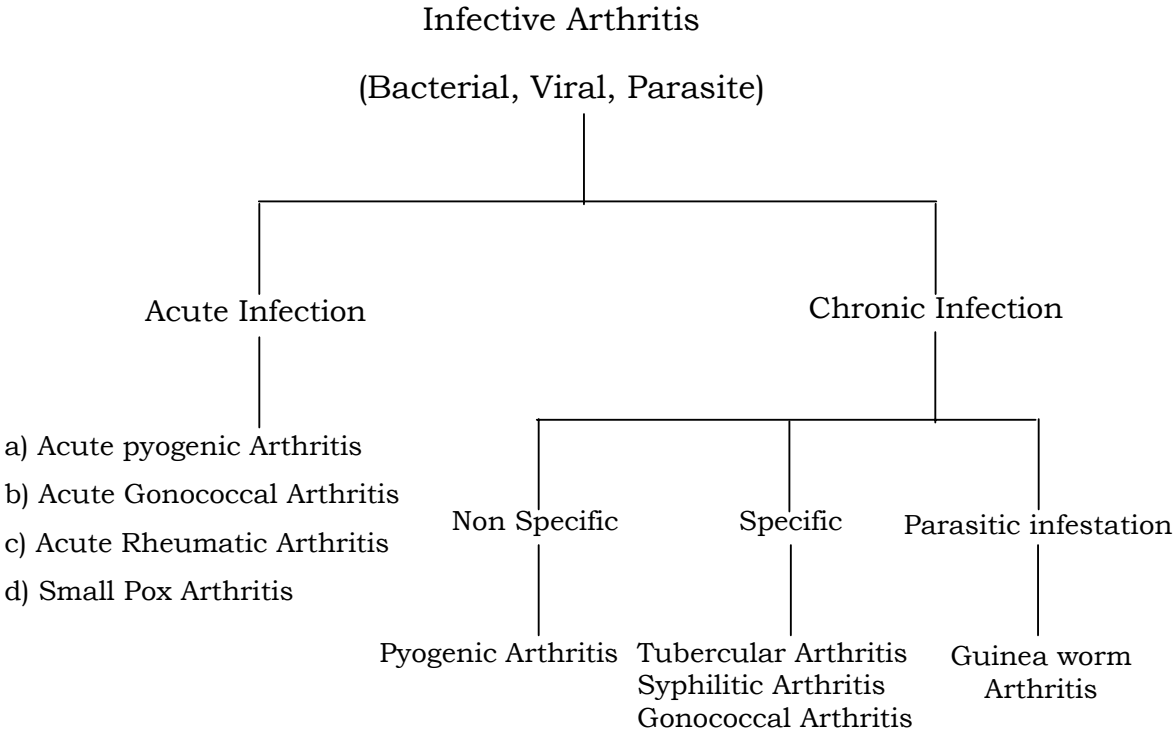
Rheumatism is an indefinite term applied to various conditions with pain or other symptoms which are of articular origin or related to other elements of the musculo skeletal system.

The word "Rheumatoid" is derived from Greek language (Rheuma-Flux, eidos – resemblance) indicating a condition resembling rheumatism is an indefinite term applied to various conditions with pain or other symptoms which are of articular origin or related to other elements of the musculo skeletal system.

Classification of Joint Diseases

(Text book of orthopaedic & Traumatology – Natarajan)

I) Infective Arthritis :



II) Rheumatoid Arthropathy

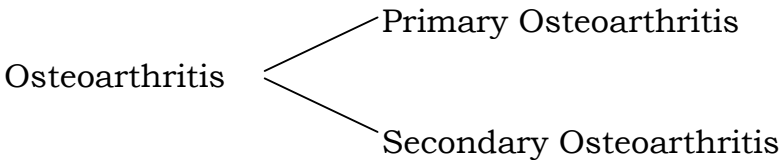
a) Rheumatoid Arthritis :

- Rheumatoid Arthritis (Adult)
- Juvenile Rheumatoid Arthritis (JRA)

b) Sero Negative Spondylo Arthropathy :

- ❖ Ankylosing Spondylitis
- ❖ Reiter's Disease
- ❖ Psoriatic Athritis
- ❖ Enteropathic Arthritis

III) Degenerative Arthritis :



IV) Neuropathic Arthropathy :

- ❖ Tabes – Charcot's Arthropathy
- ❖ Syringo Myelia
- ❖ Leprosy
- ❖ Diabetes Mellitus

V) Metabolic Arthritis :

- ❖ Gout
- ❖ Alkaptonuric Arthritis

VI) Arthritis in Systemic disorder :

- ❖ Allergic Arthritis
- ❖ Haemophilic Arthritis

VII) Miscellaneous Joint :

- ❖ Villo – Nodular synovitis
- ❖ Synovial Chondromatosis

VIII) Hysterical Joint :

Pathology :

Arthritis is the inflammation of all the component structures of the joint with involvement of the synovium, articular surfaces and capsule.

The following stages can be identified :

- ❖ Stage of synovitis
- ❖ Stage of reversible arthritis
- ❖ Stage of irreversible arthritis
- ❖ Stage of ankylosis

The critical stage of the disease is the involvement and destruction of the articular cartilage, as any gross damage to the cartilage is irreversible leading to ankylosis and loss of function.

Collagen diseases are systemic diseases affecting all connective tissues in the body. Many of these disorders have joint manifestations. The most important of these is **Rheumatoid Arthritis.**

Polyarthritis :

Polyarthritis is involvement of five or more jts or jt groups. In determining the cause it is helpful to consider whether the polyarthritis :

- ❖ is symmetrical (approximately) or asymmetrical
- ❖ shows predominant or equal involvement for upper and lower limbs.
- ❖ shows predominant or equal involvement for large and small jts.
- ❖ has accompanying peri articular involvement.
- ❖ has accompanying extra-articular features as clue to the diagnosis.

Examples of extra articular features that associate with inflammatory oligo or poly arthritis.	
Clinical Features	**Disease Association**
Skin, nails and mucos membranes	
• Psoriasis, nail pitting and dystrophy	• Psoriatic arthritis
• Raynaud's	• Lupus, Scleroderma
• Photo sensitivity	• Lupus
• Livedo reticularis	• Lupus
• Splinter haemorrhages, nail fold infarcts	• Vasculitis
• Oral ulcers	• Lupus, reactive Arthritis, Behcet's
• large nodules (mainly extensor surfaces)	• Rheumatoid Arthritis, Gout
• clubbing	• Enteropathic Arthritis, metastatic lung cancer, endocarditis.
Eye	
• Uveitis	• Seronegative spond Arthritis.
• Conjunctivitis	• Reactive Arthritis
• Episcleritis, scleritis	• Rheumatoid Arthritis, Vasculitis
• Urethritis	• Reactive Arthritis
Heart, lungs	
• Pleuro-pericarditis	• Lupus, Rheumatoid Arthritis.
• Fibrosing alveolitis	• Rheumatoid Arthritis, lupus, other connective tissue disease.
Abdominal organs	
• Hepato splenomegaly	• Rheumatoid Arthritis, Lupus
• Haematuria, proteinuria	• Lupus, vasculitis scleroderma
• Urethritis	• Reactive Arthritis.
Fever, lymphadenopathy	Infection, Systemic Juvenile Idiopathic Arthritis

- A large number of viral infection may cause arthralgia (Joint pain with no abnormal examination findings) and rapid onset of an acute symmetrical inflammatory poly Arthritis affecting small and large jts of upper and lower limbs that is usually self limiting within six weeks.

- These include parvovirus B_{19}, hepatitis B and C, mumps, rubella, chickenpox and infectious mononucleosis.

- The rapidity of onset, the presence of fever and the characteristic rash usually suggest the diagnosis.

- Arthritis usually precedes jaundice from hepatitis B.

- Rubella Arthritis mainly affects girls and women,. occurring 1-7 days after the rash or 2-6 weeks after vaccination.

- Rubella is exceptional in that, although the symmetrical poly Arthritis settles, oligo Arthritis may persist for some months.

- Poly Arthritis that persists for more than 6 weeks is unlikely to be viral.

- A definitive diagnosis may be difficult in the first few months of onset but often becomes firmer as more characteristic features develop with time. However, certain patterns are characteristic and may be present at or soon after presentation.

- Rheumatoid Arthritis is by for the most common cause of chronic inflammatory, symmetrical poly Arthritis affecting small and large jts of upper and lower limbs.

- ❖ Tenosynovitis and bursitis (ie- synovial inflammation) are the main periarticular manifestations.
- ❖ Marked asymmetry, lower limb predominance and involvement of large more than small jt are all more characteristic of seronegative spond Arthritis.
- ❖ Concurrence of enthesitis associated diffuse periarticular swelling and inflammatory spondylitis may be further clinical markers of spond Arthritis.
- ❖ Lupus usually causes more arthralgia and wrist extensor tenosynovitis than over synovitis.
- ❖ Chronic poly Arthritis due to gout is inevitably preceded by a long history of acute attacks.
- ❖ Other causes of poly Arthritis are rare.
- ❖ For inflammatory poly Arthritis present for less than 6 weeks.
    - The full blood count
    - Liver function tests
    - Viral serology is often appropriate.
- ❖ For early persistant poly Arthritis of indeterminate cause appropriate initial investigation should include the full blood count.
    - ESR
    - CRP
    - Liver function
    - Rheumatoid factor
    - Antinuclear antibody
    - Radiographs of hands and feet.

Causes of Poly Arthritis	
Cause	**Characteristics**
Non inflammatory	
• Generalised Osteo Arthritis	• Very common, symmetrical, small and large jts, Heberden's nodes, only a few jts symptomatic at any one time.
• Haemo chromatosis	• Rare, small and large jts
• Acromegalic arthropathy	• Rare, mainly large jts, spine.
Inflammatory	
• Viral arthritis	• Very acute, self limiting
• Rheumatoid Arthritis	• Symmetrical, small and large jts, upper and lower limbs
• Seronegative spondarthritis i. Psoriasis ii. Reactive iii. Ankylosing spondylitis iv. Enteropathic arthropathy	• Asymmetrical, large > small jts, lower > upper limbs, spondylitis
• Lupus	• Symmetrical, small > large jts, joint damage uncommon
• Chronic gout	• Distal > Proximal jts, preceded by acute attacks
• Juvenile idiopathic Arthritis	• Symmetrical, small and large jts, upper and lower limbs
• Chronic sarcoidosis	• Symmetrical, small and large jts.
• Scleroderma & poly myositis	• Rare, small and large jts.
• Hypertrophic osteoarthropathy	• Rare, large > small jts, clubbing.

Degenerative Joint Disease or Osteo Arthritis :

Degenerative joint disease or osteoarthritis (OA) is a disorder characterized by progressive deterioration and loss of articular cartilage accompanied by proliferation of new bone and soft tissue in and around the involved joint.

Primary (idiopathic) OA	:	No underlying cause is apparent.
Scondary OA	:	a predisposing factor is present, such as trauma, repetitive stress (occupation, sports) congenital abnormality, metabolic disorder, or other bone/joint diseases.
Erosive OA	:	term often applied to patients who have hand DIP/PIP OA associated with synovitis and radiographic central erosions of the articular surface.

Pathology :

Osteo arthritis (OA), also called degenerative joint disease (DJD), is the most common type of joint disease. It is characterised by the progressive erosion of articular cartilage. The term OA implies a role for inflammation in its pathogenesis; however, inflammatory cells are usually not prominent and are a secondary phenomenon. OA is now considered to be a disease of cartilage, in which intrinsic bio-chemical and metabolic alterations result in its breakdown.

Clinical Manifestations :

OA is the most common form of joint disease. It can affect almost any joint, but usually occurs in weight-bearing and frequently used joints such as the knee, hip, spine and hands. The hand joints that are typically affected are the DIP, PIP or first CMC (thumb base); MCP involvement is rare.

Symptoms :

- Usually – related pain affecting one or a few joints (rest and nocturnal pain less common)
- Stiffness after rest or in morning may occur but usually brief (<30min)
- Loss of joint movement or functional limitation.
- Joint instability
- Joint deformity
- Joint crepitation ("crackling")

Physical Examination :

- Chronic mono arthritis or asymmetric oligo/poly arthritis
- Firm or "bony" swellings of the joint margins, e.g.Heberden's nodes (hand DIP) or Bouchard's nodes (hand PIP)
- Mild synovitis with a cool effusion can occur but is uncommon
- Crepitance – audible creaking or crackling of joint on passive or active movement.
- Deformity, e.g., OA of knee may involve medial, lateral or patellofemoral compartments resulting in varus or valgus deformities.
- Restriction of movement, e.g. limitation of internal rotation of hip.
- Objective neurologic abnormalities may be seen with spine involvement (may affect intervertebral discs, apophyseal joints and paraspinal ligaments)

Evaluation :

- ❖ Routine lab work usually normal
- ❖ ESR usually normal but may be elevated in patients who have synovitis
- ❖ Rheumatiod factor, ANA studies negative
- ❖ Joint fluid is straw – coloured with good viscosity, fluid WBCs<2000/μz; of value in ruling out crystal – induced arthritis or infection.
- ❖ Radiographs may be normal at first but as disease progresses, may show joint space narrowing, subchondral bone sclerosis, subchondral cysts and osteophytes. Erosions are distinct from those of rheumatoid and psoriatic arthritis as they occur subchondrally along the central portion of the joint surface.

Diagnosis :

Usually established on basis of pattern of joint involvement, radiographic features, normal laboratory tests and synovial fluid findings.

Metabolic Disease :

Approximately 50% of people with haemochromatosis develop arthropathy, usually in their forties or fifties, which may predate other classic features. Presentation is usually with pain and stiffness of wrists, fingers and metacarpophalangeal joints, though hips, shoulders and knees are also commonly affected.

Radiographic changes resemble osteoarthritis with narrowing, sclerosis and cysts, but cysts are often multiple and prominent, there is little osteophyte, and atypical sites for osteoarthritis (e.g. radiocarpal joint, metacarpophalangeal joints) are targeted. About 30% have superimposed pseudogout attacks and radiographic chondrocalcinosis as additional clues. Treatment of the haemochromatosis does not influence the arthropathy.

Acromegalic arthropathy :

Acromegalic arthropathy, mainly affecting knees, hips and shoulders with non-inflammatory usage pain and coarse crepitus, suggesting osteoarthritis, but normal or increased (not restricted) movement. Radiographic signs may include widening of joint spaces, squaring of bone ends, generalized osteopenia and tufting of terminal phalanges.

Viral arthritis :

Most forms of viral arthritis are self-limiting. The usual presentation is with acute polyarthritis, fever or viral prodrome and rash. Parvovirus arthropathy is the most common and unlike children, adults may not have the characteristic facial rash. Diagnosis is confirmed by a rise in specific IgM. Polyarthritis may also rarely occur with hepatitis B and C, rubella and HIV infection.

Rheumatoid Arthritis :

Definition :

"Rheumatoid Arthritis is a symmetrical, destructive and deforming poly arthritis affecting small and large synovial joints with associated systemic disturbance, a variety of extra – articular features and the presence of circulating antiglobulin antibodies (Rheumatoid Factors)".

Epidemiology :

Rheumatoid Arthritis occurs throughout the world and in all ethnic groups. The prevalence of Rheumatoid Arthritis is approximately 1% of the population.

Women are affected approximately 3 times more often than men.

The disease starts most commonly between 3rd and 5th decades, but the age of onset follows a normal distribution curve and no age group is exempted.

80% of all patients developing the disease are between the ages of 35 to 50. The climate, Altitude and Geography do not appear to influence the disease.

Aetiology :

Definite cause is unknown, Host – genetic factors.

It may be familial. Family studies indicate a genetic predisposition of Rheumatoid Arthritis is found at approximately 4 times the expected rate in first degree relatives of individuals with seropositive disease.

Although the cause of Rheumatoid Arthritis remains tantalizingly obscure. There is increasing evidence that the disease is triggered by T.Lymphocyte activation in genetically predisposed individuals with HLA clears II Haplotypes.

Immunoregularity abnormalities and auto immunity :

A triggering or persisting microbial infection. Eg.Streptococci, Diphtheroides, Mycoplasmas, Clostridumperfrigens. Viral infection-Rubella, Epstein Barr virus.

Onset :

In two third of the patient, it begins insideously with fatigue, anorexia, generalized weakness and vague musculoskeletal symptoms until the appearance of the synovitis becomes apparent. This prodrome may persist for weeks or months and defy diagnosis. Specific symptoms usually appear gradually as several joints, especially those of the hands, wrists, knees and feet become affected in a symmetric fashion.

In approximately 10% of individuals the onset is more acute with a rapid development of poly arthritis often accompanied by the constitutional symptoms including fever, lymphadenopathy and splenomegaly.

In approximately one third of the patients, the symptoms may initially be confined to one or few joints.

Although the pattern of joint involvement may remain asymmetric in a few patients, a symmetric pattern is more typical.

Pathology :

The condition is widespread but the brunt of the attack falls on synovium. The constant and characteristic feature is a chronic inflammation an in-constant but pathognomonic lesion is the rheumatoid nodule.

The Pathological changes, if unchecked proceed in three stages.

Stage I – Synovitis :

Early changes are vascular congestion, proliferation of synoviocytes and infiltration of the sub synovial layers by

polymorphs, lymphocytes and plasma cells. There is thickening of the capsular structures, villous formation of the synovium and a cell – richeffusion into the joints and tendon sheaths. Though painful, swollen and tender, these structures are still intact and mobile and the disorder is potentially reversible.

Stage II – Destruction :

Persistant inflammation causes joint and tendon destruction. Articular cartilage is eroded, partly by proteolytic enzymes, party by vascular tissues in the fold of the synovial reflections, and partly due to direct invasion of the cartilage by a "Pannus" of granulation tissue creeping over the articular surface. At the margins of the joint, bone is eroded by granulation tissue invasion and oeteo clastic resorption. Similar changes occur in tendon sheaths causing teno synovitis invasion of the collagen bundles and eventually, partial or complete rupture of tendon. A synovial effusion often containing copious amount of fibrinoid material produces swelling of joints, tendon and bursae.

Stage III – Deformity :

The combination of articular destruction, capsular stretching and tendon rupture leads to progressive instability and deformity of the joint. By this time, the inflammatory process may have subsided; the emphasis is now on the mechanical and functional effects of the joint and tendon disruption.

Pathogenesis of Rheumatoid Arthritis :

The characteristic lesion of Rheumatoid arthritis is a diffuse proliferative synovitis. The synovitis is immunomediated but the initiating cause of the auto immune reaction is unknown.

Immune Mechanism and Rheumatoid Arthritis :

- About 80% of the patient has Rheumatoid factor positive. Rheumatoid factors can be of any isotope (IgM, IgG, IgA, IgE) but their distinguishing feature is the recognition of IgG as their Antigen.
- Serum Titre of Rheumatoid factor correlates roughly with the severity of Rheumatoid Arthritis.
- Rheumatoid Factor couples with autologus IgG to form immune complexes with in the articular space. Immune complexes blind complement system and activate it.
- Rheumatoid Factor in circulation and joints are formed locally by the inflammatory infiltrate of activated B cells and plasma cells.
- The products of activated complement are cheotactic fractions C3a and C5a which attract neutrophils to the joint and synovial membrane.
- Phagocytosis of Immune complexes by neutrophils follows with the release of collagenoses and Neutral peptidases. Collagenase is capable of degrading articular cartilage.

The joint damage in RA is of immune origin and appears in genetically predisposed individuals the precise trigger that initiates these reactions is still unknown.

Clinical Manifestations :

Clinical manifestations are classified under two headings.

- Articular manifestations
- Extra – articular manifestations

Signs and symptoms of Articular manifestations :

Any synovial joint in the body may be affected particularly in the more severe forms of the disease. Pain may initially be poorly localized to the joints. Pain in the affected joints aggravated by movements is the most common manifestation of established rheumatoid arthritis. It corresponds to the joint involvement but does not always correlate with the degree of apparent inflammation. Pain orginates predominantely from joint capsule which is supplied by pain fibres and is markedly sensitive to stretching or distension.

Swelling may also be an initial symptom. Clinically synovial inflammation causes swelling, tenderness and limitation of motion. Warmth is also evident on examination, especially of large joints such as the knee. Joint swelling results from accumulation of synovial fluid, hypertrophy of the synoviam and thickening of the joint capsule due to limitation of motion initially by pain. Generalised stiffness is frequent and is usually greatest after periods of inactivity. Morning stiffness of greater than one hour duration is an almost invariable feature of inflammatory arthritis. Fever of 40ºC occurs on occasion, temperature elevation in excess of 38ºC is unusual and suggests the presence of an inter current problem such as infection. Majority of patients experience weakness, Easy fatiguability, Anorexia, Weight loss as the constitutional symptoms. Muscle wasting, clinical weakness and atrophy of the skeletal muscles are common. Muscle atrophy may be evident with in weeks of the onset of rheumatoid arthritis.

Involvement of Individual Joints :

Hands and Wrist :

Rheumatoid arthritis often causes symmetric arthritis with characteristic involvement of certain specific joints such as proximal interphalangeal joints and metacarpophalangeal joints. The distal inter phalangeal joints are rarely involved.

In early course of the disease, there may be spindling of the progress due to synovial hypertrophy and effusion in the interphalangeal joints.

Later, marked synovial hypertrophy on the dorsum of the wrist with involvement of extensor tendon shoeath results in dropped finger. The same process in the palmar aspect may lead to carpal tunnel syndrome.

Persisting synovitis, weakening of the capsule, muscle wasting, tendon rupture and destruction of the articular surface leads to characteristic Rheumatoid hand deformity, which includes,

- ***"Swan neck deformity"*** with hyper extension of the proximal interphalangeal joints with fixed flexion of the distal interphalangeal joints.
- ***"Button hole deformity" (Boutonniere deformity)*** which includes fixed flexion of the proximal interphalangeal joints and extension of the distal interphalangeal joints.
- ***"Z deformity"*** of the thumb (Radial deviation at the wrist with ulnar deviation of the digits often with Palmar subluxation of the proximal interphalangeal joints.

- ❖ Hyper extension of the first interphalangeal joints and flexion of the first metacarpo phalangeal joint with consequent loss of thumb mobility and pinch.

- ❖ Palmar erythema is also common. Raynaud's phenomenon may occur in the early stage.

Feet and Ankles :

Active synovitis in the metatarsophalangeal joint can produce pain and tenderness best elicited by the lateral squeezing of the joints.

The synovial swelling of the active disease together with destruction of the ligament between the metatarsal heads may broaden the forefoot and separate the toes to produce the ***"day light sign"***.

Deformities may also develop in the feet including eversion at the hind foot (subtalar joint), Plantar subluxation of the metatarsal heads, widening of the forefoot, hallux – vulgus and lateral deviation and dorsal subluxation of the toes. So the patient walks on the upprotected heads of the metatarsal bones. The patient complains of a feeling of walking on pebble's and the metatarsal heads are readily palpable on the sole of the foot.

In the hind foot calcaneal erosions, hallux – vulgus deformity are found. Rheumatoid synovitis may develop in the subtaloid and midtarsal joints. Chronic arthritis in this region can lead to ***"Pes Plano – Valgus deformity"***

Knee Joints :

Knee joint is commonly involved with synovial hypertrophy, Chronic effusion and frequently ligamentous laxity. Pain and

swelling behind the knee may be caused by extension of inflammed synovium into the popliteal space (Baker's cyst).

Wasting of quadriceps is present, Flexion contractures may develop. Both cruciate and lateral ligaments may be destroyed, resulting in gross joint instability and vulgus deformity or varus deformity.

Elbow and Shoulder Joints :

Inflammed olecranon bursae and Rheumatoid nodules around the elbow are common but true rheumatoid arthritis affecting the elbows is less common. Severe destructive changes can occur leading to ***"Fixed flexion deformity"***.

Pain in the shoulder can be referred from the neck or be due to involvement of acromio clavicular joint, sub acromial bursa, rotator cuff and bicipital tendon as well as the gleno humeral joint.

Cervical spine :

The upper cervical discs are frequently involved. The cervical vertebrae may become subluxed and this may cause serious neurological disorders.

The atlantoaxial articulations and their associated ligaments are frequently involved. Separation between the odontoid process and the first cervical vertebra exceeds the normal of 2 to 3 mm which can be detected by X-ray. They complain pain in the cervical spine which radiates upwards over the occiput and vertex to the fore head.

Atlanto axial dislocation may cause the vertebro basilar insufficiency or may produce neurological signs by direct pressure on the cord.

Extra Articular Manifestation :

General :

- ❖ Low grade fever
- ❖ Lymphadenopathy
- ❖ Weight loss
- ❖ Anorexia
- ❖ Anaemia & Lassitude

Rheumatoid Nodules :

Vasculitis :

Vasculitis most commonly occurs in Rheumatoid patients with long standing disease, significant joint involvement, positive Rheumatoid factor nodules present.

All size of blood vessels may be involved Rheumatoid vasculitis may cause cutaneous ulceration and gangrene of the digits.

- ❖ Pulmonary Manifestations
- ❖ Cardio Vascular Manifestations
- ❖ Haematological Manifestations
- ❖ Neuromuscular Manifestations
- ❖ Muscular changes
- ❖ Ocular Manifestations

Diagnosis :

The typical picture of bilateral symmetric inflammatory poly arthritis involving small and large joints in both the upper and lower extremities suggests the diagnosis.

Criteria for the diagnosis of Rheumatoid Arthritis :

- ❖ Morning Stiffness > 1 hour
- ❖ Arthritis of three or more joint areas
- ❖ Arthritis of hand joints
- ❖ Symmetrical Arthritis
- ❖ Rheumatoid nodules
- ❖ Rheumatoid factor
- ❖ Radiological Changes
- ❖ Duration of 6 weeks or more

Diagnosis of Rheumatoid Arthritis is made with four or more criteria.

Investigations :

- ❖ **Haematological** :
  - ESR – increased in active stage
  - Serum Proteins – Hyperglobulinaemia with elevation of Gammas and Alpha 2 Globulins and Hypoalbulinaemia during acute Phase.
- ❖ **Immunological** :
  - Rheumatoid Factor (RF)
  - Anti – Nuclear Antibodies.
- ❖ **Special Investigations :**
  - Synovial fluid analysis
  - Synovial biopsy
  - Radiographic Evaluation

The primary value of radiography is to determine the extent of **cartilage destruction and bone erosion produced by the disease.**

Stages of X-ray progression in Rheumatoid Arthritis :

- Periarticular osteoporosis
- Loss of articular cartilage ("joint space")
- Erosions
- Subluxation and Ankylosis

❖ Arthroscopy

❖ Renal biopsy

❖ Pulmonary biopsy

❖ Ultra sound

❖ Scintigraphy

❖ CT scaning

❖ MRI

❖ Urine analysis

❖ Bio chemical analysis

❖ Miscellaneous

Sero Negative Spondylarthropathy :

Sero negative spondylarthropathy includes the following rheumatoid like conditions where the serum is negative form rheumatoid factor. They are

❖ Ankylosing spondylitis

❖ Reactive Arthritis, including Reiter's syndrome

❖ Psoriatic Arthritis

❖ Enteropathic arthropathy.

Ankylosing spondylitis :

Ankylosing spondylitis is a chronic, progressive and crippling disease affecting the spine. The exact etiology is unclear. Ankylosing spondylitis have been found to be more prevalent in certain races and hence shows a genetic predisposition. It is related to certain tissue types of the Human Leucocyte Antigen (HLA) system. The majority of ankylosing spondylitis patients are found to belong to HLA B 27 group.

Clinical Features :

The disease occurs in the third and fourth decades of life and is more common in males. The patients present with complaints of diffuse pain in the back and vague pain in other joints.

On examination, the movements of the whole spine are limited, the sacro-spinalis muscles are in spasm, but there is no point of localized tenderness in the spine. There is tenderness over one or both sacro-iliac joints. The chest expansion is diminished to less than 5cms due to the involvement of the costovertebral joints.

In the late stages the whole spine including the cervical spine is rigid and the patient is bent forward. The classical description refers to this late stage where the patient is totally stiff and disabled with ankylosis of both hips and flexion deformity of knees. The patient is bent over with the eyes facing the ground.

One of the last joints to be affected is the temporo mandibular joint. Extra skeletal manifestations include acute iritis, aortic valve incompetence and pulmonary complications due to costovertebral ankylosis.

Diagnosis :

Criteria for diagnosis of ankylosing spondylitis (Rome, Newyork Criteria) include

- ❖ Diffuse pain in the spine of some months duration
- ❖ Limitation of all spinal movements for some months
- ❖ Diminished chest expansion

Laboratory findings :

The blood examination shows raised ESR and anaemia. The serum is negative for Rheumatoid factor. The test for HLA – B 27 is positive.

Radiological features :

The earliest changes involve the sacro-iliac joints. The joint margins become hazy and the joint space is widened. This is followed by subchondral erosion and sclerosis. In the final stages, the sacro iliac joints show total fusion.

In the early stages, the lumber spine shows in the lateral view, the filling up of the concavity of the anterior border causing a 'squaring' appearance of the vertebral body. Later on, extensive calcification of the anterior longitudinal ligament occurs. In the final stage, the calcification of the lateral ligaments produces the Bamboo spine appearance in the antero posterior view. The interspinous ligaments are also calcified. In the later stages, the cervical spine is also involved with fusion of posterior intervertebral joints.

Psoriatic Arthritis :

Psoriatic arthritis is a poly arthritis seen in about 10% of the patients with psoriasis. The most common type a) is the one involving the distal interphalangeal joints of the hands and feet with psoriatic nail changes Metacarpo phalangeal joints are never involved in psoriatic arthritis, b) arthritis mutilans is a severe form where there is marked destruction of joints, c) symmetrical poly arthritic type, d) oligo arthritic type, e) spondylarthritic type,

Treatment is on the same lines as for the rheumatoid arthritis along with the treatment for psoriasis.

Enteropathic Arthritis :

Chronic inflammatory bowel diseases like regional enteritis (Ocohn's disease) and ulcerative colitis are associated with arthritic lesions in about 10% of the cases. There is a peripheral poly arthritis or involvement of the spine. The joint condition shows remissions and exacerbations along with the activity of the underlying bowel disease. Treatment of the bowel disease usually clears the joint disease also.

Reiter's Disease :

It is characterized by a triad of seronegative oligoarthritis, conjunctivitis and nonspecific urethritis, 1-3 weeks following bacterial dysentery or exposure to sexually transmitted disease. Arthritis occurring alone following sexual exposure or enteric infection is known as reactive arthritis.

Arthritogenic Bacteria in Reactive Arthritis :

- Salmonella
- Shigella

- Campylobacter
- Yersinia
- Chlamydia

Clinical Features :

- It presents with monoarthritis of a knee or and an asymmetrical inflammatory arthritis of interphalangeal joints.
- Patients can have heel pain, Achilles tendonitis or plantar fascilitis with presence of circinate balanitis. The presence of rash of keratoderma blennorrhagica is diagnostic of Reiter's disease in the absence of classifical triad.
- Skin lesions are faint macules, vesicles and pustules on the hands and feet to marked hyperkeratosis with plaque like lesions spreading to scalp and trunk.
- Dystrophy of nail and massive subungual hyperkeratosis may be seen.
- Ocular involvement (mildbilateralconjunctivitis) subsides spontaneously within a month. Iritis can occur in 10% of cases.
- Symptomatic urethritis (mild dysuria and clear sterile discharge) is seen in most cases.
- Self limiting arthritis is seen in all cases.
- The extra articular features are

- Conjunctivitis
- Iritis
- Aortic Regurgitation
- Cardiac conduction defects
- Peripheral neuropathy

Systemic Lupus Erythematosus (SLE) :

It is a multisystem connective tissue disease of unknown cause in which tissues and cells are damaged by pathogenic autoantibodies and immune complexes.

It is more common in women of child bearing age (male : female is 1:9).

Etiology and Pathogenesis :

- ❖ There is disturbance of immune regulation
- ❖ Genetic factors are involved (HLA – B8 and DR 3)
- ❖ Involvement of environmental factors (Sunlight).
- ❖ Drugs – Oestrogens, Oral contraceptives, Quinidin, INH, hydralazine, chlorpromazine, Practolol, methyldopa, Phenytoin, a interferon and procainamide (most frequent)
- ❖ Infection is thought to be one of the etiological factors.
- ❖ Immunologically – mediated tissue damage, also results.
- ❖ Miscellaneous – Ingested alfalfa sprout and chemicals like hydrazines, hair dyes are also implicated.

Autoantibodies present in patients with Systemic Lupus Erythematosus

CLINICAL FEATURES

System involved	Manifestations
Skin	Fixed, erythematous rash over malar regions (Butterfly rash), discoid rash, alopecia, diffuse maculo papular rash, urticaria, erythema multiforme, lichen planus like lesions; photosensitivity, psori form lesions (subacute cutaneous lupus), oral ulcers, vasculitis.
Renal	Proteinuria, nephrotic syndrome, focal, proliferative glomerulo nephritis, hypocomplementemia and renal failure.
Nervous System	Meninges, spinal cord, cranial and peripheral nerves are involved. Patients can have cognitive dysfunction, organic brain syndromes (psychosis, neurosis), pseudotumor cerebri, extrapyramidal and cerebellar involvement. Hypothalamic dysfunction causes inappropriate ADH secretion.
Vascular	Thrombosis can occur due to vasculitis, antibodies against phospholipids, (lupus anticoagulant, anti cardiolipin antibodies), and immune complex mediated destruction.
Hematological	Anemia of chronic disease, leucopenia, mild thrombocytopenia.
Cardiopulmonary	Anemia of chronic disease, leucopenia, mild thrombocytopenia. Pericarditis, pericardial effusion, constrictive pericarditis, myocarditis (arrhythmias, CCF) sudden death due to MI, and Libman-sach's endocarditis causing MR or AR. Pleurisy and Pleural effusion are common. Lupus pneumonia, interstitial fibrosis, pulmonary hypertension and ARDS can occur.
Gastrointestinal	Nausea, diarrhoea, vague discomfort, lupus peritonitis, vasculitis of intestine, intestinal perforation, GI motility disorders and intestinal pseudo obstruction.
Ocular	Retinal vasculitis, conjunctivitis, episcleritis and blindness can occur (fundus shows sheathed, narrow retinal arterioles and cystoid bodies).
Musculoskeletal system	Myopathy, myositis and ischemic bone necrosis are common; Arthritis, arthralgia which can be transient or persistent leading to chronic inflammatory arthritis and tenosynovitis causing deformities and contractures.
Systemic	Fatigue, malaise, fever, anorexia and weight loss can occur.

Gout :

Gout is a true crystal deposition disease. It can be defined as the pathological reaction of the joint or periarticular tissues to the presence of Monosodium Urate Monohydrate (MSUM) crystals. Clinically, this may present as inflammatory arthritis, bursitis, tenosynovitis, cellulites or as nodular ('tophaceous') crystal deposits. Prolonged hyperuricaemia is necessary, but is alone not sufficient, for development of gout.

Epidemiology :

The prevalence of gout varies between populations but is around 1% with a strong male predominance (> 10:1). Prevalence increases with age and increasing serum uric acid concentration. 'Primary' gout is almost exclusively a male disease and the most common cause of inflammatory arthritis in men over the age of 40. 'Secondary' gout, due to renal impairment or drug therapy, mainly affects people over the age of 65 and is the form most usually seen in women. Hyperuricaemia can be defined in two ways.

- As a serum uric acid level above the theoretical solubility of MSUM in physiological conditions (0.42 mmol/ℓ)

- As a serum uric acid level greater than 2 standard deviations above the mean for the population (c.0.40 mmol/ℓ for men, 0.35 mmol/ℓ for women).

Probably 95% of hyperuricaemic subjects never develop gout.

Clinical Features :

Acute Gout :

Typical attacks have the following characteristics :

- ❖ Extremely rapid onset, reaching maximum severity in just 2-6 hours, often waking the patient in the early morning.
- ❖ Sever pain, often described as the “worst pain ever”.
- ❖ Extreme tenderness – the patient is unable to wear shocks or to let bedding rest on the joint.
- ❖ Marked swelling with overlying red, shiny skin.
- ❖ Self limiting over 5-14 days, with complete return to normality.

Chronic tophaceous gout :

Large MSUM crystal deposits produce irregular firm nodules (“tophi”) at the usual sites for nodules around extensor surfaces of fingers, hands, forearm, elbows, Achilles tendons and sometimes the helix of the ear. Marked asymmetry, locally and between sides, is characteristic. The white colour of MSUM crystals may be evident and permit distinction from rheumatoid nodules. Large nodules may ulcerate, discharging white gritty material and associating with local inflammation (erythema, pus) even in the absence of secondary infection. Although tophi are usually a very late feature, they may appear surprisingly rapidly, in under 1 year, in patients with chronic renal failure.

The joints most commonly involved with signs of damage and varying degrees of synovitis are the first metatarsophalangeal joint, midfoot, finger joints and wrists, occasionally with severe deformity and marked functional impairment, especially of feet and hands. As with tophi, asymmetry is characteristic.

Secondary gout may present with painful, sometimes discharging tophi without preceding acute attacks. This is particularly seen in older, mainly female patients with nodal osteoarthritis who develop tophi in and around their osteoarthritic finger joints as a consequence of chronic (> 1-2 years) diuretic therapy.

Juvenile Idiopathic Arthritis :

Althouth MSK pain is prevalent in children, inflammatory arthritis is relatively rare compared to adults (<0.01% prevalence). Juvenile idiopathic arthritis (JLA) is defined as persistent (> 6 weeks) inflammatory arthritis that begins before age 16 for which no specific cause can be found. There are no specific diagnosis of exclusion. A list of some of the alternative diagnoses that may require consideration in a child with MSK pain and apparent joint swelling.

The aetiology of JLA is unknown, though both genetic and environmental factors are thought to be involved. JLA is classified according to the pattern of onset of arthritis in the first few months. This simple descriptive classification has prognostic significance and helps guide treatment selection.

International League Against Rheumatism (ILAR) classification of Juvenile Idiopathic Arthritis		
Pattern	**Definition**	**Main Target**
Oligoarthritis		
Persisting	Arthritis of 1-4 joints in first 6 months of disease	Young girls
Extending	Arthritis restricted to 1-4 joints in first 6 months that subsequently develops into polyarthritis	Young girls
Poly arthritis		
Rheumatoid factor (RF) – Negative	Arthritis of > 4 joints in first 6 months	Young girls
Rheumatoid factor (RF) - Positive	Arthritis of > 4 joints in first 6 months, x 2 positive serum rheumatoid factor tests 3 months apart.	Older, adolescent girls
Psoriatic arthritis	Arthritis + psoriasis, or Arthritis + family history of psoriasis and either dactylitis or nail pitting/onycholysis	Older girls and boys equally
Enthesitis – related arthritis	Arthritis + enthesitis, or Arthritis + two of : Sacroiliac joint tenderness Inflammatory spinal pain HLA –B27 Anterior uveitis Family history of uveitis, spondarthritis or inflammatory_bowel disease	Older boys
Systemic arthritis	Arthritis + fever > 2 weeks, evanescent skin rash	Under 2, girls and boys equally
Other arthrities	Patients who fit no category or more than one category	
Children under the age of 16 at onset of symptoms with persistent features of arthritis for at least 6 weeks.		

Sarcoidosis :

Acute self-limiting arthritis, presenting as polyarthralgia and erythema nodosum, may accompany the onset of acute sarcoidosis. Chronic sarcoidosis may associate with a more persistant arthritis that targets the same joints.

Scleroderma :

Sclerodema is a generalized disorder of connective tissue affecting the skin, internal organs and vasculature. The clinical hallmark is the presence of sclerodactyly in combination with Raynaud's or digital ischaemia, The peak age of onset is in the fourth and fifth decades, and overall prevalence is 10-20 per 100 000 with a 4:1 female : male ratio. It is subdivided into diffuse and limited disease, the latter also termed 'CREST syndrome' (Calcinosis, Raynaud's, oesophageal involvement, Sclerodactyly, Telangiectasia)

Aetiology and pathogenesis :

The aetiology is unknown, with no consistent genetic, geographical or racial associations. Environmental factors are important in isolated cases that result from exposure to silica dust, vinyl chloride, hypoxia resins and trichloroethylene.

Early in the disease there is skin infiltration by T lymphocytes and abnormal fibroblast activation that leads to increased production of extra cellular matrix in the dermis, primarily type 1 collagen. This results in symmetrical thickening, tightening and induration of the skin (sclerodactyly). In addition to skin changes there is arterial and arteriolar narrowing due to intimal proliferation and Vessel wall inflammation. This endothelial injury causes release of vasoconstrictors and platelet activation, resulting in further ischaemia.

Polymyositis :

The idiopathic inflammatory myopathies (IIMs) are rare connective tissue disorders defined by the presence of muscle weakness and inflammation. The incidence is 2-10 per million/year with no significant world-wide variations. The aetiology is unknown and genetic associations differ amongst ethnic groups. The most common clinical forms of IIM are polymyositis, dermatomyositis and inclusion body myositis. Other systemic autoimmune diseases such as SLE or vasculitis can also cause myositis, whilst organ specific autoimmune disease (e.g. thyroid) may impair muscle function without causing muscle inflammation. Usually only skeletal muscle is affected. Occasionally, the distribution is focal (e.g. orbital myositis).

Juvenile Rheumatoid Arthritis :

Juvenile Rheumatoid Arthritis (JRA) is one of the more common connective tissue diseases of children and is a major cause of functional disability in this age group. By definition, it begins before the age of 16 and most patients are diagnosed during early childhood. There is 2:1 female predominance except in the subgroup that has a systemic onset, in which the sexes are equally affected. JRA differs from R.A. in adults.

In that

- ❖ Oligo Arthritis is more common
- ❖ Systemic onset is more frequent
- ❖ Large joints are affected more than smaller joints
- ❖ Rheumatoid nodules and Rheumatoid factor are usually absent
- ❖ Antinuclear antibody seropositivity is common.

Neuropathic Arthropathy :

Aetiology :

Neuropathic joints are a chronic disease of the joint characterised by extensive disorganisation of the joint but no pain or inflammatory signs. It was first described by charcot as a complication of tabes dorsalis and hence called charcot's joint.

The conditions that cause neuropathic arthropathy are,

- Tabes dorsalis – Hip, Knee
- Syringomyelia – Shoulder, elbow
- Leprosy – Ankle and foot
- Diabetes – Ankle and foot
- Iatrogenic – Repeated intra articular injections of hydrocortisone in a bad surgical environment.

The cause of this gross destruction and disintegration lies in the nervous system. It is believed to result from the loss of proprioceptie and sensory impulses from the articular structures. The joint undergoes degeneration and destructive changes due to repeated minor trauma, when the sensory and autonomic nerve supply to the joint structures are lost. This explains the total absence of pain in the neuropathic joint.

Alkaptonuric Arthritis :

Alkaptonuria is a congenital disorder of amino acid metabolism affecting the joints. The break down of the amino acid tyrosine does not go beyond the stage of homogentisic acide due to the absence of its oxidizing enzyme. Hence homogentisic acid appears in the urine. This condition is rare.

Haemophilic Arthritis :

Haemophilia is a disease characterised by a bleeding diathrosis due to a defect in the clotting mechanism of the blood. It is a hereditary disease affecting males but transmitted through the females. Involvement of joints is an important complication of haemophilia.

The patient is usually an adolescent boy with a history of previous bleeding episodes following cuts of tooth extraction. He presents with an acutely swollen knee or swollen hip with flexion deformity, haemorrhage into joints.

The joints usually involved are the knees, ankles, elbows and hips.

Physical Therapy (Physiotherapy)

Physiotherapy is the application of physical agents and principles to pathological conditions for the purpose of producing therapeutic effects.

Physiotherapy includes

1. Active exercise
2. Passive joint movements
3. Local heat
4. Massage
5. Electrical stimulation of Muscles
6. Ultra sound therapy
7. Light therapy, Ultraviolet rays and infrared rays.

Exercise Therapy :

In Rheumatoid Arthritis, Exercise therapy is extensively used to prevent deformitis and mobilise the stiff joints. Early movement will prevent the muscles from degeneration and the joints from becoming weakened and stiff.

A graduated plan of rehebilitation and muscle training is wiser. One should take as much exercise as possible but must not allow the muscles and joints to become too tired.

Active exercise is given to mobilize joints, strengthen muscles, Improve co-ordination or balance.

Passive joints movements :

The chief use of passive joint movement is to preserve full mobility when the patient is unable to move the joint actively.

Types of Exercise :

1. Range of motion Exercises / Stretching Exercises:

Stretching exercise involve moving a joint as it will comfortably go through its full range of motion or stretch. This exercise help to maintain normal joint movement or restore movement that has been lost.

Clinical Assessment of joint motion :

The most widely used and recommended instrument is the universal Goniometer, sometimes called as Arthrometer. Basically, it is a protractor, to the center of which two long slender arms or levers are attached. Usually only one of the arms is movable but many variations in design are possible.

Normal values for range of motion. This offer a basis for comparison of values.

2. Strengthening Exercises :

Strengthening Exercises helps to maintain or increase the strength and power of the muscles.

3. Limbering up Exercises :

Help to reduce morning skiffness or stiffness after staying in one position too long by doing the Range-of-motion exercises each day only a few times to loosen up.

Details of Range-of-motion Exercises :

1. Upper Extremities :

Shoulder :

a. Arms at side with Elbow straight, bring arms forward – upward by ear.

b. Arms at side with Elbow straight, take arms sideward – upward overhead.

c. Arms at side bend elbow to right angle and take hands apart.

Elbow :

a. Bend elbow, touching fingers to top of shoulder.

b. Straighten elbow.

Forearm :

Elbows bent, turn palm of the hand and then back of the hand towards face.

Wrist :

a. Keeping forearm steady, move the wrist up and down as in waving.

b. Again hold forearm steady, move the wrist up and down as in hand shaking.

c. Make circle with hands.

Hand and fingers :

a. Make tight fist

b. Open fingers as wide as possible.

c. With the hand open spread fingers away from each other and then together.

d. Touch tip of the thumb to the tip of each fingers.

e. Bend the thumb in toward palm of the hand.

2. Lower Extremities :

Knee :

Sit with your feet off the floor. Lift the leg and then allow it to return to the bent position slowly.

Ankle :

a. Pull foot up and in, then push back down.

b. Make circle with foot

c. Pull foot in toward other foot

d. Pull foot to outside

Materials and Methods

MATERIALS AND METHODS

The disease **"Santhuvatham"** has been dealt in the book **Yugi Muni Vaidhya Chindhamani**. Patients were selected according to the symptoms mentioned in Santhuvatham.

Selection of the patients :

For this clinical study 20 patients of both sexes and of varying age group suffering from Santhuvatham were selected and admitted in the In patient ward and another 20 patients were also treated with the trial medicines in the out patients department of Government Siddha Medical College, Palayamkottai.

In this study, the detailed clinical history was taken from the patients. Special attention were laid on the pain and stiffness, excessive salivation, dryness of tongue regarding their nature, site of occurrence, mode of onset and severity as loss of function. The seasonal variation and precipitating factors like emotional stress, trauma, change of climate were enquired. Constitutional symptoms like easy fatiguability, anorexia, weight loss, pyrexia were noted. Ocular complaints like conjunctivitis, iritis, keratolysis, Siogren's syndrome, rheumatoid scleritis and genitourinary tract disorders were noted.

The socio economic status, family history and other significant disease already treated were carefully noted.

For this purpose the case sheets were prepared, based on both siddha and modern concept were maintained separately for all patients.

Investigations :

The symptoms of santhuvatham were more or less correlated with poly arthritic conditions of (Rheumatological and collagen

diseases) in modern medicine. So investigations meant for such diseases were done for santhuvatham also. Some of these are routine blood tests, urine tests, stools examination and specific tests such as rheumatoid arthritis factor, radiographic evaluation etc. Besides this blood sugar, blood urea, serum cholesterol were also investigated.

On the basis of these investigations modern diagnosis and parallel siddha diagnosis was made with the help of the following criteria, the mukkutra nilaigal, envagaithervugal, elu udal kattugal, nilam, mummalam, kalam, vayathu etc.

Investigations were found to be useful in assessing the progress of the disease and prognosis of the patient.

Thus the patients were selected and managed as follows.

Evaluation of the trial medicine :

The medicines selected for the dissertation were subjected to pharmacological and Bio-chemical analysis. The analysis were made in the pharmacology and Bio-chemistry departments of Government siddha medical college, palayamkottai.

Management :

"விரேசனத்தால் வாதம் தாழும்"

The vitiated Vatham can be brought down by a laxative (or) purgative since santhu vatham is a vatha disease, nilavagi choornam was used as a laxative. All the patients were given 10gm of nilavagai choornam with hot water at bed time for only one day.

For the dissertation work Ichchura Mooli Chooranam and Erivatha Thylam are the specific medicines selected. All the two medicines were prepared (on by myself) in the post graduate practical hall with the knowledge of my teaching staffs of the post – graduate department.

Results and Observations

RESULTS AND OBSERVATION

Results were observed with respect to the following criteria.

- Sex distribution.
- Age distribution.
- Kaalam.
- Socio-Economic status.
- Paruva Kalam.
- Thinai.
- Aetiological factors.
- Mode of Onset.
- Clinical Manifestations
- Systemic Examination
- Incident of poly Arthritic conditions.
- Gradation of pain, Joint swelling and Restricted movements.
- Incidents of individual joint involvement.
- Deformities of joints.
- Disturbances of vatha, pitha and kapha
- Conditions of Udal Thathukkal.
- Condition of Envagai Thervugal.
- Grading of Arthritis.
- Gradation of Results.
- Radio graphic Findings.

1. Sex Distribution :-

Table 1 : Illustrates Sex distributions and its relative percentage

Sl. No.	Sex	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percentage	No. of Cases	Percentage
1.	Male	10	50	8	40
2.	Female	10	50	12	60

- From the above table, it is clear females were mostly affected than males.

2. Age Distribution :-

Table 2 : Illustrates the age distribution and its relatives percentage

Sl. No.	Age group in year	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percentage	No. of Cases	Percentage
1.	1-20	-	-	-	-
2.	21-30	-	-	3	15
3.	31-40	3	15	-	-
4.	41-50	1	5	8	40
5.	51-60	9	45	3	15
6.	Above 60	7	35	6	30

- The above table shows that 45% of IP patients were in the age group of 51-60 years and 40% of OP patients were in the age group of 41-50 years.

3. Kalam :-

In siddha lliterature age of individual is fixed as 100 and into 3 kalam as,

- Vatha kalam – first 33 years & 4 months
- Pitha kalam – Second 33 years & 4 months
- Kapha kalam – Third 33 years & 4 months

The data given below are according to the patient's age during admission.

Table 3 : Illustrates the kalam

Sl. No.	Kalam	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percentage	No. of Cases	Percentage
1.	Vatha kalam	-	-	3	15
2.	Pitha kalam	17	85	14	70
3.	Kapha Kalam	3	15	3	15

- It is seen that most of the cases were in pitha kalam.

4. Socio – Economic Status :-

Table 4 : Illustrates the socio-economic status

Sl. No.	Socio – economic Status	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percentage	No. of Cases	Percentage
1.	Rich	-	-	-	-
2.	Middle Class	-	-	2	10
3.	Poor	20	100	18	90

- From the above table cent percent of IP patients and 90% of OP patients were belonged to poor socio-economic status.

5. Paruva Kalam :-

Table 5 : Illustrates the incidence of the disease

Sl. No.	Paruva Kalam	Months	In Patients (IP)		Out Patients (OP)	
			No. of Cases	Percentage	No. of Cases	Percentage
1.	Kar Kalam	Aavani, Purattasi	-	-	-	-
2.	Koothir Kalam	Iyppasi, Karthigai	-	-	-	-
3.	Munpani Kalam	Markazhi, Thai	7	35	12	60
4.	Pinpani Kalam	Masi, Panguni	10	50	7	35
5.	Elavenil Kalam	Chithirai, Vaikasi	3	15	1	5
6.	Muthuvenil Kalam	Aani, Aadi	-	-	-	-

- The above table shows that 50% of IP patients were admitted in Pinpani Kalam and 60% of OP patients were treated in Munpani Kalam.

6. Thinai (The habitat of the patients) :-

Table 6 : Illustrates the Thinai

Sl. No.	Thinai	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percentage	No. of Cases	Percentage
1.	Kurinji	-	-	-	-
2.	Mullai	-	-	-	-
3.	Marutham	20	100	20	100
4.	Neithal	-	-	-	-
5.	Palai	-	-	-	-

- All the cases were from Marutha Nilam.

7. Aetiological Factors :-

Table 7 : Illustrates the Aetiological Factors

Sl. No.	Precipitating Factors	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percen tage	No. of Cases	Percen tage
1.	Positive family history	2	10	2	10
2.	Positive previous history	4	20	5	25
3.	Miscellaneous	14	70	13	65

- The above table shows that 70% of IP patients and 65% of OP patients had miscellaneous reasons.

8. Mode of Onset :-

Table 8 : Illustrates the Mode of onset

Sl. No.	Mode of Onset	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percentage	No. of Cases	Percentage
1.	Acute	1	5	2	10
2.	Gradual	19	95	18	90

- The table shows that 95% of IP patients and 90% of OP patients had gradual onset.

9. Clinical Manifestations :-

Table 9 : Illustrates the Symptoms

Sl. No.	Symptoms	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percen tage	No. of Cases	Percen tage
1.	Joint Stiffness	20	100	20	100
2.	Pain on extremities	20	100	20	100
3.	Body pain	19	95	18	90
4.	Inflammatory symptoms of joints	20	100	20	100
5.	Functional disability of extremities	20	100	20	100
6.	Sleeplessness	15	75	10	50
7.	Fever	6	30	4	20
8.	Loss of appetite	8	40	2	10
9.	Loss of weight	4	20	2	10
10.	Constipation	18	90	8	40
11.	Easy fatiguability	20	100	20	100

- From the above table cent percent of IP and OP patients had joint stiffness, pain on extremities, inflammatory symptoms of joints, functional disability of extremities and easy fatiguability.

10. Systemic Examination :-

Table 10 : Illustrates signs of Systemic Examination

Sl. No.	Signs	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percen tage	No. of Cases	Percen tage
1.	Subcutaneous nodules	1	5	2	10
2.	Muscle wasting	5	25	4	20
3.	Ophthalmic Manifestation	-	-	-	-
4.	Hepatomegaly	-	-	-	-
5.	Splenomegaly	-	-	-	-
6.	Respiratory system	-	-	-	-
7.	Cardiovascular system	-	-	-	-
8.	Central nervous system	-	-	-	-

The above signs were observed in the systemic involment of Poly Arthritis patients.

- Out of 20 In Patients, 5% of cases had subcutaneous nodules, 25% of cases had Muscle wasting and out of 20 Out Patients, 10% of cases had subcutaneous nodules, 20% of cases had Muscle wasting.

11. Incidence of Poly Arthritic conditions :-

Table 11 : Illustates Incidence of types of Poly Arthritis

Sl. No.	Types of Arthritis	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percen tage	No. of Cases	Percen tage
1.	Rheumatoid Arthritis	5	25	5	25
2.	Ankylosing spondylitis	-	-	-	-
3.	Reiter's Syndrome	-	-	-	-
4.	Psoriatic Arthritis	-	-	-	-
5.	Enteropathic Arthritis	-	-	-	-
6.	Postmenopausal Arthritis	-	-	-	-
7.	Osteo Arthritis	15	75	15	75
8.	Reactive Arthritis	-	-	-	-

- Out of 20 In Patients and 20% Out Patients, 75% of cases had resemblance of Osteo Arthritis and 25% of cases had resemblance of Rheumatoid Arthritis.

12. Gradation of Pain, Joint Swelling and Restricted Movements :-

Table 12 : Illustrates Grades of Signs and Symptoms

Sl. No.	Signs and Symptoms	In Patients (IP)				Out Patients (OP)			
		No. of cases and Percentage				No. of cases and Percentage			
		Mild	Moderate	Severe	Total	Mild	Moderate	Severe	Total
1.	Pain	4 (20%)	9 (45%)	7 (35%)	100%	5 (25%)	10 (50%)	5 (25%)	100%
2.	Joint Swelling	4 (20%)	10 (50%)	6 (30%)	100%	4 (20%)	9 (45%)	7 (35%)	100%
3.	Restricted Movements	5 (25%)	8 (40%)	7 (35%)	100%	6 (30%)	10 (50%)	4 (20%)	100%
4.	Muscle Wasting	2 (10%)	3 (15%)	-	25%	2 (10%)	2 (10%)	-	20%

13. Incidents of individual Joint involvement :-

Table 13 : Illustrates incidents of Joints involvement

Sl. No.	Joints involved	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percen tage	No. of Cases	Percen tage
1.	Distal interphalangeal joint	5	25	5	25
2.	Proximalinterphalangeal joint	5	25	5	25
3.	Metacarpophalangeal Joint	5	25	5	25
4.	Wrist Joint	5	25	5	25
5.	Elbow joint	1	5	-	-
6.	Shoulder joint	-	-	-	-
7.	Temporomandipular Joint	-	-	-	-
8.	Sternoclavicular Joint	-	-	-	-
9.	Cervical spine	-	-	-	-
10.	Hip joint	-	-	-	-
11.	Knee joint	20	100	20	100
12.	Ankle joint	4	20	2	10
13.	Metatarsophalangeal joint	4	20	2	10
14.	Lumbar Spine	-	-	-	-
15.	Thoracic Spine	-	-	-	-

14. Deformities of Joints :-

Table 14 : Illustrates Deformities of Joints

Sl. No.	Deformities of joints	In Patients (IP)		Out Patients (OP)	
		No. of Cases	Percen tage	No. of Cases	Percen tage
1.	Interphalangeal Joint	2	10	1	5
2.	Metacarpophalangeal Joint	2	10	1	5
3.	Wrist Joint	-	-	-	-
4.	Elbow Joint	-	-	-	-
5.	Shoulder Joint	-	-	-	-
6.	Hip Joint	-	-	-	-
7.	Knee Joint	10	50	8	40
8.	Ankle Joint	-	-	-	-
9.	Metatarso phalangeal Joint	-	-	-	-
10.	Spine	-	-	-	-

15. Disturbances of Vatha, Pitha and Kapha :-

Table 15 : Illustrates the Disturbances of Mukkuttam

Particulars	In Patients (IP)		Out Patients (OP)	
	No. of cases	Percentage	No. of cases	Percentage
Vatham				
Piranan	-	-	-	-
Abanan	18	90	8	40
Viyanan	20	100	20	100
Uthanan	-	-	-	-
Samanan	20	100	20	100
Nagan	-	-	-	-
Koorman	3	15	2	10
Kirukaran	8	40	2	10
Devathathan	15	75	10	50
Dhananjeyan	-	-	-	-
Pitham				
Anarpitham	8	40	2	10
Ranjagapitham	10	50	10	50
Prasakapitham	2	10	-	-
Alosakam	3	15	2	10
Sathagam	20	100	20	100
Kapham				
Avalambagam	20	100	20	100
Kilethagam	8	40	2	10
Pothagam	-	-	-	-
Tharpagam	-	-	-	-
Santhegam	20	100	20	100

16. Conditions of Udal Thathukkal :-

Table 16 : Illustrates the conditions of Udal Thathukkal

Sl. No.	Udal Thathukkal	In Patients (IP)		Out Patients (OP)	
		No. of cases	Percen tage	No. of cases	Percen tage
1.	Saram	20	100	20	100
2.	Senneer	20	100	20	100
3.	Oohn	20	100	20	100
4.	Kozhuppu	20	100	20	100
5.	Enbu	20	100	20	100
6.	Moolai	-	-	-	-
7.	Sukkilam / suronitham	-	-	-	-

- Out of 20 In Patients and 20 Out Patients Saram, Senneer, Oohn, Kozhuppu and Enbu were affected in 100% of cases.

17. Conditions of Envagai Thervugal :-

Table 17 : Illustrates the conditions of Envagai Thervugal

Sl. No.	Envagai Thervugal	In Patients (IP)		Out Patients (OP)	
		No. of cases	Percentage	No. of cases	Percentage
1.	Naadi (Vathakalappu)	20	100	20	100
2.	Sparisam	20	100	20	100
3.	Naa	10	50	10	50
4.	Niram	1	5	-	-
5.	Mozhi	-	-	-	-
6.	Vizhi	3	15	2	10
7.	Malam	18	90	8	40
8.	Moothiram	20	100	20	100

- Out of 20 In Patients, 65% of cases were Vatha Pitha Naadi. 35% of cases were Pitha Vatha Naadi. Sparisam was affected in 100% of cases. Naa was affected in 50% of cases. Malam was affected in 90% of cases. Niram was affected in 5% of cases. Vizhi was affected in 50% of cases. Moothiram was affected in 100% of cases. In all 20 cases. Neerkuri and Neikuri were studied. Neerkuri was found to be normal in all cases. Neikuri showed that the oil dropped in to the urine spreaded like **"Aazhiyil Aravu"** (35%) and **"Aravil Aazhi"** (65%).

- Out of 20 Out Patients, 80% of cases were Vatha Pitha Naadi. 20% of cases were Pitha Vatha Naadi. Sparisam was affected in 100% of cases. Naa was affected in 50% of cases and Malam was affected in 40% of cases. Vizhi was affected in 10% of cases. Moothriram was affected in 100% of cases. Neerkuri was found to be normal in all cases. Neikuri showed that the oil dropped in to the urine spreaded like **"Aazhiyil Aravu"** (20%) and **"Aravil Aazhi"** (80%).

18. Grading of Arthritis :-

Table 18 : Illustrates Grading of poly Arthritis

Sl. No.	Grade	In Patients (IP)		Out Patients (OP)	
		No. of cases	Percentage	No. of cases	Percentage
1.	I	-	-	-	-
2.	II	13	65	14	70
3.	III	6	30	6	30
4.	IV	1	5	-	-

Grade I : No restriction of ability to perform normal activities.

Grade II : Moderate restriction but with an ability to perform most activities of daily activity.

Grade III : Marked restriction with an inability of perform most activities of daily living and occupation.

Grade IV : In capacitation with confinement to bed or wheel chair.

Out of 20 In Patients,

- 65% of cases belonged to Grade II
- 30% of cases belonged to Grade III and
- 5% of case belonged to Grade IV

Out of 20 Out Patients,

- 70% of cases belonged to Grade II and
- 30% of cases belonged to Grade III

Assessment of the Effect of Therapy :

The patients were treated for about 41days to 64 days with the trial medicines. At the end of the treatment the results were categorised as follows,

Good : Complete, Subsidence of Pain and Disappearance of Swelling.

Fair : Relief of pain, Reduction in Swelling and Increasing Range of Movements.

Poor : No Improvement.

19. Grading of Results :-

Table 19 : Illustrates Grading of Results

Sl. No.	Grade	In Patients (IP)		Out Patients (OP)	
		No. of cases	Percentage	No. of cases	Percentage
1.	Good	2	10	3	15
2.	Fair	17	85	14	70
3.	Poor	1	5	3	15

- Out of 20 In Patients, 10% of cases showed good response. 85% of cases showed fair response. 5% of cases showed poor response.
- Out of 20 Out Patients, 15% of cases showed good response. 70% of cases showed fair response. 15% of cases showed poor response.

20. Radio graphic Findings :

Table 1 : Illustrates Radio graphic findings (IP)

S. No.	IP No.	X-Ray	Probable Diagnosis
1.	913	Both Knee joints – Ap view	Bil OA
2.	181	Both Knee joints – Ap view	Bil OA
3.	185	Both Knee joints – Ap view	Bil OA
4.	1191	Both hands with wrist joints - Ap view	RA
5.	1131	Both Knee joints – Ap view	Bil OA
6.	937	Both Knee joints – Ap view	Bil OA
7.	795	Both Knee joints – Ap view	Bil OA
8.	778	Both hands with wrist joints - Ap view	RA
9.	763	Both Knee joints – Ap view	Bil OA
10.	282	Both Knee joints – Ap view	Bil OA
11.	800	Both hands with wrist joints - Ap view	RA
12.	231	Both Knee joints – Ap view	Bil OA
13.	113	Both Knee joints – Ap view	Bil OA
14.	14	Both Knee joints – Ap view	Bil OA
15.	1329	Both Knee joints – Ap view	Bil OA
16.	952	Both hands with wrist joints - Ap view	RA
17.	777	Both Knee joints – Ap view	Bil OA
18.	704	Both Knee joints – Ap view	Bil OA
19.	703	Both hands with wrist joints - Ap view	RA
20.	284	Both Knee joints – Ap view	Bil OA

Table 2 : Illustrates Radio graphic findings (OP)

S. No.	OP No.	X-Ray	Probable Diagnosis
1.	75980	Both Knee joints – Ap view	Bil OA
2.	75286	Both Knee joints – Ap view	Bil OA
3.	74745	Both Knee joints – Ap view	Bil OA
4.	23883	Both Knee joints – Ap view	Bil OA
5.	21885	Both Knee joints – Ap view	Bil OA
6.	23224	Left Knee joint – Ap view	OA (Left)
7.	74703	Both Knee joints – Ap view	Bil OA
8.	75736	Both Knee joints – Ap view	Bil OA
9.	74100	Both Knee joints – Ap view	Bil OA
10.	24243	Both Knee joints – Ap view	Bil OA
11.	25573	Both Knee joints – Ap view	Bil OA
12.	23882	Both Knee joints – Ap view	Bil OA
13.	27728	Both Knee joints – Ap view	Bil OA
14.	26343	Both hands with wrist joints - Ap view	RA
15.	3312	Both hands with wrist joints - Ap view	RA
16.	1786	Both hands with wrist joints - Ap view	RA
17.	1785	Both hands with wrist joints - Ap view	RA
18.	1787	Both hands with wrist joints - Ap view	RA
19.	76150	Both Knee joints – Ap view	Bil OA
20.	76152	Both Knee joints – Ap view	Bil OA

CASE SHEET

Sl. No.	I.P. No.	Name	Age/Sex	Occupation	Date of Admission	Date of Discharge	Duration of Illness	No. of Days Treated		Total No. of Days Treated	Results
								IP	OP Follow up		
1.	913	Muthumalai	39/M	Farmer	09.04.08	28.04.08	4 months	20	28	48	Good
2.	181	Ramakrishna Nambiyar	60/M	Farmer	23.01.08	17.02.08	9 months	26	21	47	Fair
3.	185	Lakshmanan	65/M	Farmer	23.01.08	17.02.08	6 months	26	21	47	Fair
4.	1191	Muthuvel	40/M	Driver	07.05.07	28.05.07	2 months	22	21	43	Good
5.	1131	Sankaran	54/M	Porter	28.04.07	28.05.07	10 months	31	21	52	Fair
6.	937	Subramanian	62/M	Farmer	09.04.07	28.04.07	8 months	20	28	48	Fair
7.	795	Subbiahpillai	82/M	Farmer	20.03.07	09.04.07	5 months	21	28	49	Poor
8.	778	Natarajan	67/M	Farmer	17.03.07	03.04.07	3 years	18	28	46	Fair
9.	763	Aathiappan	60/M	Farmer	15.03.07	03.04.07	10 months	20	21	41	Fair
10.	282	Vetrivelmurugan	60/M	Tailor	01.02.08	10.02.08	6 months	18	28	46	Fair
11.	800	Poomani	60/F	House Wife	27.03.08	15.04.08	2 years	20	28	48	Fair
12.	231	Saraswathi	40/F	Tailor	27.01.08	14.02.08	4 months	19	35	57	Fair
13.	113	Sornam	70/F	House Wife	17.01.08	07.02.08	8 months	22	28	50	Fair
14.	14	Lakshmi	60/F	House Wife	03.01.08	23.01.08	5 months	21	28	49	Fair
15.	1329	Chellammal	60/F	House Wife	19.05.07	28.05.07	10 months	41	14	55	Fair
16.	952	Mahamayi	60/F	House Wife	10.04.07	21.05.07	4 years	42	14	56	Fair
17.	777	Lakshmiammal	60/F	House Wife	17.03.07	05.04.07	5 months	20	28	48	Fair
18.	704	Mahalakshmi	64/F	House Wife	14.03.08	04.04.08	9 months	22	28	50	Fair
19.	703	Vellammal	50/F	Farmer	14.03.08	03.04.08	2 years	21	35	56	Fair
20.	284	Gomathi	64/F	House Wife	01.02.08	21.02.08	9 months	21	28	49	Fair

LABORATORY INVESTIGATION REPORTS (IP)

Sl. No	I.P. No.	Blood Report										Urine			Stool		Blood Sugar	Serum Cholestrol	Blood urea mg%	RA Factor	
		TC Cells / Cu mm	DC %			ESR				HB%		Alb	Sug	Dep	Ova	Cyst				BT	AT
			P	L	E	B ½ hr	T 1 hr	A ½ hr	T 1 hr	BT	AT										
1	913	9,700	59	35	6	30	60	15	20	74	75	Nil	Nil	Occ.epi cells	Nil	Nil	68	133	28	-	-
2	181	10,000	68	30	2	10	22	5	10	72	74	Nil	Nil	Occ. pus cells	Nil	Nil	97	223	37	-	-
3	185	10,000	70	20	10	25	50	10	20	71	71	Nil	Nil	NAD	Nil	Nil	85	219	20	-	-
4	1191	9,200	64	30	6	4	10	2	5	65	68	Nil	Nil	NAD	Nil	Nil	79	148	24	+ve	+ve
5	1131	9,400	66	3	4	2	5	2	4	75	75	Nil	Nil	NAD	Nil	Nil	81	162	17	-	-
6	937	9,500	54	40	6	5	11	3	6	75	78	Nil	Nil	NAD	Nil	Nil	85	152	23	-	-
7	795	10,200	50	40	10	10	15	6	12	71	74	Nil	Nil	NAD	Nil	Nil	89	160	34	-	-
8	778	10,000	68	28	4	10	22	6	15	71	72	Nil	Nil	NAD	Nil	Nil	105	167	26	+ve	+ve
9	763	9,000	72	24	4	15	32	8	16	78	78	Nil	Nil	2-3 epi cells	Nil	Nil	99	165	30	-	-
10	282	9,000	58	38	4	6	14	2	6	58	60	Nil	Nil	NAD	Nil	Nil	96	75	20	-	-
11	800	9,900	70	27	3	8	18	4	8	63	65	Nil	Nil	NAD	Nil	Nil	75	191	23	+ve	+ve
12	231	9,000	69	27	4	8	18	6	12	74	75	Nil	Nil	1-2 epi cells	Nil	Nil	102	145	22	-	-
13	113	10,200	58	30	12	20	38	8	16	68	70	Nil	Nil	Occ. epi cells	Nil	Nil	88	200	14	-	-
14	14	9,300	72	26	2	10	20	5	10	68	71	Nil	Nil	Occ. epi cells	Nil	Nil	108	194	36	-	-
15	1329	9,200	58	34	8	10	20	6	12	69	70	Nil	Nil	2-4 epi cells	Nil	Nil	82	213	18	-	-
16	952	7,500	58	34	8	6	13	4	8	68	71	Nil	Nil	2-3 epi cells	Nil	Nil	69	202	19	+ve	+ve
17	777	9,200	64	34	2	30	62	10	20	78	78	Nil	Nil	2-3 epi cells	Nil	Nil	70	151	17	-	-
18	704	8,800	60	34	6	10	20	5	12	68	68	Nil	Nil	Occ. epi cells	Nil	Nil	86	142	31	-	-
19	703	8,900	60	36	4	25	50	5	10	68	72	Nil	Nil	Few epi cells	Nil	Nil	104	161	20	+ve	+ve
20	284	8,900	50	44	6	15	30	8	16	68	71	Nil	Nil	Few epi cells	Nil	Nil	100	241	28	-	-

CASE SHEET

Sl. No.	O.P. No.	Name	Age/Sex	Occupation	Duration of Illness	Treatment Starting date	End of the treatment date	No. of Days Treated	Results
1.	75980	Rajendran	48/M	Tailor	6 months	29.12.07	20.02.08	54	Good
2.	75286	Kuppaiyandi	50/M	Farmer	9 months	26.12.07	20.02.08	57	Fair
3.	74745	Gandhi	54/M	Farmer	5 months	22.12.07	20.02.08	61	Fair
4.	23883	Duraisamy	65/M	Farmer	10 months	28.03.07	21.05.07	55	Fair
5.	21885	Velu	64/M	Porter	8 months	19.03.07	07.05.07	50	Fair
6.	23224	Gopal	50/M	Farmer	7 months	24.03.07	21.05.07	59	Fair
7.	74703	Durairaj	80/M	Farmer	10 months	22.12.07	20.02.08	61	Poor
8.	75736	Annamalai	76/M	Farmer	9 months	28.12.07	20.02.08	55	Poor
9.	74100	Veeralakshmi	43/F	Tailor	6 months	18.12.07	20.02.08	64	Fair
10.	24243	Essakiammal	45/F	Cooli	8 months	29.03.07	21.05.07	54	Fair
11.	25573	Gomathi	45/F	Farmer	7 months	05.04.07	28.05.07	54	Fair
12.	23882	Kurubai	50/F	House Wife	10 months	28.03.07	21.05.07	55	Good
13.	27728	Valliammal	73/F	House Wife	10 months	17.04.07	30.05.07	45	Poor
14.	26343	Gomathi	29/F	House Wife	2 months	10.04.07	30.05.07	51	Fair
15.	3312	Lakshmi	65/F	House Wife	3 years	09.01.08	22.02.08	45	Fair
16.	1786	Eruliammal	27/F	Tailor	1 year	05.01.08	22.02.08	49	Fair
17.	1785	Lakshmi	28/F	Farmer	1 months	05.01.08	22.02.08	49	Fair
18.	1787	Nagammal	55/F	House Wife	2 years	05.01.08	22.02.08	49	Fair
19.	76150	Malaiazhagu	52/F	House Wife	6 months	30.12.08	20.02.08	53	Fair
20.	76152	Shenbagam	46/F	Tailor	9 months	30.12.08	20.02.08	53	Good

LABORATORY INVESTIGATION REPORTS (OP)

Sl. No	O.P. No.	Blood Report										Urine			Stool		Investigation mg%		
		TC Cells/ Cu mm	DC %			ESR				HB%		Alb	Sug	Dep	Ova	Cyst	Blood Sugar	Serum Cholestrol	Blood urea
			P	L	E	B ½ hr	T 1 hr	A ½ hr	T 1 hr	BT	AT								
1	75980	8200	65	33	2	2	5	2	4	72	73	Nil	Nil	NAD	Nil	Nil	102	162	17
2	75286	8700	59	40	1	14	20	5	10	68	70	Nil	Nil	NAD	Nil	Nil	73	181	29
3	74745	9100	60	38	2	2	7	2	5	72	74	Nil	Nil	NAD	Nil	Nil	101	192	24
4	23883	9600	62	36	2	35	72	5	10	68	71	Nil	Nil	NAD	Nil	Nil	76	197	30
5	21885	8600	68	28	4	5	12	2	4	78	79	Nil	Nil	NAD	Nil	Nil	84	176	19
6	23224	9000	58	36	6	10	21	5	10	71	72	Nil	Nil	NAD	Nil	Nil	80	200	23
7	74703	8800	58	40	2	10	25	6	12	68	70	Nil	Nil	NAD	Nil	Nil	90	160	17
8	75736	9400	60	36	2	30	60	8	11	69	72	Nil	Nil	Occ pus cells	Nil	Nil	96	165	15
9	74100	9500	60	38	2	10	15	5	10	78	79	Nil	Nil	Occ pus cells	Nil	Nil	88	190	20
10	24243	9400	64	28	8	25	52	10	25	64	70	Nil	Nil	FEW epi cells	Nil	Nil	88	160	21
11	25573	8400	62	32	6	7	15	5	10	75	75	Nil	Nil	FEW epi cells	Nil	Nil	105	192	20
12	23882	9400	60	38	2	5	11	2	5	71	73	Nil	Nil	FEW epi cells	Nil	Nil	75	209	19
13	27728	9800	54	38	8	10	22	8	16	65	70	Nil	Nil	NAD	Nil	Nil	102	180	21
14	26343	7200	61	38	1	35	71	15	20	64	68	Nil	Nil	NAD	Nil	Nil	92	168	23
15	3312	9000	55	40	5	20	42	5	15	71	72	Nil	Nil	1-2 epi cells	Nil	Nil	78	205	20
16	1786	9400	52	38	10	15	32	10	20	64	69	Nil	Nil	2-3 epi cells	Nil	Nil	93	171	27
17	1785	9400	60	38	2	28	55	15	20	68	70	Nil	Nil	FEW pus cells	Nil	Nil	60	173	22
18	1787	9400	70	26	4	3	8	2	4	68	71	Nil	Nil	1-2 pus cells	Nil	Nil	89	154	20
19	76150	8700	55	38	7	14	22	6	12	70	70	Nil	Nil	NAD	Nil	Nil	104	164	16
20	76152	9800	55	40	5	3	6	2	4	72	74	Nil	Nil	NAD	Nil	Nil	94	172	19

Discussion

DISCUSSION

Among 80 Vatha diseases, **Santhuvatham** is one of the Rheumatic conditions characterized by stiffness and inflammation of joints, body pain, lethargy, lassitude, along with pillor erectation of skin and salivary secretary defects. Particulary upper and lower extremities and their functions are affected, resulting inability to stand firmly. So Vatha diseases have received more attention and good prognosis in the field of Alternative medicine, especially in Siddha medicine.

Santhuvatham is correlated to inflammatory poly arthritic conditions, characteristically upper and lower extremities involvement.

Groups of inflammatory arthritis such as seronegative and seropositive Rheumatoid Arthritis and degenerative type of arthritis such as Osteo Arthritis cases also have above-mentioned clinical manifestations.

20 In Patients and 20 Outpatients were subjected on this study results can be discussed as follows.

Sex Distribution :

Among 20 In Patients and 20 Outpatients, 18 were males ad 22 females. From this study the sex incidence was higher in females than in males, indicating Santhuvatham is predominant in females.

Age Distribution :

Among 20 In Patients, 15% of cases were in the age between 31-40 years. 5% of cases were between 41-50 years. 45% of cases were between 51-60 years. 35% of cases were above 60 years.

Among 20 Out Patients, 15% of cases between 21-30 years. 40% of cases between 41-50 years. 15% of cases between 51-60 years and 30% of cases were above 60 years.

The incidence of the disease was more predominant in 6th, 5th and 4th decades. According to the literatures no age group is exempted for Santhuvatham, but usual incidence of Rheumatoid Arthritis is during 4th and 5th decade. The clinical study also coincides with it. For Osteo Arthritis after 40 years.

Kalam :

Among 20 In Patients,

Pitha Kalam – 85%

Kapha Kalam – 15%

Among 20 Out Patients,

Vatha Kalam – 15%

Pitha Kalam – 70%

Kapha Kalam – 15%

According to this concept maximum numbers of cases were noted in Pitha Kalam, which is the time between 33 years & 4 months – 66 years & 8 months which coincides very well with that of modern concept of age i.e. 4th and 5th decades.

Socio – economic status :

20 In Patients and 18 Out Patients were belonged to poor class.

Poor patients were mostly affected because of physical and mental stress and poor resistance.

Paruvakalam :

Among 20 In Patients, 35% of cases were admitted in Munpani Kalam. 50% of cases were admitted in Pinpani Kalam and 15% of cases were admitted in Elavenil Kalam.

Among 20 Out Patients, 60% of cases were treated in Munpani Kalam. 35% of cases were treated in Pinpani Kalam and 5% of cases were treated in Elavenil Kalam.

According to siddha system, Koothir Kalam is a season for vatha diseases. But this incidence may be due to the alteration in the food habit and their activities.

Thinai :

Among 20 In Patients and 20 Out Patients, all cases were admitted from Marutha Nilam.

Marutha Nilam is the area where the severity of the disease is less. But this incidence may be due to the alteration in the food habit and their activities.

Aetiology :

Among 20 In Patients, 10% of cases had a positive family history. 20% of cases had a positive previous history and rest of the persons affected by miscellaneous reasons.

Among 20 Out Patients, 10% of cases had a positive family history. 25% of cases had a positive previous history and rest of the persons affected by miscellaneous reasons.

Mode of onset :

Among 20 In Patients, the Onset of the disease was acute in 5% and gradual in 95% of cases.

Among 20 Out Patients, the Onset of the disease was acute in 10% and gradual in 90% of cases.

The incidence was more in gradual onset as indicated on literatures.

The clinical trail coincides with it.

Clinical Manifestations :

Santhuvatham is present with stiffness of joints and inflammatory signs and symptoms like Pain, Swelling, Restriction of movements and extra articular manifestations.

Among 20 In Patients, cent percent of cases had joint stiffness, pain on extremities, inflammatory symptoms of joints, functional disability of extremities and easy fatiguability. 95% of cases had body pain. 75% of cases had sleeplessness. 30% of

cases had fever. 40% of cases had loss of appetite. 20% of cases had loss of weight and 90% of cases had constipation.

Among 20 Out Patients, cent percent of cases had joint stiffness, pain on extremities, inflammatory symptoms of joints, functional disability of extremities and easy fatiguability. 90% of cases had body pain and 50% of cases had sleeplessness. 10% of cases had loss of appetite. 20% of cases had fever. 10% of cases had loss of weight and 40% of cases had constipation.

Joint pain was assessed by the words of the patients and was classified into mild, moderate and severe.

Among 20 In Patients, mild pain was observed in 20% of cases, moderate pain was observed in 45% of cases, severe pain was observed in 35% of cases.

Among 20 Out Patients, mild pain was observed in 25% of cases, moderate pain was observed in 50% of cases, severe pain was observed in 25% of cases.

Swellings of the joints were noticed in all cases. Swellings of the joints were measured by means of a non elastic measurable tape. Areas of maximum level of swelling around the joints were measured both before and after the treatment. The joints subjected to measurements were both knee joints, ankle joints, wrist joints, proximal inter phalangeal joints of index fingers, middle fingers and little fingers.

The degree of joints swelling was observed with respect to the constitution (thin, obese, medium built) of the body.

Among 20 In Patients, mild swelling was measured in 20% cases, moderate swelling was measured in 50% of cases and severe swelling was measured in 30% of cases.

Among 20 Out Patients, mild swelling was measured in 20% of cases, moderate swelling was measured in 45% of cases and severe swelling was measured in 35% of cases.

A measurement taken after treatment reveals that 80% of cases under regular treatment had marked reduction in swelling. 15% of cases had mild reduction and 5% showed no signs of in improvement.

Almost all the patients experienced early morning stiffness, ranging approximately from 30 minutes to 4 hours. After treatment, it gradually came down to 20-30 minutes.

Restricted movements or decreased range of movements were seen in 100% of cases. Since facilities are inadequate, (Gonio meter) restricted movements of patients were assessed by asking the patients to move the joint in a particular direction. When the active movements of the joint were impossible, movements were considered as restricted or decreased range of motion.

Improvement was also assessed by the gradual reduction of time taken to walk a distance of about 100 feet after treatment. After treatment with trial medicines along with physiotherapy, in most of the cases increased range of movement was observed.

Incidence of individual joint involvement :

Among 20 In Patients, Distal interphalangeal joint, proximal interphalangeal joint, metacarpo phalangeal joints, wrist joint were

involved in 25% of cases. Ankle joint and metatarsophalangeal joints were involved in 20% of cases. Elbow joint was involved in 5% of cases. Knee joint was involved in cent percent of cases.

Among 20 Out Patients, Distal interphalangeal joint, proximal interphalangeal joint, metacarpo phalangeal joints, wrist joint were involved in 25% of cases. Ankle joint and metatarsophalangeal joints were involved in 10% of cases. Knee joint was involved in cent percent of cases.

Deformities of Joints :

Among 20 In Patients, 10% of cases had deformity in the inter phalangeal joints, metacarpo phalangeal joints. 50% of cases had deformity in knee joints.

Among 20 Out Patients, 5% of cases had deformity in the inter phalangeal joints, metacarpo phalangeal joints. 40% of cases had deformity in knee joints.

Elicitation of extra articular manifestations :

Apart from the symptoms told by the patient, certain signs were also elicited. These included examination of the liver, spleen for enlargement, presence of subcutaneous nodules, respiratory symptoms, cardiovascular symptoms, muscle wasting, reflexes, ophthalmic manifestations etc were noted.

Among 20 In Patients, 5% of cases had subcutaneous nodules, 25% of cases had muscle wasting.

Among 20 Out Patients, 10% of cases had subcutaneous nodules 20% of cases had muscle wasting.

Hepatomegaly, splenomegaly were not present in any case. Likewise, Cardiovascular symptoms were not present.

Uyirthathukkal :

Uyirthathukkal constitute three vital humours mentioned in siddha system, namely Vatha, Pitha and Kapha. Disturbances in uyirthathukkal leads to disease entities and are discussed here.

Disturbances in vatham :

Among 20 In Patients, Abanan was affected in 90% of cases produces constipation. Viyanan was affected in cent percent of cases produces pain and restriction of movements of the joints. Samanan was affected in 100% of cases produces loss of appetite, indigestion and it neutralizes other vayus. Koorman was affected in 15% of cases produces blurring of vision. Kirukaran was affected in 40% of cases produces loss of appetite, excessive salivation and dryness of tongue. Devathathan was affected in 75% of cases produces insomnia.

Among 20 Out Patients, Abanan was affected in 40% of cases. Viyanan was affected in 100% of cases. Samanan was affected in 100% of cases. Koorman and Kirukaran were affected in 10% of cases. Devathathan was affected in 50% of cases. Uthanan, Nagan and Dhananjeyan were found to be normal in both In Patients and Out Patients.

Disturbances in Pitham :

Among 20 In Patients, Anarpitham was affected in 40% of cases produces loss of appetite and indigestion. Ranjagaitham was affected in 50% of cases produces deceased Hb percentage.

Prasakapitham was affected in 10% of cases produces pallor of the skin. Alosakapitham was affected in 15% of cases produces blurring of vision. Sathagapitham was affected in cent percent of cases produces unable to carryout their regular works properly.

Among 20 Out Patient, Anarpitham was affected in 10% of cases. Ranjagapitham was affected in 50% of cases. Alosakapitham was affected in 10% of cases. Sathagapitham was affected in cent percent of cases. Prasakapitham was found to be normal in all Outpatients.

Disturbances in Kapham :

Among 20 In Patients, Avalambagam was affected in cent percent of cases because it is basic for all other kaphas (Kilethagam, Pothagam, Tharpagam and Santhegam). Kilethagam was affected in 40% of cases produces loss of appetite and indigestion. Santhegam was affected in cent percent of cases produces joint pain, swelling and restriction of movements.

Among 20 Out Patients, Avalambagam and Santhegam were affected in cent percent of cases. Kilethagam was affected in 10% of cases. Pothagam and Tharpagam were found to be normal in both In Patients and Out Patients.

Udal Thathukkal or Udal Kattugal :

Among 20 In Patients and 20 Out patients, Saram was affected in all cases and produces easy fatiguability. Senneer was affected in all cases and produces decreased Hb percentage and pain. Oohn was affected in all cases which produced muscle wasting in thenar and hypothenar muscles and pain. Kozhuppu

was affected in all cases which showed emaciation. Enbu was affected in all cases which showed joint pain, swelling and restricted movements.

Moolai, Sukkilam and suronitham were found to be normal in both In Patients and Out Patients.

Envagai Thervugal :

Envagai thervugal is considered to be the very vital observation. This constitute Naadi, Sparisam, Naa, Niram, Mozhi, Vizhi, Malam and Moothiram.

Among 20 In Patients and 20 Out Patients,

65% of In Patients and 80% of Out Patients showed Vatha Pitha Naadi. 35% of In Patients and 20% of Out Patients showed Pitha Vatha Naadi.

Sparisam was affected in all In Patients and Out Patients produced warmthness over the inflammed joints.

Naa was affected in 50% of In Patients and 50% of Out Patients. Coated tongue due to constipation and pale due to Anaemia.

Niram was affected in 5% of In Patients and none of Out Patients which showed pallor of the skin.

Mozhi was normal in both In Patients and Out Patients.

Vizhi was affected in 15% of In Patients and 10% of Out Patients which showed blurring of vision.

Malam was affected in 90% of In Patients and 40% of Out Patients. Constipation was present in those cases.

Moothiram was affected in cent percent of In Patients and Out Patients which altered Neikuri.

Neerkuri and Neikuri were noticed in all the cases.

Neerkuri was found to be normal, straw in colour, normal frequency, Smell and froth.

Neikuri showed that the oil dropped into the urine was spreading like **"Aravil Aazhi"** (Vatha Pitha Neer) and **"Aazhiyil Aravu"** (Pitha Vatha Neer).

Grading of arthritis Patients :

Grading of arthritis was useful to assess the gravity of the disease. Four grades are as follows :

Grade I : No restriction of ability to perform normal activities.

Grade II : Moderate restriction but with an ability to perform most activities of daily activity.

Grade III : Marked restriction with an inability to perform most activities of daily living and occupation :

Grade IV : Incapacitation with confinement to bed or wheel chair

Among 20 In Patients and 20 Out Patients

- No cases belonged to grade I
- 65% of In Patients and 70% of Out Patients belonged to Grade II
- 30% of In Patients and 30% of Out Patients belonged to Grade III
- 5% of In Patients belonged to Grade IV and no Out Patients belonged to Grade IV

Investigations :

Routine examination of blood, urine and stools were done. Examination of urine and stools showed no abnormalities.

ESR (Erythrocyte Sedimentation Rate) is increased in 95% of In Patients and 90% of Out Patients.

50% of In Patients and 50% of Out Patients had decreased Hb%. Blood sugar, blood urea, serum cholesterol were also done in bio-chemistry department, Government siddha medical college, Palayamkottai. The values were found to be normal in all cases.

Affordable patients were asked to do the investigations privately at their own cost and reports were recorded.

The patients were also subjected to radiological investigations.

X-ray of both hands with wrist joints (Antero posterior view) :

Were taken to 5 In Patients and 5 Out Patients. 10 patients had gross abnormalities (gross osteoporosis), with reduction in interphalangeal joint space, Synovial thickening etc and in one case ankylosis also seen. These patients had been suffering from this disease for a long period and one case had soft tissue swelling over interphalangeal joint.

X-ray of both knee joints :

Antero posterior view was taken for 15 In patients and 15 Out Patients. The reports revealed gross osteoporosis with reduction of joint space and sclerosis.

Management :

"விரேசனத்தால் வாதம் தாழும்"

Vatha disease can be brought down by Viraesanam (Laxative and purgative) So 10gm of Nilavagai chooranam was given with hot water at bed time.

Ichchura Mooli Chooranam and **Erivatha Thylam** were the specific medicines selected for the disease santhuvatham. Ichchura Mooli Chooranam 1-2gms was given two times a day with hot water internally and 30ml of Erivatha Thylam was given externally. The patients were advised to apply over the areas of pain three times a day. Gentle massage was also given. No adverse reactions of drugs were observed.

Hot water fermentation was advised to all the patients after the application of oil, because hot water fermentation increases the blood supply to that affected area and relieves the pain.

Bed rest was advised for all the patients. After inflammation was subsided the patients were advised to do some exercise to increase the range of movements, to prevent disuse atropy and to prevent deformities.

Assessment of the effects of management :

All the 20 In Patients and 20 Out Patients were treated with Ichchura Mooli Chooranam internally and Erivatha Thylam externally. Physiotherapy was also advised. The results were assessed on the basis of improvement of the range of movements, decrease of pain and inflammation and a sense of well being. The duration of treatment was 41-64 days in average.

At the end of the treatment,

- 35% of In Patients showed good results
- 60% of In Patients showed fair results
- 5% of In Patients showed poor results
- 15% of Out Patients showed good results
- 70% of Out Patients showed fair results
- 15% of Out Patients showed poor results

15% of poor results may be due to the Out Patients were not strictly followed diet restriction.

After discharge the In Patients were advised to attend the post graduate Out Patients ward for further follow-up.

During the treatment, the diet restriction was strictly followed. Patients were instructed to take warm bath and to avoid exposure to chill weather.

Summary

SUMMARY

Santhuvatham is a connective tissue disorder with a chronic course, unless early diagnosis and proper management, this condition leads to deformities of involved joints associated with systemic disturbances.

The modern treatment of poly Arthritis with Analgesics and Anti inflammatory drugs has not proved any permanent cure. So poly Arthritis has received an international attention for finding out a new siddha medicines **(Ichchura Mooli Chooranam, Erivatha thylam)** were tried clinically in this dissertation work.

In this study of 40 patients (20 Inpatients and 20 Outpatients) of both sexes were selected. Females are predominant than males. This disease usually occurs betweeen third and fifth decades. the incidence of this disease was higher in winter seasons and positive family history and previous illness.

All Inpatients and 90% of Outpatients belonging to poor socio economic status. 10% of Outpatients belonging to middle class. The onset of the disease in gradual in 95% of Inpatients and 90% of Outpatients and acute in 5% of Inpatients and 10% of Outpatients.

Articular manifestations of Santhu vatham were cent percent present in all cases. Constipation and insomnia were also common in this disease.

90% of Inpatients and 40% of Outpatients were suffered from constipation. 75% of Inpatients and 50% of Outpatients were suffered from insomnia.

In Uyir Thathukkal, Viyanan, Samanan, Sathagam, Avalambagam and santhegam were affected in cent percent of Inpatients and Outpatients. Abanan was affected in 90% of Inpatients and 40% of Outpatients. Korrman was affected in 15% of Inpatients and 10% of Outpatients. Kirukaran was affected in 40% Inpatients and 10% of Outpatients. Devathathan was affected in 75% of Inpatients and 50% of Outpatients. Anarpitham was affected in 40% of Inpatients and 10% of Outpatients. Ranjaga pitham was affected in 50% of Inpatients and 50% of Outpatients. Prasakapitham was affected in 10% of Inpatients and none of Outpatients. Alosakapitham was affected in 15% of Inpatients and 10% of Outpatients. Kilethagam was affected in 40% of Inpatients and 10% of Outpatients.

In udal kattugal, Saram, Senneer, Oohn, Kozhuppu and Enbu were affected in all Inpatients and all Outpatients.

In Envagai Thervugal, Vatha Pitha Naadi was present in 65% of Inpatients and 80% of Outpatients. Pitha Vatha Naadi was present in 35% of Inpatients and 20% of Outpatients. Sparisam and Moothiram were affected in all Inpatients and Outpatients. Naa was affected in 50% of Inpatients and 50% of Outpatients. Niram was affected in 5% of Inpatients and none of Outpatients. Vizhi was affected in 15% of Inpatients and 10% of Outpatients. Malam was affected in 90% of Inpatients and 40% of Outpatients.

Routine blood, urine and stool examinations and Radiological evaluation were also considered for diagnosis and to follow the progress of the patients.

The efficacies of the trial medicines were studied and observed during the period of this study.

Clinically there were marked reduction of extra articular symptoms such as defective salivary secretion, epigastric pain, anorexia, chillness, constipation, burning micturition etc, and marked improvement of articular manifestation present in those who came in early stage of disease. Clinically there were marked reduction of spasm, restricted movement and clinical weakness of limbs, along with sense of well being and decreased ESR were noted.

Clinically the medicines were free from side effects. Pharmacological studies showed that **Ichchura Mooli Chooranam had significant Analgesic, Anti inflammatory and Anti pyretic activities Erivatha thylam showed significant Anti inflammatory action also**.

I have a plan for further studies. I would like to have a deeper knowledge on this disease. I intend to have more intensive knowledge on the dissertation subject by doing Ph.D.

Conclusion

CONCLUSION

All the cases were treated with **Ichchura Mooli Chooranam** (internal) and **Erivatha thylam** (external). Clinical results were found to be satisfactory.

The follow up of these patients for a period varying from 1-3 months showed moderate relief and improvement and a state of well being.

The medicines were free from adverse effects clinically.

So it is concluded that Santhuvatham is a connective tissue disorder with a chronic course that can be controllable in early diagnosis and treatment with **Ichchura Mooli Chooranam** and **Erivatha thylam** along with the diet and regimen stated in siddha medicine.

Annexure

ANNEXURE

Annexure – I

PREPARATION AND PROPERTIES OF THE TRIAL MEDICINES

ஈச்சுரமூலி சூரணம்

தேவையான சரக்குகள் :

ஈச்சுரமூலி வேர்

செய்முறை :

மேற்படி ஈச்சுரமூலிவேரை நன்றாக உலர்த்தி இடித்து சலித்து வஸ்திரகாயம் செய்து கொண்டேன்.

அளவு :

அரைக்கால் முதல் அரை வராகனெடை (1-2கிராம்)

அனுபானம் :

வெந்நீர்

உபயோகம் :

படர்புடைகள், நஞ்சுகள், வளி நோய்கள், இரைப்பு, இருமல், சுரம் போன்றவைகளைப் போக்கும். அன்றியும் மாட்டு நோய்களுக்கும் கொடுப்பதுண்டு.

ஆதார நூல் :

குணப்பாடம் (பொருட் பண்பு நூல்) முதற் பாகம்-மூலிகை வகுப்பு. ப.எண்.129

எறிவாதத் தைலம்

தேவையான சரக்குகள் :

பசுவின் நெய்
எள்ளெண்ணெய்
சிற்றாமணக்கெண்ணெய்
வேப்பெண்ணெய்

} வகைக்கு ½ ஆழாக்கு இவற்றை ஒன்றாக கலந்து கொள்ளவும்

கப்பு மஞ்சள் (அ) கொச்சி மஞ்சள்
நாட்டு வெண்காரம்
வசம்பு
வில்வவேர்ப்பட்டை

} இந்நான்கையும் தனித்தனி ஜலம் வார்த்திரைத்து எடுத்த விழுது தனித்தனி வகைக்கு நடுத்தரமான எலும்மிச்சை காயளவு

செய்முறை :

மேற்படி எண்ணெய்யில் மேற்படி சரக்குகளைக் கரைத்து அடுப்பேற்றி சிறு தீயால் எரித்து நீர் தண்டி திரள்பதத்திலிறக்கி இளஞ்சூட்டுடன் வடிகட்டி சீசாவில் பத்திரபடுத்தவும்.

உபயோகம் :

நாளொன்றுக்கு மூன்று முதல் நான்கு முறை மூன்று நாட்களுக்கு மேற்பூச்சாக பூசி நான்காம் நாள் சிறுபயிற்றை அரைத்து தேய்த்து ஸ்நானம் செய்ய எரிவாதம், உதருவாதம், நடுக்குவாதம், கடுப்புவாதம், வாதபிடிப்பு, கைகால்முடக்கு, கைகால் பிடிப்பு, கீல்வாதம் முதலிய பலவகை வாத ரோகங்கள் தீரும்.

ஆதார நூல் :

அகத்தியர் வைத்திய பிள்ளைத்தமிழ். பக்க எண்.138

Annexure – II

BIO CHEMICAL ANALYSIS

Preparation of the extract :

5gms of chooranam was weighed accurately and placed in a 250ml clean beaker. Then 50ml distilled water was added and dissolved well. Then it is boiled well for about 10minutes. 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.

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	**TEST FOR CALCIUM :** 2ml of the above prepared extract is taken in a clean test tube. Add 2ml of 4% Ammonium oxalate solution to it.	No White precipitate is formed	Absence of Calcium
2.	**TEST FOR SULPHATE :** 2ml of the extract is added to 5% barium chloride solution.	No white precipitate is formed	Absence of Sulphate
3.	**TEST FOR CHLORIDE :** The extract is treated with silver nitrate Solution.	No white precipitate is formed	Absence of Chloride
4.	**TEST FOR CARBONATE :** The substance is treated with concentrated HCL.	No brisk effervescence informed	Absence of Carbonate
5.	**TEST FOR STARCH :** The extract is added with weak iodine Solution.	No blue colour is formed	Absence of starch
6.	**TEST FOR IRON : FERRIC** The extract is treated with glacial acetic acid and potassium Ferro cyanide.	No blue colour is formed	Absence of Ferric Iron

7.	**TEST FOR IRON : FERROUS** The extract is treated with concentrated Nitric acid and ammonium thio cynate	No blood red colour is formed	Absence of ferrous Iron
8.	**TEST FOR PHOSPHATE :** The extract is treated with ammonium Molybdate and concentrated nitric acid.	No yellow precipitate is formed	Absence of phosphate
9.	**TEST FOR ALBUMIN :** The extract is treated with Esbach's reagent.	No yellow precipitate is formed	Absence of albumin
10.	**TEST FOR TANNIC ACID :** The extract is treated with ferric chloride reagent.	No blue black precipitate is formed	Absence of tannic acid
11.	**TEST FOR UNSATURATION :** Potassium permanganate solution is added to the extract.	It gets decolourised	Indicates of presence of unsaturated compound
12.	**TEST FOR REDUCING SUGAR :** 5ml of Bendict's qualitative solution is taken in a test tube and allowed to boil for 2mts and add 8-10 drops of the extract and again boil it for 2mts.	No colour change occurs	Absence of reducing sugar
13.	**TEST FOR AMINO ACID :** One or two drops of the extract is placed on a filter and dried it well after drying 1% Ninhydrin is sprayed over the same and dried it well.	Violet colour is formed	Indicates the presence of Amino acid

Inference :

The Bio chemical analysis showed that the Ichchura Mooli Chooranam had unsaturated compound and amino acid.

Annexure – III

PHARMACOLOGICAL ANALYSIS

ANALGESIC STUDY ON ICHCHURA MOOLI CHOORANAM

(In Albino rats by hot water bath method)

Aim :

To study the analgesic effect of Ichchura Mooli Chooranam.

Preparation of the test medicine :

200mg of Ichchura Mooli Chooranam was taken and dissolved in 10ml of milk. A does 1ml was given to each rat. This 1ml contains 20mg of test medicine.

Procedure :

Three groups of healthy albino rats on both sexes were selected. Each group having 3 rats, weighing between 100 to 150gm. The hot water bath was maintained at the temperature of 55°C.

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 5sec 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 100mg of body weight.

The second group was given paracetamol 20mg per 100mg of body weight and kept as standard.

The third group was given test medicine.

30 minutes after Medicine 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, standard and test medicine groups were tabulated and compared.

S. No.	Groups	Dose/100gm body weight	Initial reading in Seconds	After Medicines Administration	
				After ½hr	After 1hr
1	Water	2ml	2.1	2.5	2.5
2	Paracetamol	20mg/1ml	2	5.5	6.7
3	Ichchura Mooli Chooranam	20mg	2.2	3.4	5.25

Inference :

It is observed that Ichchura Mooli Chooranam has got significant analgesic action.

ACUTE ANTI-INFLAMMATORY STUDY ON ICHCHURA MOOLI CHOORANAM BY HIND PAW METHOD IN ALBINO RATS

Aim :

To study the Acute Anti-inflammatory effect of Ichchura Mooli Chooranam.

Preparation of test medicine :

200mg of Ichchura Mooli Chooranam was dissolved in 10ml of milk. A dose of 1ml was given to each rat. This 1ml contains 20mg of the test medicine.

Procedure :

Nine healthy albino rats weighing 100-150gm were taken and divided into three groups, each consisting of 3 rats.

First group was kept as control by giving distilled water of 1ml/100gm of body weight. The second group was given lbuprofen as dose of 20mg/100gm of body weight. The third group received the test medicine Ichchura Mooli Chooranam of 20mg/100gm of body weight.

Before administration of test medicine, the hind – paw volume of all rats was measured. This was done by dipping the hind paw up to tibio dorsal 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 drugs were administered orally. One hour later, a subcutaneous injection of 0.1ml of 1% (w/v) carragenin in water was made 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.

The results of control, standard and test medicine groups were tabulated and compared.

S. No.	Groups	Dose / 100gm body weight	Initial reading average	Final reading average	Mean diff	Inflan mation (%)	Inhibi tion (%)
1.	Water	2ml	0.55	1.4	0.85	100	---
2.	Ibu profen	20mg/1ml	0.55	0.85	0.3	35.2	64.8
3.	Ichchura Mooli Choornam	20mg	0.4	0.55	0.15	17.6	82.4

Inference :

It is observed that Ichchura Mooli Chooranam has got significant anti inflammatory action.

CHRONIC ANTI INFLAMMATORY STUDY ON ICHCHURA MOOLI CHOORANAM BY COTTON PELLETS GRANULOMA METHOD

Aim :

To study the chronic anti inflammatory activity of drug Ichchura Mooli Chooranam in the rats by cotton pellets implantation (Granuloma) method.

Preparation of test medicine :

200mg of Ichchura Mooli Chooranam was dissolved in 10ml of milk. A dose of 1ml was given to each rat. This 1ml contains 20mg of the test medicine.

Procedure :

Cotton pellets each weighing 10mg were prepared and sterilized in an autoclave for about one hour under 15 pounds atmospheric pressure. 9 albino rats weighing between 150 to 200mg were selected and were divided into 3 groups each containing 3 rats. Each rat was anaesthetised with ether and cotton pellets were implanted subcutaneously in the groin, two on each side.

From the day of implantation, one group of animals received Ichchura Mooli Chooranam in a dose of 20mg/100gm of body weight. The standard drug of animals received Ibuprofen in a dose of 20mg/100gm body weight.

On the eighth day the rats were sacrificed and the pellets were removed and weighed. Then they were put in an incubator at 60ºC – 80ºC and then the weight of the granulation tissue was determined separately.

Inference :

It is observed that Ichchura Mooli Chooranam has got significant anti inflammatory action.

Study of Chronic Anti inflammatory effect on Ichchura Mooli Chooranam by cotton pellet method

S. No.	Groups	Dose / 100gm body weight	Pellet weight	Pellet weight of the granuloma of drugs	Mean difference	Percentage Inflanmation	Percentage Inhibition
1.	Water	2ml	10mg	250mg	---	100	---
2.	Ibu profen	20mg/1ml	10mg	56mg	---	22.4	77.6
3.	Ichchura Mooli Choornam	20mg	10mg	105mg	---	42	58

Note : The test drug has got significantaction when compared with that of the standard drug.

ANTIPYRETIC STUDY OF
ICHCHURA MOOLI CHOORANAM

Aim :

To study the antipyretic activity of Ichchura Mooli Chooranam.

Procedure :

Group of six Albino rats were selected and divided equally into 2 groups. All the rats were made hyperthermic by subcutaneous injection of 12% suspension of yeast at a dose of 1ml/100gm of the body weight. 10 hours later one group of animals were given the test medicine by gastric tube at a dose of 20mg/1ml and the second group received only distilled water at a dose of 1ml.

The mean rectal temperature for the two groups were recorded at 0' hour, 1½ hours, 3 hours and 4½ hours after the drug administration. The difference between the mean temperature of the control group and that of the other group is measured.

Tabulation of results obtained

S. No.	Drug	Dose / 100gm body weight	Initial temp	After 1½ hour	After 3 hours	After 4½ hours	Remarks
1.	Water	1ml	36.0	36.0	36.0	37.0	38.0
			37.0	37.0	38.0	39.0	
2.	Ichchura Mooli Choornam	20mg	37.0	37.0	36.0	35.0	35.0
			37.0	37.0	36.0	35.0	
3.	Paracetamol	20mg/1ml	37.0	37.0	36.5	35.0	34.5
			38.0	37.0	36.5	34.0	

Inference :

It is observed that Ichchura Mooli Choornam has got significant antipyretic action.

ACUTE ANTI INFLAMMATORY ACTION ON ERIVATHA THYLAM

Aim :

To study the acute anti – inflammatory action on Erivatha thylam by hind paw method in albino rats.

Procedure :

Six albino rats weighing between 100-150gms were selected and divided into two groups each containing three rats. To the first group distilled water was given and kept as a control. Before the application of medicine, the hind paw volumes of all rats were measured. This was done by dipping the hind – paw upto the tibio dorsal junction in mercury plethysmography.

Subcutaneous injection of 0.1ml of 1% of carrogenin (w/v) in water was made into plantar surface of both the hind-paw of each rat. To the test group (Erivatha Thylam) was applied topically frequently over the inflammed surface in a thin layer. To the control group, no drug was applied over inflammed surface. One and half an hours after injection, the hind – paw volume was measured once again. The difference between the initial and final volume would show the amount of inflammation. Taking the volume in the control group as 100% of inflammation, the anti inflammatory effect of the group is calculated.

Inference :

It is observed that Erivatha Thylam has got significant anti inflammatory action.

Study of Acute Anti-Inflammatory effect by hind paw method using Erivatha Thylam

S. No.	Name of drugs / groups	Dose / 100gm body weight	Initial Reading average	Final Reading average	Mean difference	Percentage Inflanmation	Percentage Inhibition
1.	Water	2ml	0.55	1.4	0.85	100	---
2.	Ibu profen	20mg/1ml	0.55	0.85	0.3	35.2	64.8
3.	Erivatha Thylam	Ext	0.87	1.15	0.28	32.9	67.1

Note : The test medicine has got significant action when compared with that of the standard drug.

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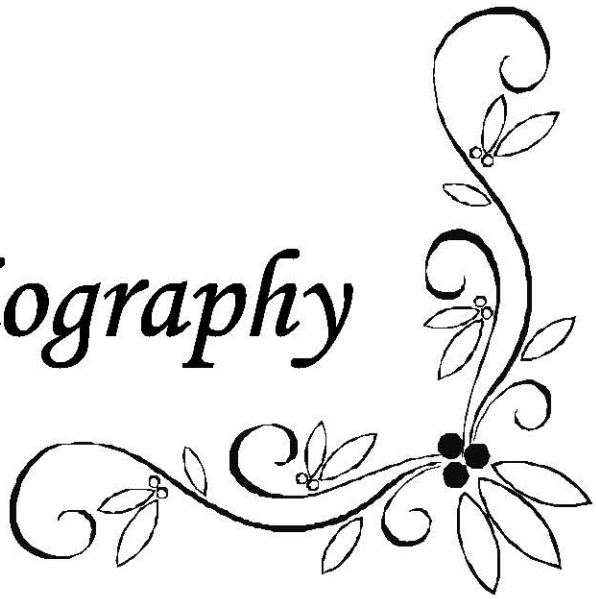

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CASE SHEET PROFORMA

Government Siddha Medical College & Hospital Palayamkottai

Department of Post Graduate – Maruthuvam (pothu) case sheet proforma for "Santhu Vatham"

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

Complaints and duration :

History of present illness :

History of previous illness :

Personal History :

Family History :

Habits
(Veg/ non-veg/ mixed diet /
smoker/ alcoholic / tobacco – chewer) :

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	:			
7.	Blood pressure	:	14.	Oedema	:
8.	Respiratory Rate	:	15.	JVP	:
			16.	Engorged veins	:

Congenital anomaly [if any] :

Miscellaneous :

In Siddha aspects

Nilam		**Paruvakalam**	
Kurinchi	:	Kar	:
Mullai	:	Koothir	:
Marutham	:	Munpani	:
Neithal	:	Pinpani	:
Palai	:	Ilavenil	:
		Mudhuvenil	:

IymPorigal (sensory organs)		**Kanmethiriyam (motor organs)**	
Mei	:	Kai	:
Vai	:	Kal	:
Kan	:	Vai	:
Mooku	:	Eruvai	:
Sevi	:	Karuvai	:

Mukkutram

Vatham

Piranan :

Abanan :

Vianan :

Uthanan :

Samanan :

Nagan :

Koorman :

Kirugaran :

Devathathan :

Dhananjeyan :

Pitham

Anarpitham :

Ranjagam :

Sathagam :

Alosagam :

Prasagam :

Kapham

Avalambagam :

Kilethagam :

Tharpagam :

Pothagam :

Santhigam :

Ezhu Udalkattugal

Saram :

Senneer :

Oon :

Kozhuppu :

Enbu :

Moolai :

Sukkilam/suronitham :

Envagai Thervugal

Naadi :

Sparism :

Naa :

Niram :

Mozhi :

Vizhi :

Malam :

Moothiram :

Neerkuri

Niram :

Edai :

Manam :

Nurai :

Enjal :

Neikuri

IN MODERN ASPECTS

History

Pain	:	HT	:
Fever	:	DM	:
Trauma	:	Rheumatic fever:	
Early morning stiffness	:	PT	:
Fracture	:	Br.asthma :	
Skin changes	:	Allergy	:
Raynaud's phenomenon	:	Surgery	:
Venereal exposure	:	Others (if any)	:

Inspection

Gait	:
Skin changes	:
Swelling	:
Muscle wasting	:
Attitude	:
Deformity	:
Restriction	:
Mobility	:
Pain on usage	:

Palpation

Tenderness	:
Increased warmth	:
Swelling	:
Crepitus	:
Stability	:
Resisted active Movements	:

Examination of Joints & Connective Tissue

Sl. No.	Joints	Pain		Swelling oedema		Redness		Warmth		Crepitus		Stiffness		Restricted movements (or) loss of function		Deformity subluxation contractions ulcers		Muscle spasm, wasting weakness malarise		Subcutaneous nodules cystacalosities (Bony enlargement)	
		BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	Inter phalangeal joint																				
2	Wrist-metacarpo phalangeal joint																				
3	Elbow																				
4	Shoulder acromioclavicular																				
5	Ankle-Subtarsal Midtarsal																				
6	Metatarso phalangeal joint																				
7	Phalanges																				
8	Knee joint																				
9	Spine-Cervical, Thoracic, Lumbar, sacroiliac joint																				
10	Mandibular joint																				
11	Sterno clavincular joint																				
12	Costo vertebral joint																				

LABORATORY INVESTIGATIONS

1.	**Blood**	**:**
	TC	:
	DC	:
	ESR	:
	HB%	:
	Sugar	:
	Cholesterol	:
	Uric acid	:
	Urea	:
2.	**Urine**	**:**
	Albumin	:
	Sugar	:
	Deposits	:
3.	**Stools**	**:**
	Ova	:
	Cyst	:
	Occult blood	:
4.	**Immunological tests**	**:**
	RA factor	:
	Anti Nuclear Antibody	:
	Aso Titre	:
5.	**Radiographic Evaluation**	**:**
6.	**ECG**	**:**
7.	**Serological test for syphilis**	**:**
8.	**Synovial Fluid Analysis**	**:**
9.	**Arthrography**	**:**
10.	**Sputum for AFB**	**:**

Government Siddha Medical College & Hospital

Palayamkottai

Department of postgraduate – Maruthuvam (Pothu)

Discharge case sheet – "Santhu Vatham"

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

Clinical Features

During admission	During discharge

Place :

Date :

Government Siddha Medical College & Hospital
Palayamkottai

Department of Post Graduate – Maruthuvam (pothu)

case sheet proforma for "Santhu Vatham"

O.P. No.	:	Treatment starting date	:
Name	:	End of the Treatment date	:
Age/Sex	:	No. of days treated	:
Occupation	:	Diagnosis	:
Income	:	Medical Officer	:
Address	:		

Complaints and duration :

General Examination :

Congenital anomaly [if any] :

Miscellaneous :

In Siddha Aspects

Nilam	:	Paruvakalam	:
Iymporigal (Sensory organs)	:	Kanmenthiriyam (Motor organs)	:
Mukkutram	:	Elu udal kattugal	:
Envagai thervugal	:	Neerkuri	:
Neikuri	:		

In Modern Aspects

History

Pain	:	HT	:
Fever	:	DM	:
Trauma	:	Rheumatic fever	:
Early morning stiffness	:	PT	:
Fracture	:	Br.asthma	:
Skin changes	:	Allergy	:
Raynaud's phenomenon	:	Surgery	:
Venereal exposure	:	Others (if any)	

Inspection :

Palpation :

LABORATORY INVESTIGATIONS

1.	**Blood**	**:**
	TC	:
	DC	:
	ESR	:
	HB%	:
	Sugar	:
	Cholesterol	:
	Uric acid	:
	Urea	:
2.	**Urine**	**:**
	Albumin	:
	Sugar	:
	Deposits	:
3.	**Stools**	**:**
	Ova	:
	Cyst	:
	Occult blood	:
4.	**Immunological tests**	**:**
	RA factor	:
	Anti Nuclear Antibody	:
	Aso Titre	:
5.	**Radiographic Evaluation**	**:**
6.	**ECG**	**:**
7.	**Serological test for syphilis**	**:**
8.	**Synovial Fluid Analysis**	**:**
9.	**Arthrography**	**:**
10.	**Sputum for AFB**	**:**

ROOTS OF ICHCHURAMOOLI

ICHCHURAMOOLI CHOORANAM

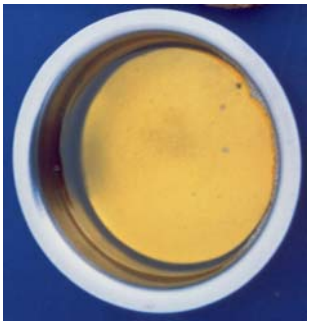
INGREDIENTS OF ERIVATHA THYLAM

COW'S GHEE

NEEM OIL

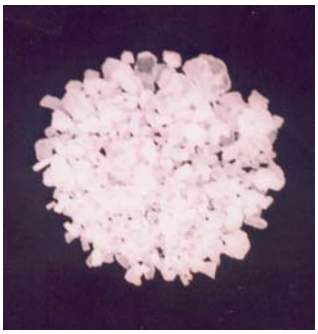
CASTOR OIL

GINGELY OIL



VASAMBU

VENGARAM

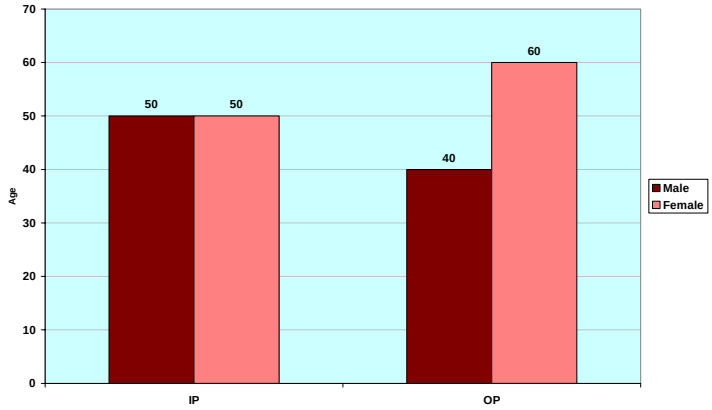


VILVAVER

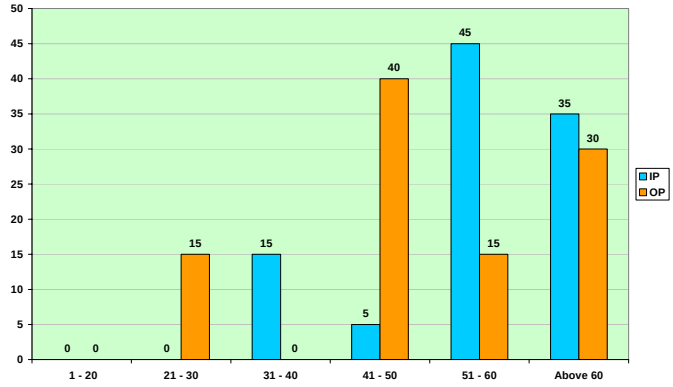
KAPPU MANJAL

ERIVATHA THYLAM

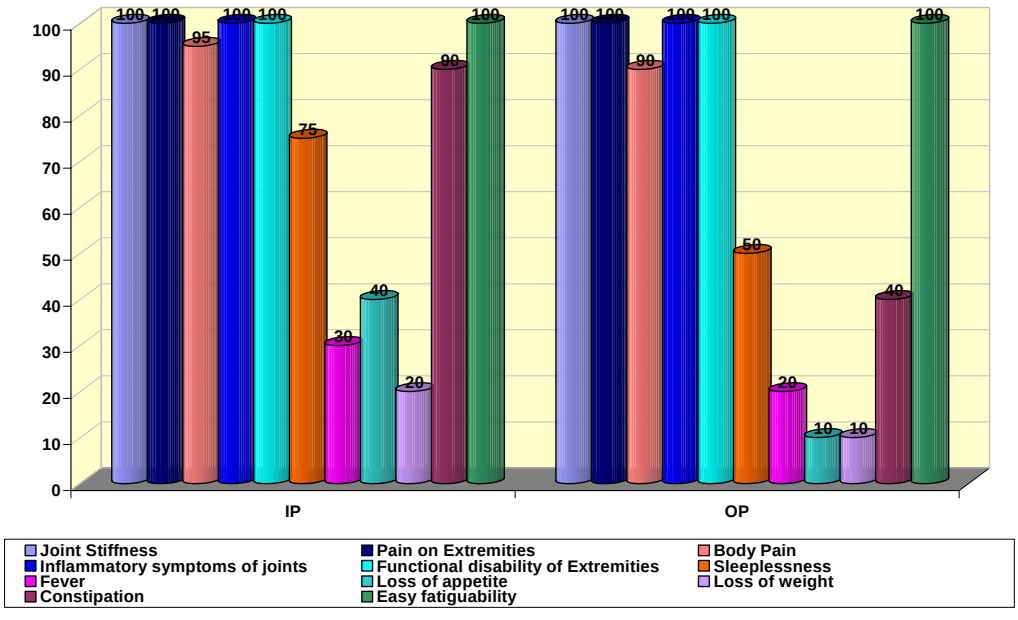
GRAPH SHOWING SEX DISTRIBUTION



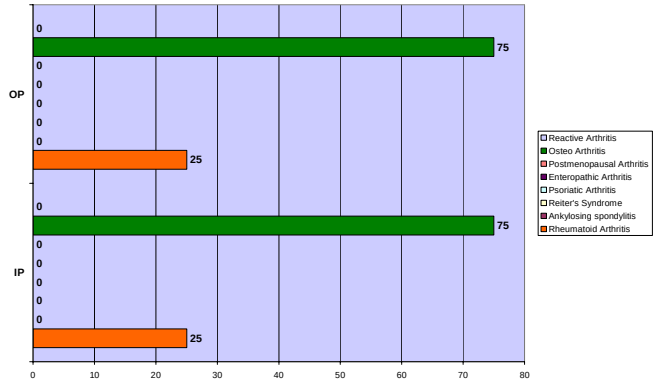
GRAPH SHOWING AGE DISTRIBUTION



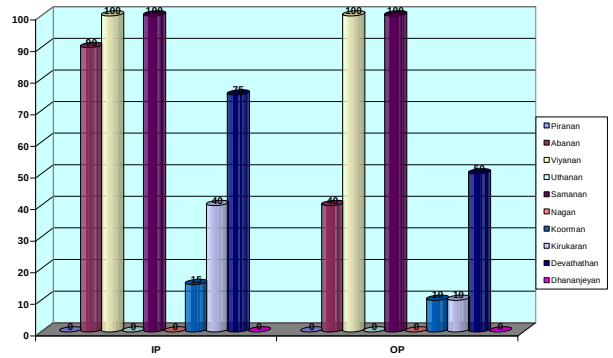
GRAPH SHOWING CLINICAL MANIFESTATION



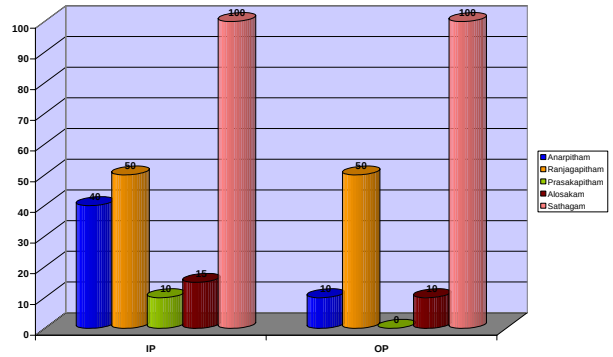
GRAPH SHOWING INCIDENCE OF POLY ARTHRITIC CONDITIONS



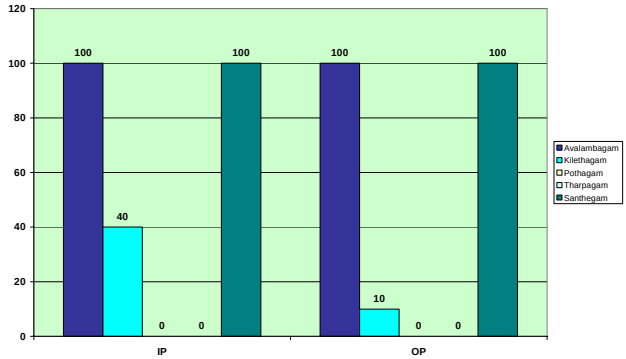
GRAPH SHOWING DISTURBANCES IN VATHA



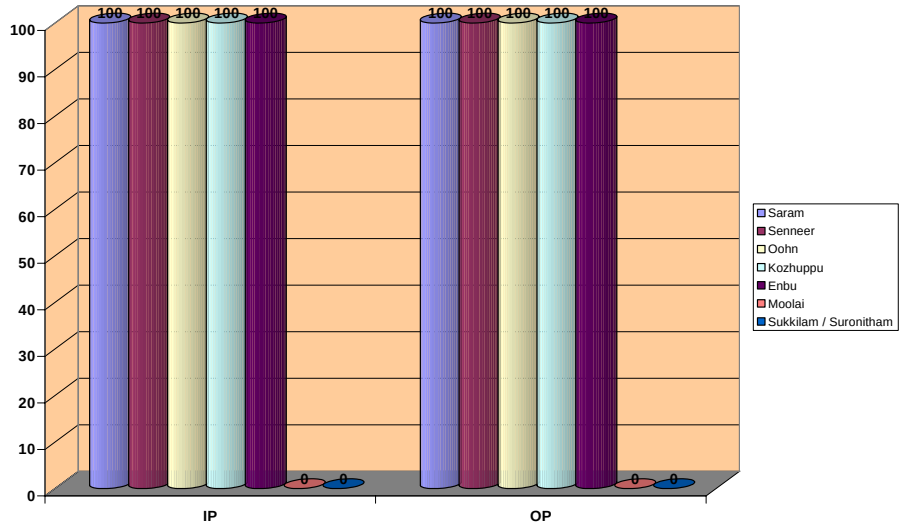
GRAPH SHOWING DISTURBANCES IN PITHA



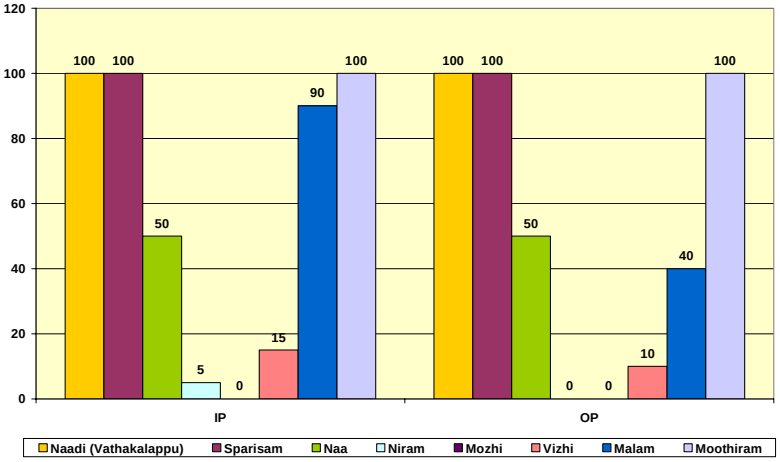
GRAPH SHOWING DISTURBANCES IN KAPHA



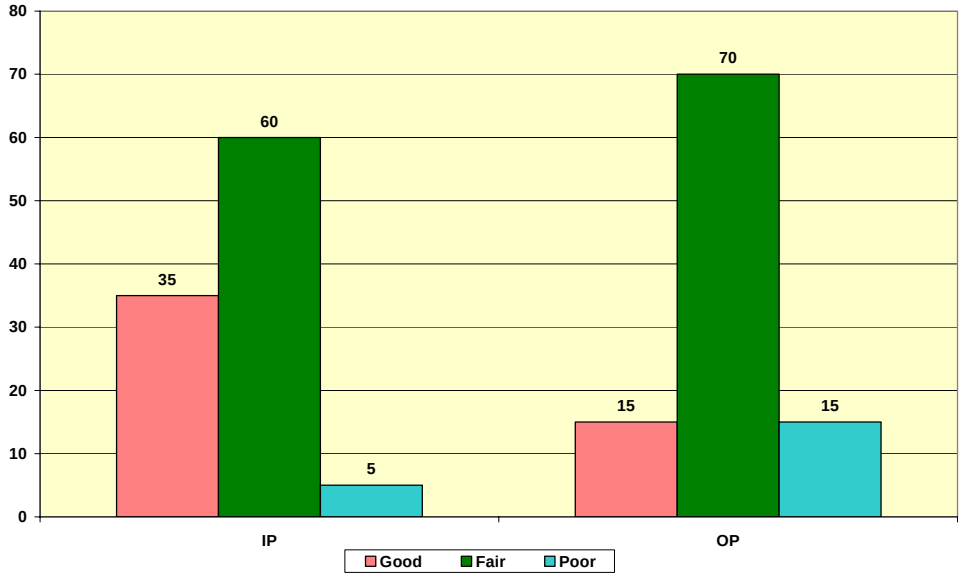
GRAPH SHOWING CONDITIONS OF UDAL THATHUKKAL



GRAPH SHOWING CONDITIONS OF ENVAGAI THERVUGAL



GRAPH SHOWING GRADATION OF RESULTS

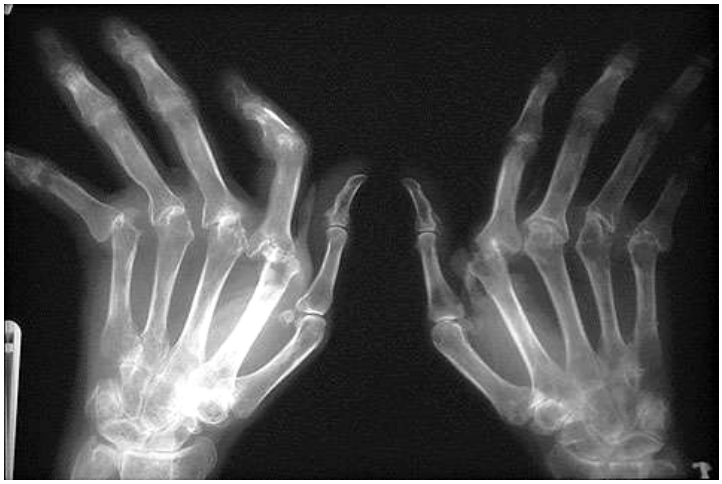


X-RAY BOTH HANDS AND WRIST JOINTS – AP VIEW

RHEUMATOID ARTHRITIS

I.P. PATIENT : NATARAJAN – 67 / MALE

I.P. NO. 778



X-RAY – KNEE JOINT – AP VIEW

I.P. PATIENT : LAKSHMIAMMAL – 60 / FEMALE

I.P. NO. 777