

**A STUDY ON
UDHIRA VATHA SURONITHAM**

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CERTIFICATE

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*“Lead, kindly light, amid the encircling gloom,
Lead thou me on,
The night is dark and I am far from home,
Lead thou me on,
Keep thou my feet, I do not ask to see
The distant scene; one step enough for me.”*

- **Cardinal Newman**

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INTRODUCTION

Health is the ideal state of mankind. Without good health we can hardly expect success in any walk of life. The dimensions of life-its length, its breadth and its depth are diminished when health gives way to disease. Health and disease are related by being at opposite extremes of the scale. Hence thinking positively about health will justify a person overlooking the dangers of disease.

Modern life beset with tensions and anxieties continues to crush the individuals with increasing number of diseases and the expected quality of life with harmony and peace seems to be far from reality. Medical science during the last century has kept abreast of civilization progress and continues in today's jet age to make spectacular advances. Even though development in medicine have virtually wiped out many diseases, there are many diseases that are yet to be answered. Thus the frustrated people are moving towards the alternative system of medicine to find efficacious cure.

Siddha system of medicine which has survived through centuries, emphasize on positive health. Their medical education was a mysterious process of initiation and apprenticeship in the top, where there were two wings concentrating on studying the diseases and patients by methods of physical examination and intensive observation. The one we may call

scientists and the other, practitioners. The distinctive feature is the thoroughness with which the theoretical and scientific knowledge are fused with what experience teaches in the practical responsibility of taking care of human beings.

This ancient heritage, brilliant in conception, exhaustive in its systemization and precise in its technique of practice, strikes that dearrangement of 3 humors,

- Vatham
 - Pitham
 - Kabham
- } will produce disease.

The disease **‘Udhira Vatha Suronitham’** is a chronic scourge which writes the obituary of joints and presents a nightmarish experience to the patients. Hence the author selected the disease for the present study with the trial medicines, to combat it successfully and keep it subdued and to improve the quality of the victims, afflicted by this malady.

This is a small effort on my part in this regard. I have just touched the fringe of several esoteric siddha medicines which would show the worth, value, rare insight and foresight of the siddhars. Further, study in this regard has to be continued in the course of time with the Almighty’s grace.

AIM AND OBJECTIVES

The knowledge of preserving one's health sound and thus prolonging life is said to have descended in this modern technological world. The prolonged and uncertain course of the disease "**UDHIRA VATHA SURONITHAM**" calls for special emphasis and intended the author to bring an ideal treatment for the disease.

Medicine, as everyone knows is not a mere science, but is an art as well. It is the only want of men with such knowledge of science and its practical practice with efficacious cures on hand.

OBJECTIVES:

- To collect various information about "**UDHIRA VATHA SURONITHAM**" and to expound the characteristics of aetiology, premonitory symptoms, homologatory signs and pathogenesis based on both siddha and modern aspects.
- To access the prevalence of the disease with reference to age, sex, socioeconomic status, family history etc.
- To correlate the etiology, classification, signs and symptoms of "Udhira Vatha Suronitham" in siddha aspect with Rheumatoid Arthritis in Modern science.
- To propagate the views of siddhars, in terms of scientific proofs to the needy world.

- To highlight the siddha diagnostic principles in diagnosing the disease.
- To evaluate the biochemical analysis, pharmacological analysis, acute toxicity study of trial medicine.
- The study was designed to examine the effect of **“KIRUBAGARA SHANMUGA CHENDURAM”** given internally along with the external application of oil, **“VATHATHIRKKU POOSA NOCHI ENNEI”**.
- The study also includes the use of modern diagnostic parameters in studying the progress of the patients.

ABSTRACT

The author has selected the disease “**UDHIRA VATHA SURONITHAM**” for the dissertation subject, because it presents a major challenge to the clinical judgement. The chronicity, variability, tendency to exacerbate, unknown pathogenesis, variable response to specific treatment and myriad effects upon the patient’s life style, family relationship, self image and employability combine to complicate the therapeutic equation.

The inscriptions mentioned in the siddha literatures about this disease and therapeutics impressed the author and made her to correlate the disease with “**RHEUMATOID ARTHRITIS**” as mentioned in modern medicine.

The diagnosis of disease was done by using siddha parameters like Mukkutra Verupadugal, Envagai Thervugal, Kaalam, Thinai and Modern Parameters. 20 In-Patients and 20 Out-Patients of both sexes were selected for the study and the trial drug, “**KIRUBAGARA SHANMUGA CHENDURAM**” was administered at a dose of 130mg with Chukku, Milagu, Omam Choornam and Murungaipattai Charu as vehicle which would effect a speedy recovery, (Ref: Pathartha Guna Vilakkam – Thathu Seeva Vaguppu Page No.55) with the external

application of Oil, Vathathirku Poosa Nochi Ennei (Ref: Vaithiya Thirattu, Page No.4)

The trial drugs were subjected to Biochemical and Pharmacological analysis. Further Acute Toxicity study has been done to rule out any untoward effects.

After the administration of drug with dietic restrictions, majority of cases showed good clinical improvement with speedy recovery.

REVIEW OF LITERATURE

SIDDHA ASPECTS

In siddha system of medicine, the physiological function in human system is mediated by three substances viz, Vatham, Pitham, Kabham. These three humors maintain the upkeep of the human body through their combined functioning. When deranged, they bring about diseases peculiar to their influence. In turn, they vitiate other structural and functional elements of living body known as Udal Thathus.

VATHAM:

Vatham is the primal constituent of the living body whose structure is **Vayu + Agayam**. It maintains the cohesive unity of the body as a whole. It is unconditioned, absolute and all pervading in its nature and forms the life force of all human beings.

“பொற்றா மரையான் புனைமெய் யரண்காக்கும்
பொற்றா மரையான் புகல்வதென் பொற்றாம்
வளவிலே யாக்குரம்பை மன்னென்ன மன்ன
வளவிலே யாக்கும் வளி.”

- தேரையர் யமக வெண்பா.

Vatham is being hailed as the king, who rules the fort (Body) and enables the dwelling of the citizen (Uyir) in the fort. Hence Theraiyar lauds Vatham as the prime force.

CHARACTERS OF VATHAM:

- Hardness
- Dryness
- Lightness
- Coldness
- Mobility
- Subtleness

OPPOSITE QUALITIES OF VATHAM:

- Softness
- Unctuousness
- Heaviness
- Hotness
- Stability
- Solid

DWELLING PLACES OF VATHAM:

“நாமென்ற வாதத்துக்கு இருப்பிடமே கேளாய்
நாபிக்குக் கீழென்று நவில வாகும்.”

“அறிந்திடும் வாதம் அடங்கு மலத்தினில்.”

“நெளிந்திட்டவாதம் பானத்தை பற்றி
நிறைந்திடையைச் சேர்ந்துநதிக்குக் கீழே நின்று
குளிர்ந்திட்ட மூலத்தூடெழுந்து காம
கோடியிடையைப் பற்றியெழுங்குணத்தைப்பாரே.”

- நோய் நாடல் நோய் முதல் நாடல், பாகம் - I.

Abaanan, Idakalai, Undhiyin keel Moolam, Pelvis, Bones,
Muscles, Nerves, Ear, Joints, Skin, Hairfollicles, Stools.

FUNCTIONS:

“ஓழுங்குடன் தாது ஏழ் மூச்சோங்கி இயங்க
எழுச்சிபெற எப்பணியுமற்ற - எழுந்திரிய
வேகம் புலன்களுக்கு மேவச் சுறுசுறுப்பு
வாகளிக்கும் மந்தர்க்கு வாயு.”

- மருத்துவத் தனிப்பாடல்

- Giving briskness
- Respiration
- Maintenance of body and mind in a balanced state
- Regulation of reflexes (14 urges)
- Enhancement of functioning of seven Udal Thathukkal
- Protection and strengthening of sense organs.

DISTURBANCE IN VATHAM:

- Body ache
- Pricking pain
- Nerve weakness
- Shivering
- Numbness in feet
- Joint pain
- Cramps in calf muscles
- Increased thirst
- Weakness of organs

- Breaking pain in the knee joints
- Pain in the leg and thigh
- Unable to do flexion and extension of the limbs
- Pilo-erection
- Dryness
- Polydypsia
- Excess salivation
- Anuria and constipation
- Astringent taste perception in all food
- Darkness of skin, eyes and urine.

TYPES OF VATHAM:

Vatham is not mere wind, but also that which causes motion, energy and sensation of every cell in the body. It is further divided into ten types.

i) PRAANAN:

Lies in the chest. It regulates respiration and digestion.

ii) ABAANAN:

This is responsible for expulsion of faeces, urine, sperm, ova and also menstrual outflow. It also spreads the nutrients of the digested food all over the body for its utilization.

iii) **VIYAANAN:**

It pervades all over the body. It controls voluntary and involuntary movements, sensory perception. It distributes the energy of the assimilated food to various parts of the body.

iv) **UDHAANAN:**

Regulates speech. It induces the physiological reflexes such as vomiting, hiccup, cough, sneezing etc.

v) **SAMAANAN:**

It controls digestion. Acts as activating factor for the other vayus.

vi) **NAAGAN:**

It is responsible for the intelligence quotient of an individual, opening and closure of eyelids.

vii) **KOORMAN:**

It is responsible for yawning, closure of eyelids, lacrimal secretion and vision.

viii) **KIRUKARAN:**

It resides in tongue and is responsible for salivary secretion, nasal secretion, hunger, sneeze, cough etc.

viii) **DEVATHATHAN:**

It causes fatigue, angry and ocular movements.

ix) **DHANANJEYAN:**

It causes bloating of the body after death and escapes after third day of death.

VATHAM & SUVAIGAL:

Siddha system explains about six types of tastes, which are formed by the combination of two boothams. They are sweet, salt, sour, bitter, pungent and astringent. Some tastes will aggravate vatham and some tastes will neutralize vatham. Further if the thodam (vatham) is increased, it will cause an alteration of taste in tongue, which is appreciable by the patient. So suvaigal holds a separate place in diagnosing.

“மகத்திய புளிப்பு மீறில் வந்திடும் வாதமாகும்”

- அகத்திய நாடி.

“வாதமே புளிப்பு வேண்டும் வன்பித்தம் கசப்பு வேண்டும்”

- இரத்தன சுருக்க நாடி.

“புளிதுவர் விஞ்சுகங்கறி யாற்பூரிக் கும்வாதம்”

The above versions denotes that sour, astringent and pungent tastes hold its part in raising vatham.

“வாதம் மேலிட்டால் மதுரம் புளி உப்பு”

- கண்ணுசாமியம்.

Exaggerated vatham can be neutralized by tastes like sweet, sour

and salt. The basic concept behind this is, among the panchabootham, Vin and Vayu forms vatham. So tastes formed by other boothams are advisable to neutralize it. It is noted that, in the formation of sweet, sour and salt tastes vayu and vin doesn't takes part.

VATHA DISEASES:

“வாதமலரது மேனி கெடாது”

- தேரையர்.

“ஆனதோர் வாத நாடி இடர்ந்துற வலுவாய் நிற்கில்
ஊனமள முடலில் நோய்களுலாவியே நிற்கும்.”

“வாதமே கதித்தபோது வாயுவு மெழும்புங் கண்டீர்
வாதமே கதித்தபோது வாயுவு வந்திடுஞ் சன்னி தேரஷம்
வாதமே கதித்தபோது வந்திடும் வியாதி மேலும்
வாதமே கதித்தபோது வல்லுடல் மெலிந்து கொல்லும்.”

- சிகிச்சா ரத்ன தீபம்.

Which depicts that derangement of humor vatham, will produce many hazardous symptoms in bringing down the normal healthy condition of the body.

Yugi Munivar, classified Vatha diseases into 80 types, while naming them he mentioned 85 types.

“என்னவே வாதமது எண்பதாக்கும்
ஏற்றமளம் பேருடைய வெழிலைக் கேளாய்”

- பாடல் 246.

AETIOLOGY:

The various causative factors for vatha diseases are summarized below.

ACCORDING TO YUGI VAIDHYA CINTHAMANI:

“என்னவே வாதந்தா னெண்பதாக்கும்
இகத்திலே மனிதர்களுக் கெய்யுமாறு
பின்னவே பொன்னதனையே சேரஞ்செய்து
பெரியோர்கள் பிராமணரைத் தூடனித்தும்
வன்ன தேவச் சொத்தில் சேரஞ்செய்து
மாதாபிதா குருவை மறந்த பேர்க்கும்
கன்னவே வேதத்தை நிந்தை செய்தால்
காயத்திற் கலந்திடுமே வாதந்தானே.”

- பாடல் 243.

Frittering away gold, blaspheming elders, holymen and Vedas, obsession of temple property, obliviousness of parents, teachers and god all leads to vatha diseases.

“தானென்ற கசப்போடு துவர்ப் புறைப்பு
சாதகமாய் மிஞ்சுகிலும் சமைத்த வண்ணம்
ஆனென்ற வானினது புசித்த லாலும்
ஆகாயத் தூறலது குடித்தலாலும்
பானென்ற பகலுறக்க மிராவிழிப்பு
பட்டினியே மிகவறுதல் பார மெய்தல்
தேனென்ற மொழியார் மேற்சிந்தையாதல்
சீக்கிரமாய் வாதமது செனிக்குந் தானே.”

- யுகி வைத்திய சிந்தாமணி, பாடல் - 244.

Increased intake of food rich in bitter, astringent and pungent taste, intake of stale food, drinking rainwater, day time sleep and awakening at night, undue starving, lifting heavy objects and increased sexual passion will produce vatha diseases.

“பகரவே வாதமது கோபித் தப்போ
 பண்பாக பெண்போக மதுதான் செய்யில்
 நகரவே வெகுதூரவழி நடக்கில்
 நளிர்நான கற்றுமே பனிமேற்பட்டால்
 மிகரவே காய்கள் கனிகிழங்கு தன்னை
 மிகவருந்தி மீறியே தயிர்தான் கொண்டால்
 முகரவே முதுகெலும்பை முறுக்கி நொந்து
 முழங்காலும் கணைக்காலும் கடுப்பு உண்டாமே.”

- யூகி வைத்திய சிந்தாமணி, பாடல் - 285.

During vitiation of vatham, indulgence in sexual act, walking for long distance, exposure to dampness and cold, increased intake of fruits, vegetables, curd will affect vertebral joints, knee joint and ankle joint.

ACCORDING TO PARARASA SEKARAM:

“தொழில் பெறுகைப்புக் கார்த்தல், துவர்த்தல் விஞ்சினுஞ் சேறும்
 பழையதாம் வரகு மற்றறைப் பைந்தினை யருந்தி னாலும்
 எழில் பெறப் பகலுறங்கி இரவினி லுறங்கா ததாலும்
 மழைநிகர் குழலினாலே வாதங் கோபிக்குங் கானே.”

- பாடல் 232.

- Intake of food with excessive bitter and astringent taste
- Intake of stale food
- Daytime sleep and awakening at night will produce Vatha diseases.

“காணவே மிகவுண்டாலும் கருதுபட்டினி விட்டாலும்
 மானனை யார்கண் மேகமறக்கினு மிகுந்திட்டாலும்
 ஆணவ மலங்க டம்மை யங்ஙனே விடாத தாலும்
 வானுதன் மடநல் லாளே வாதங் கோபிக்கும் கானே.”

- பாடல் 233.

Excessive intake of food, starvation, increased sexual passion, anger, greed plays a vital role in the causation of vatha diseases.

“பாறினிற் பயப்பட் டாலும் பலருடன் கோபித் தாலும்
காரெனக் கருகி யோடிக் கழுமரத் துரத்தி னாலும்
ஏற்பெறு தனது நெஞ்சின் மிகத்துக்க மடைந்திட் டாலும்
பாறிய காற்றி னாளும் படரினும் வாதங் காணும்.”

- பாடல் 234.

Fear, anger, excessive running, stress, exposure to wind produces vatha diseases.

“காலங்கண்மாளி யுண்ணுங் காறியத் தாலுந்தண்ணீர்
சாலவே யருந்தி னாலுஞ் சந்தியி லுட்காந் தாலும்
கோலமாம் புளிப்பு நெய்யைக் குறைவற வருந்தி னாலும்
வாலவாந் முலைநல் லாளே வாதமுற் பவிக்குங் காணே.”

- பாடல் எண் 235.

Irregular food habits, increased intake of food rich in sour taste, ghee will bring out vatha diseases.

வாதநோய்களின் இயல்பு: (characteristics of vatha diseases)

“காண்பா வாதமீறில் கால்கைகள் பெருத்து நோவும்
பூண்பா குடல் புரட்டும் மலசலம் பொருமிக் கட்டும்
ஊண்பா குளிர்நங் காய்ச்சல் உடம்பெல்லாம் குத்து வாய்வு
வீண்பா குதமிறுக்கும் வியர்வையும் வேர்க்கும் தானே.”

- அகத்தியர் வைத்திய காவியம் 1500.

“மேவிய வாதஞ் செய்யும் குணந்தனை விளம்பக் கேளாய்
தாவியே வயிறு மந்தஞ் சந்துகள் பொருந்து நோவாஞ்
சீவிய தாது நாசஞ் செறுத்துடன் சிறுநீர் வீழும்
காவியங் கண்ணினாளே மலமது கருகி வீழும்”.

- அகத்தியர் ஆயுள் வேதம்.

“வாதத்தின் குணமே தென்னில் வயிறது பொருமிக் கொள்ளும்
தாதுகளுலர்ந்து கை கால் சந்துக்கள் கடுப்பு தோன்றுந்
தீதற்றுச் சிறுநீர் தானுஞ் சிறுத்துடன் கடுத்து வீழும்
போதுற்ற வாதமென்று புகன்றனர் முனிவர் தாமே”.

- அகத்தியர் ஆயுள் வேதம்.

“எறிய நல்வாத மெறிக்குங் குணங்கேளு
குறியென கைகால் குளைச்சு விலாச்சந்து
பறியென நொந்துடற் பச்சைப் புண்ணாகுமே
புண்ணாய் வலிக்கும் பெருகும் குடலோடித்
தண்ணை மலத்தைத் தம்பிக்கும் போக்காது
ஒண்ணான ஆசனம் உறவே சரக்கிடும்
பண்ணார் குளிர்சீதம் பருத்திடும் வாதமே”.

- திருமூலர் வைத்தியசாரம்.

“சந்திரவாத முடம்பு குளிர்ந் தெழுந்தே நடுக்குஞ் சீதவாய் வாம்
முந்திய குத்திசிவந்து சந்துகள் தோறுங் குடைந்து மொளிகள் வீங்கும்
வுந்திய தொந்த வாதம் நரம்புகளெல்லா மிசிந்து வலம் வீடாது
ஆந்து அவ்வாகு வாதம் வீக்கமுண்டா முடலிற்றி மிருண்டாமே.”

- தேரையர் வாகடம்.

“வாதம் வந்துற்ற போது வயிறது பொருமி கொள்ளும்
தாதவிற்திடுப்பு கைகால் சந்துகள் கடுப்புத் தோன்றும்
சீதொரு மலமு நீருந் சிறுத்ததுடன் கடுத்து விழ
மாதவமரை மேல் வந்த வாதத்தின் குணமிதாமே.”

- யூகி முனிவர் பெருநூல் வைத்திய காவியம் 1000.

From the above poetic versions, it is clear that the major characters of vatha diseases are joint pain, swelling, difficulty in walking, constipation, burning micturation, oliguria, dyspnoea, flatulence, fever, fatigue, giddiness, nerve weakness etc.

EXAGGERATED VATHAM:

Increase in vatham produces,

- Body pain
- Joint pain
- Astringent taste perception in all food
- Dark coloured stools and urine
- Difficulty in movement
- Constipation
- Distress
- Fatigue

DECLINED VATHAM:

Decrease in vatham produces,

- Body pain
- Low pitched voice
- Exhaustion
- Low intelligent quotience
- Giddiness
- Syncope
- Symptoms of increased Kabham.

UDHIRA VATHA SURONITHAM

“Udhira Vatha Suronitham” is one among the 80 types of vatha diseases explained by yugi munivar.

The term ‘Udhiram’ and ‘Suronitham’ are synonyms and indicates blood. The main pathology lies in the blood indicating it as an autoimmune disease.

“Udhira Vatha Suronitham”, a condition that affects joints, with symptoms of pain and swelling in smaller joints, anorexia and fatigue.

CLINICAL FEATURES OF “UDHIRA VATHA SURONITHAM”:

In Yugi vaidhya cinathamani,

“வைகிதமாய்க் கணைக்காலு முழுங்கால் தானு
மற்கடஞ் சந்துபுற வடியும் வீங்கிச்
செய்கிதமாஞ் சிறுவிரல்கள் மிகவும் நொந்து
சிந்தைதடு மாறியே சலிப்புண் டாகும்
பைகிதமாம் பயித்தியத்தில் வாத மிஞ்சிப்
பாரமன யுற்பவித்து அழலுண் டாகும்
உய்கிதமாம் அசனமது தானும் வேண்டா
உதிரவாதச் சுரோணிதத்தி னுணர்ச்சியாமே.”

- பாடல் 319.

The above poetic version depicts the following clinical features,

- Swelling of ankle and knee joints
- Swelling of the hind foot
- Pain in minor joints of hand and feet
- Confused state of mind

- Fatigue
- Increased production of heat in the body than that is produced in paithiya vatham
- Anorexia

In Pararasa Segaram,

“சொற்சித வுதிர வாத சுரோணித முழுங்கால் தானும்
பொற்கணைக் காலுஞ் சந்தும் புறவடி தானும் வீங்கி
நற்கணு விரல்க ணைந்து நடுப்பயித் தியவா தத்தில்
உற்பவக் குணமு முண்டா முறுநூலிற் சொன்ன தாமே.”

- பாடல் 278.

- Swelling of ankle and knee joints
- Swelling of hind foot
- Pain in the interphalangeal joints
- Characters of paithya vatham are seen.

PATHOLOGY:

“பிணியினுற் பத்தியை பேசுவன் பிணிமுதல்
வாதபித் தங்கப மன் மந்திரி தந்திரி
வீதமா யுடலரண் மெய்ப்புர வரசு செய்
முறை செயுமாதலான்.”

- தேரையர் காப்பியம்.

(வாதம் - அரசன், பித்தம் - மந்திரி, கபம் - சேனாதிபதி)

Which highlights that the main factor in the causation of disease are vatham, pitham and kabham.

Vatham is the prime force that impacts movement to every living cell in the body. Its dwelling place lies in the bones, muscles, nerves, joints etc. Hence it is responsible for the movement of parts involved in locomotor system. When this Uvir Thathu, Vatham is affected the other two, Pitham and Kabham gets dearranged and in turn, they vitiate the other structural and functional elements of living body called Seven Udal Thathus.

1. **Viyaanan** which is responsible for the voluntary and involuntary movements and nutrition of the tissue gets affected leading to restriction of movements and lassitude.
2. **Samaanan** which neutralizes other vitiated vayus gets affected. Further it is needed for normal digestion. So dearrangement of this vayu produces loss of appetite and indigestion.
3. Involvement of **Abaana Vayu** also plays a main role in the manifestation of signs and symptoms. Abaanan which is responsible for distribution and assimilation of nutritional factors gets affected leading to symptoms like constipation.

The main function of Pitham which represents Agni is Thermogenesis or heat production, metabolism within its limits, process of digestion etc. Its vitiation produces inflammatory changes in joints.

Among the five types of Pitham, the following four types gets affected in Udhira Vatha Suronitham.

1. **Ranjaga Pitham** which gives colour to blood.
2. **Saathaga Pitham** which is needed to carry out normal activities gets affected.
3. In few, **Anal Pitham** which is needed for digestion and
4. **Prasaga Pitham** which gives complexion to skin gets affected leading to anorexia and pallor of skin respectively.

The deterioration of the two main kuttram also accompany the Kabha kutram whose structure is **Earth + Water** and is concerned with the maintenance of Smooth working of joints, Integration of structural elements of the body into stable structures etc. Hence deterioration of kabham which is of five types affects the following.

1. **Santhiga Kabham** which is needed for normal maintenance of synovial fluid gets affected.
2. **Avalambagam** which forms the basis for all other four types of Kabham gets affected.
3. In few, **Kilethagam** gets affected leading to loss of appetite.

Thus disturbance in Mukkutram produces,

- Pain, swelling of joints, joint stiffness, restriction of movements due to **Vatham**.

- Inflammatory changes in joints like redness, warmth due to **Pitham**.
- Erosion of bony margin, osteoporotic changes, increase in the Synovial fluid are due to disturbed **Kabham**.

Disturbances in Vatham, Pitham and Kabham gets reflected on Udal Thathus leading to change in normalcy of body either conferring a pre disposition to or actually causing disease. The Seven Udal Thathus that supports the body in their state of equilibrium are as follows.

1. Saaram - Strengthens the body and mind.
2. Senneer - Gives power, knowledge and boldness to the mankind.
3. Oon - It gives structure and shape to the body and is responsible for movements of the body.
4. Kozhuppu - It lubricates the joints and organs and facilitates their functions.
5. Enbu - It protects all the internal organs and forms structural framework of the body.
6. Moolai - Resides inside the core of bones. It strengthens and maintains the normal condition of bones.
7. Sukkilam/
Suronitham - Meant for reproduction (Male and Female respectively).

In Uthira Vatha Suronitham, the affected Udal Thathus are,

- Saaram - Loss of appetite, lassitude.
Senneer - Decrease in Udal Vanmai (Anaemia, presence of RA Factor).
Oon - Muscle wasting, swelling.
Kozhuppu - Emaciation, restriction of joint movements.
Enbu - Swelling of joints and deformity of joints.

NAADI PATHOLOGY:

“திருத்தமாம் வாதத் தேரடே தீங்கொடு பித்தஞ்சேரில்
பொருந்துகள் தேறும் நொந்து”.

- குணவாகடம் நோயின் சாரம்.

“காணப்பா வாதமீறில்
கால்கைகள் பொருந்தி நோகும்.”

- காவிய நாடி.

Vitiation of Vatham and Pitham produces joint pain.

“வாதத்தின் குணமே தன்னில்
வயிறது பொருமிக் கொள்ளும்
தாதத்தில் மேனி கைகால்
சந்துமே கடுப்பு தேன்றும்.”

- குறியடையாள நாடி.

Increase in Vatham results in abdominal distension and pain in the joints.

“அறிந்துபாள் வாதமே தனித்ததானால்
அன்மை போல் நடக்குமப்பா நாடிபாரு
சரிந்திடவே கால்முடக்கும் போது காட்டும்”

- அகத்தியர் ரத்தினச் சுருக்கம்.

Vitiated Vatham causes difficulty in walking and impaired functioning of lower extremities.

“அறியும் வாதத்தில் அடுத்த பித்தமாயின்
குறியதுதான் வாயும் குழறும் நெறியால்
குளிருங் கால்வீங்கும் குடல்புறட்டும் விம்மித்
தெளிவில்லை புத்தியெனச் செப்பு”

- கண்ணுசாமியம் என்னும் வைத்திய சேகரம்.

DIFFERENTIAL DIAGNOSIS:

Yugi Munivar in his “Yugi Vaidhya Cinthamani”, mentioned about 80 types of Vatha diseases. Among them, the following diseases have joint pain as main clinical feature.

- Oorusthamba Vatham
- Malaithakamba Vatham
- Santhu Vatham
- Paithya Vatha Suronitham
- Vatha Suronitham

1. ஊருஸ்தம்ப வாதம் (Oorusthamba Vatham):

“ஆமென்ற வாதமது உள்ள டங்கி
அடித்துடைதான் குறங்கிரண்டு மளவாய்ப் பற்றிக்
காமென்ற கைகாலில் விரலுஞ் சுற்றிக்
கனத்துமே சாணியது பொதிந்தாற் போலத்
தேமென்ற சிரந்தனிலே பார முண்டாய்த்
தேகமெங்கு மூதியே திமிருண்டாகும்
நாமென்ற நடக்கொணா வெளடுக்க மாகி
நலியுருத் தம்பமது நணுகுங் காணே.”

Pain in both the thighs, swelling of fingers and toes, numbness, generalized oedema of the body and inability to walk are the symptoms of this disease.

2. மலைத்தகம்ப வாதம் (Malaitha Kamba Vatham)

“கும்பமகம் கையின்மணிக் கட்டு தன்னிற்
குவிந்தரையில் மொத்தைபோ லுரத்துக் காணுந்
தும்பமக மங்கங்கள் துடிப்ப தாகுந்
துவண்டுமே கால் கையு நடுக்க மாகும்
அம்பமக மரைக்குக்கீழ் திமிருண் டாகும்
அதரமே மிகக்கறுத்து வெடிப்புண் டாகும்
வம்பமகம் வாயுந்தான் பரியு நாற்றம்
வருமலைத்த கம்பத்தின் மர்க்கமாமே.”

Congestion of wrist joint, twitching, tremors in upper, lower extremities, numbness below the hip joint, black – fissured lips and passing off foul flatus will be seen.

3. சந்துவாதம் (Santhu Vatham)

“செய்கைதான் சந்துகளு மிகத் திமிர்ந்து
சடமெங்கு நொந்துமே மிகவ ழுற்றி
நைகையாய் நலுத்துமே மயிர்க் கூச்சலிட்டு
நாணியே முன்போல் நடை கொடாது
மைகைதான் மயக்கமொடு வாய்நீருறும்
வரண்டிடுமே நாவுதா னடிக்க டிக்குக்
கைகால்தான் தரணிதனிற் றரிக் கொணாது
சஞ்சரிக்குஞ் சந்துவாம் வாதங் கேளே.”

Pain in joints, body pain, pilo erection, inability to walk, giddiness, dryness of tongue, excessive salivation and unable to keep the limbs in floor are the features of this disease.

4. பயித்திய வாத சுரோணிதம் (Paithya Vatha Suronitham)

“உணர்ச்சியாய்ச் சுரோணிதந்தான் மிகவெ தும்பி
ஊக்கமாய்த் தேகமெங்கு மிகவே நொந்து
முணர்ச்சியாய் முழங்கால்கள் முழங்கை யொக்க
முனையான சிறுவிரல்கள் கன்னம் நெற்றி
தணர்ச்சியாய்ச் சந்துசரு வாக் மெங்கும்
தாட்டிக மாய்க்குடைந்து சுரமு முண்டாம்
பணர்ச்சியாய் பண்டதுபோல் மேனி யாகும்
பயித்திய வாதசுரோணிதத்தின் பண்புதானே.”

Generalised body pain, severe pain in the knee joint, elbow joint, minor joints, temporomandibular joint and all other joints, fever and anaemia are the features of this disease.

5. வாத சுரோணிதம் (Vatha Suronitham)

“அறிந்திட்ட வங்கமெலா மெலிவுமாகி
அசைவான தவ்விடங்கள் வீக்கமாகி
நறிந்திட்ட நடைகொடா தானி ருத்தல்
நலியாகி மொழி மொழிய வீக்கமாகச்
செறிந்திட்டு தேகமெங்கு மசைவு காணல்
சோற்றின்மே னினைவின்றித் தூக்கமாதல்
அறிந்திட்ட வாயதனி நீந்தா னூறல்
வாதசுரோணிதந்தானும் வகுத்தவாரே.”

Emaciation, swelling in movable joints, inability to walk, tremors, anorexia, increased sleep and excessive salivation are the features of this disease.

PINIYARI MURAIMAI:

Piniyari Muraimai is the diagnostic modalities followed in siddha system of medicine and is based on,

- Poriyal Arithal
- Pulanal Arithal
- Vinathal

Poriyal Arithal and Pulanal Arithal goes hand in hand with the concept of examining the patients 'Pori' and 'Pulan' with that of the physician's 'Pori' and 'Pulan'. Vinathal is the method of enquiring about the details of the patient's complaints in their own words or from their attendants. This helps to elicit an accurate account of the symptoms that represents the clinical problems.

Envagai Thervugal, though it is mentioned in a single phrase, the actual boundary is unknown, each entity dealing with a vast subject. It spreads its eagle's eye view and also a thorough check up in each and every thing.

“தொடுக்கலுற்ற அட்டவிதப் பரிட்சை தன்னை
துலக்கமுறும் பண்டிதரே தெளி வதாகப்
பகுக்கரிய நூடியே நீ பிடித்துப் பாரு
பகர்கின்ற வளத்தை பர் நாவைப் பாரு
வகுக்கரிய தேகமெனத் தொட்டுப் பாரு
சகிக்கரிய மலத்தைப் பர் சலத்தைப் பாரு
சர்ந்த விழிதனைப் பர்த்து தெளிவாய் காணே.”

- அகத்தியர் வைத்திய வல்லாதி 600.

It constitutes Naadi, Sparisam, Naa, Niram, Mozhi, Vizhi, Malam, Moothiram.

1. Naadi (Pulse):

The science of pulse forms a very important branch in the siddha system of medicine and it enables a physician to diagnose and suggest forth with remedies there for. The pulse-waves as felt on the radial artery, one inch from the wrist by means of palpation with the tip of index, middle and ring finger corresponds to Vatham, Pitham and Kabham. They exist in the ratio of 1:1/2:1/4 normally. Derangement of this ratio leads to various disease entities.

In Udhira Vatha Suronitham, Vatha Pitha Naadi, Pitha Vatha Naadi is commonly seen.

2. Sparisam (Skin):

Skin examination can be made by inspection and palpation. It reveals about the warmth/chillness, dry/weeping skin, rough/smooth, soft/hard, tenderness, presence of ulcers, fissures, swelling, wrinkles, hair, pigmentation etc.

In Udhira Vatha Suronitham, the affected part feels warm with redness, swelling and tenderness.

3. Naa (Tongue):

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

In Udhira Vatha Suronitham, few cases had coated tongue. In few cases who were anaemic the tongue was pale.

4. Niram (Colour):

Signs of different complexions in Vatham, Pitham, Kabham and Thontha thegis, cyanosis, pallor, yellowish discolouration can be studied by means of niram.

In Udhira Vatha Suronitham, the patient is of mixed complexion and the affected parts gets swollen with hyperaemia.

5. Mozhi (Speech):

It constitutes high, low pitched voice, slurring and incoherent speech, nasal speech, hoarseness of voice etc.

In Udhira Vatha Suronitham, the speech is normal.

6. Vizhi (Eye):

Both motor and sensory disturbance of eye are noticed. Changes according to mukkutram, redness of eyes, ulcers, paleness, excessive lacrimation, swelling, sunken eyes, corneal ulcers, other diseased conditions should be noted.

In Udhira Vatha Suronitham, if the patient is anaemic, pallor of conjunctiva will be seen.

7. Malam (Stools):

1. Vatha type : Black coloured stools with constipation.
2. Pitha type : Loose stools with yellowish red colour.
3. Kabha type : White coloured stools with mucus.
4. Thontha type : Stools possess some of the features of two thodams.

In Udhira Vatha Suronitham, constipation is noted in few patients.

8. Moothiram (Urine):

It includes Neerkuri and Neikuri.

Neerkuri:

- Niram - Indicates the colour of urine voided.
- Manan - Indicates the smell of urine voided.
- Edai - Indicates the specific gravity of urine voided.
- Nurai - Indicates the frothy nature of urine voided.
- Enjal - Indicates the quantity of urine voided.

In addition, the frequency of micturation and sedimentations are noted.

In Udhira Vatha Suronitham, no abnormalities are seen in the above features.

Neikuri:

“அருந்து மறறிரதமும் அவிரோதமதாய்
அ.:கல் அலர்தல் அகாலஊண் தவிர்ந்தழற்
குற்றளவருந்தி உறங்கி வைகறை
ஆடிக் கலசத் தாலியே காது பெய்
தொரு முகூர்த்தக் கலைக்குட்படு நீரின்
நிறக்குறி நெய்க்குறி நிருமித்தல் கடனே.”

- தேரையர்

Prior to the day of urine examination, the patient was advised to take a 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 that is voided first is collected in a glass container and is subjected to analysis within one hour.

A drop of gingelly oil is added without disturbance and neikuri is noted in direct sunlight.

Character of Vatha Neer:

“அரவென நீண்டின.:தே வாதம்.”

When the drop of oil lengthens like a snake, it indicates ‘Vatha Neer’.

Character of Pitha Neer:

“ஆழிபேரல் பரவின் அ.:தே பித்தம்.”

When the oil drop spreads like a ring, it indicates ‘Pitha Neer’.

Character of Kabha Neer:

“முத்தொத்து நிற்கின் மொழுவதென் கபமே.”

When the oil drop remains that of pearl, it indicates ‘Kabha Neer’.

Character of Thontha Neer:

“அரவிவழியும் ஆழியில் அரவும்
அரவின்முத்தும் ஆழியில் முத்தும்
தோற்றில் தொந்த தோடங்களமே.”

Thontha neer appears as the combination of above patterns.

Character of Mukkutra Neer:

When the oil drop gets immersed in urine, it indicates ‘Mukkutra Neer’.

In ‘Udhira Vatha Suronitham’, the Neikuri appears to be thontha neer indicating patterns of aravil aazhi and aazhiyil aravu. Few cases showed patterns that of the snake indicating vatha neer.

Besides Envagai Thervugal, ‘Thinai’ and ‘Paruva Kaalangal’ also plays a main role in the diagnosis of disease.

Thinai (Land and Place)

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

1. Kurinji - Mountain and its surroundings
2. Mullai - Forest and its adjacent areas
3. Marutham - Field and its surroundings
4. Neithal - Sea and its surroundings
5. Paalai - Desert and its surroundings.

Each region has its own characters, which influences the inhabitants, physical, mental, economical and occupational activities. In each region, some ailments are endemic based on the climatic features of that area.

‘Udhira Vatha Suronitham’ is common in Marutha Nilam and Neithal. Even though marutha nilam is suitable land for living and to be free from diseases, modification in lifestyle and food habits brings about the disease.

PARUVA KAALANGAL:

The seasonal variation mainly depends upon the temperature, humidity, air and other climatic factors.

There are six main seasons which constitute Perum pozhuthu.

Perum pozhuthu	Months	Vatham	Pitham	Kabham
Kaar kaalam	Avani, Puratasi	❖	★	
Koothir kaalam	Iyppasi, Kaarthigai	⊗	❖	
Munpani Kaalam	Markazhi, Thai		⊗	
Pinpani kaalam	Maasi, Panguni			★
Elavaenir kaalam	Chithirai, Vaigasi			❖
Mudhuvaenir kaalam	Aani, Aadi	★		⊗

⊗ - Normal State

★ - Alteration from normal state

❖ - Aggravation and spread to other humors

According to climatic condition that prevails in every season, changes will occur in the human beings which will modify the physiological state and makes them susceptible to certain specific disease likely to occur in that season.

Thus Vatham gets provoked from its normal state in its own location during “Muthuvaenir Kaalam”. This altered vatham spreads to other location in “Kaar Kaalam”. Altered Vatham subsides in “Koothir Kaalam”. The above three conditions are named as Thannilai Valarchi, Vetrunilei Valarchi and Thannilai Adaithal.

The incidence of “Udhira Vatha Suronitham” is more in Koothir Kaalam and Munpani Kaalam.

PINI NEEKAM:

The main aim of Pini Neekam is based on the following objectives.

- Accurate diagnosis is essential for the early application of appropriate forms of therapy.
- To bring the three thodams to equilibrium.
- Treatment of the disease and its symptoms by internal medicines, topical application of medicated oil (Thokkanam), fomentation (Otradam) in affected region.
- Education of patient in maintaining the joint stability by means of Yogasanas.
- Allowing only such food and drink as would further hasten the recovery.

Pinineekam includes Kaappu, Neekkam and Niraiivu.

1. KAAPPU (Prevention):

“The curse causeless shall not come” is a proverb. Knowing the cause there by removing it and thus preventing the disease is the main aim of siddha system of medicine. Thiruvalluvar depicted,

“மருந்தென வேண்டாவாம் யாக்கைக்கு அருந்தியது
அற்றது பேற்றி உண்ணின்.”

This Kural highlights that no medicine is required by the body if food is taken on complete digestion on what was taken before. Thus change in food habits plays a main role in the causation of diseases.

Further, following of Theraiyar Pini Anugaa Vidhi will help in the prevention of diseases. The main highlights of Theraiyar Pini Anugaa Vidhi are as follows.

“Twice per day we take our meals
Thrice we never take
At night we sleep but never in day
Once a month we take to sex
Water we drink at meals alone
However thirsty, not other time
Except yam, roots we wont
Never we take plaintain matured
Tender ones we take and walk
Lovely after taking meals.”

“Twice a year emetic we take
Thrice the purge we never forget
Sniff we have eight times a year
Weakly shave we never forget
Every fourth day we bath with oil
Collyrium twice a week we take
What has death to do with us.”

2. NEEKKAM (Treatment):

“விரேசனத்தால் வாதம் தரமும்
வமனத்தால் பித்தம் தரமும்
நசிய அஞ்சனத்தால் கபம் தரமும்.”

Vatha diseases can be brought down by ‘Viraesanam’. For this laxatives and purgatives are given according to patient’s tolerance to drug. All the patients were given ‘AGASTHIYAR KULAMBU’ at a dose of 130mg with Inji Surasam (Boiled juice extract from Ginger) on the first day in the early morning. They were put in diet allowing only to take butter milk.

“வேர்பாரு தழைபாரு யிஞ்சினக்கால்
மெல்ல மெல்லப் பற்பச் செந்தூரம் பாரே.”

Even though there are times of remission in many cases, Uthira Vatha Suronitham tends to run a progressive course. In an early stage itself, destruction of joint tissue takes place and a later chronic stage leads to deformity. This intended the author to select the trial medicine in preventing the amount of damage which occurs during the first stage and later restoring the lost functions. The trial drug was given from the next day of Viraesanam.

PATHIYAM:

“Take anything you like” – siddha system does not believe in this dictum. The system of arranging dietary with certain restrictions in diet and physical activities is Pathiyam. This hastens the speedy recovery of the frustrated people.

சேர்ப்பன:

“செங்கழுநீர் கோட்டந் தேன்மிளகு நல்லெண்ணெய்
தங்குபெருங் காயந் தழுதாழை - எங்கெங்கும்
கூட்டுசிறு முத்துநெய் கோதில் உளுந்திவைகள்
வாட்டுமணி லத்தை மதி.”

- பதார்த்த குண சிந்தாமணி.

செங்கழுநீர் கிழங்கு, பெருங்காயம், கோஷ்டம், தழுதாழை, குறிஞ்சி
தேன், சிற்றாமணக்கு நெய், மிளகு, உளுந்து, எள் நெய் முதலியவற்றை
சேர்க்க வேண்டும்.

நீக்க வேண்டியன:

“கடுகு நற்றிலத்தெண்ணெய் கூழ்ப் பாண்டங்கள் கடலை
வடுவதாகிய தெங்குமர வருக்கை நற்காயம்
மடிவிலாத வெள்ளுள்ளி கொள் புகையிலை மதுபெண்
இடது பாகலோடு கத்தரி நீக்கி விச்சா பத்தியமே.”

சுரை, பூசணை, வெள்ளரி, புடலை, பீர்க்கு, மொச்சை, காராமணி,
கொள்ளு, கடுகு, தேங்காய், கிழங்கு வகைகள், மந்தமுள்ள பதார்த்தம்,
புகையிலை, மது, பெண்போகம் முதலியவற்றை நீக்க வேண்டும்.

THOKKANAM, OTRADAM:

Almost everyone, regardless of age, values the ability to function
as independently as possible during everyday life. The ultimate goal is
the achievement of an optimal level of symptom-free movement during
basic to complex physical activities.

Thokkanam is topical application of medicated oil. It is the systematic and scientific manipulation of body tissues, best performed by hands. Ottradam is fomentation and is done with the use of herbs etc.

Both of which produces pain relief and increases the blood flow owing to arteriolar and capillary dilatation and reduces joint stiffness.

They increase the extensibility of collagen tissues so that contractures can be stretched.

YOGA:

Yogasanas are specialized postures of the body and helps in the development of an inner awareness and results in deep relaxation and energy conservation. Prescription of these asanas which is synchronized with breathing helps in the correction of impairment there by improving the musculo-skeletal function and maintaining the state of well being.

Udhira Vatha Suronitham patients were advised to perform

- **Savasanam**, two times daily for a session of 10 minutes.

Sava – dead body. Should lie motionless on the floor in supine posture like dead body with a view to secure complete relaxation of all parts of the body and removing stress.

- Deep relaxation techniques once daily for a period of 20 minutes.

When the acute symptoms subside the following Asanas are advised to protect the diseased joints against further damaging, stress and in preserving joint motion and preventing joint stiffness and deformity.

- Sukhasana (Comfortable posture)
- Padmasana (Lotus posture)
- Ardha Padmasana (Half lotus posture)
- Utkatasana (Half squat posture)
- Vrikshasana (Tree posture)
- Bhadrasana (Beneficial posture)
- Vajrasana (Adamant posture)
- Makarasana (Crocodile posture)

Further the patients were advised to do Pranayama in association with Mudras.

- Naadi Sudhi (Using Nasika Mudra)
- Abdominal Breathing (Using Cin Mudra)
- Thoracic Breathing (Using Cinmaya Mudra)
- Clavicular Breathing (Using Adi Mudra)
- Full Yogic Breathing (Using Brahma Mudra)

Practice of this pranayama relieves stress, tension, anxiety and insomnia there by bringing stability to mind. The Mudras preserves the joint movements of fingers.

3. NIRAIVU (Life style modification):

Self help techniques were advised to keep inflammatory process at a minimum, there by preserving joint motion.

SELF MANAGEMENT TECHNIQUES:

- Rest - reduces the general activities there by avoiding straining of joints and to conserve the quota of vitality.
- Positive mental attitude.
- Use of joint – Patient is told, the value of correct posture and methods of using the joints wisely to reduce stress on the painful joints.
- Assistive devices – Like splints, walking sticks provides strength and reduces pain and inflammation.
- Adequate sleep.
- Relaxation techniques.
- Modification in daily activities like avoiding walking on hard and uneven surfaces, avoiding squatting on ground, etc.

MODERN ASPECTS

Articulations or Joints are specialized anatomical structures at which the ends of certain bones are joined or the borders of other bones are juxtaposed. These osseous junctions are secured by ligaments, fibrous capsule and other binding tissues which restrict movements or permit varying degrees of movements. Joints vary widely in their structure, frequently presenting unique morphological features, adapted to specific functional requirements.

JOINT CLASSIFICATION:

Depending on the morphological characteristics of the joints, they are classified into,

1. Fibrous Joints - Many of which are immovable and are united by fibrous tissue (synarthroses).
2. Cartilaginous Joints - Slightly movable, the union between the bones occurs via cartilage (amphiarthroses).
3. Synovial Joints - Freely movable (diarthroses).

SYNOVIAL JOINTS:

Synovial Joints are highly evolved articulations which permit free movements. Because the human lower limbs are concerned with locomotion and the upper limbs provide a great versatility of movements, it is not surprising that most of the joints are of the synovial type. The integrity of a synovial joint results from its ligaments and capsule which bind the articulation externally and to some extent from the surrounding muscles. The contiguous bony surfaces are covered with hyaline cartilage and the joint cavity is surrounded by a fibrous capsule, the inner surface of which is lined by a synovial layer containing cells that are thought to secrete the viscous lubricating synovial fluid.

STRUCTURES:

1. **Articular Cartilage:** Firmly adherent to the articular surfaces of majority of bones. They are neither innervated nor supplied with blood vessels.
2. **Ligaments:** are composed mainly of bundles of collagenous fibres. They are pliant and flexible to allow perfect freedom of movement.
3. **Articular Capsule:** Forms a complete envelope for a freely movable joint and consists of external fibrous layer and internal synovial layer. The fibrous layer gets attached to the periosteum along the entire circumference of the articular end of each bone.

Its flexibility permits movements, yet its strength protects joint from dislocation.

4. **Synovial Membrane:** Covers the inner surface of the fibrous capsule, forming a closed sac called the synovial cavity. It is composed of loose connective tissue and it has a free surface of finger like projection called the Synovial Villi. The synovial cavity contains only enough synovial fluid to moisten and lubricate the synovial surfaces, but in an injured or inflamed joint, the fluid may accumulate in painful amounts.

PHYSIOLOGY OF JOINTS:

As joint is a very well engineered structure, frictionless motion is provided by the combination of a smooth articular cartilage as well as lubrication of both the articular cartilage and the synovial membrane together which make up the entire surface area of the inside of the joints. Shock absorption to the joint is provided by the combination of structures, including articular cartilage, subchondral bone and soft tissue structures (Joint Capsule and Ligaments). Because of its re-silient nature and ability to compress, articular cartilage in itself is a good shock absorber but its thickness and overall volume is far less than bone or soft tissues. Hence the soft tissues and bones are the primary shock absorbers in joint and any disease that affect bones or soft tissue is going to interfere with this shock absorption. Re-silience of the soft tissue is

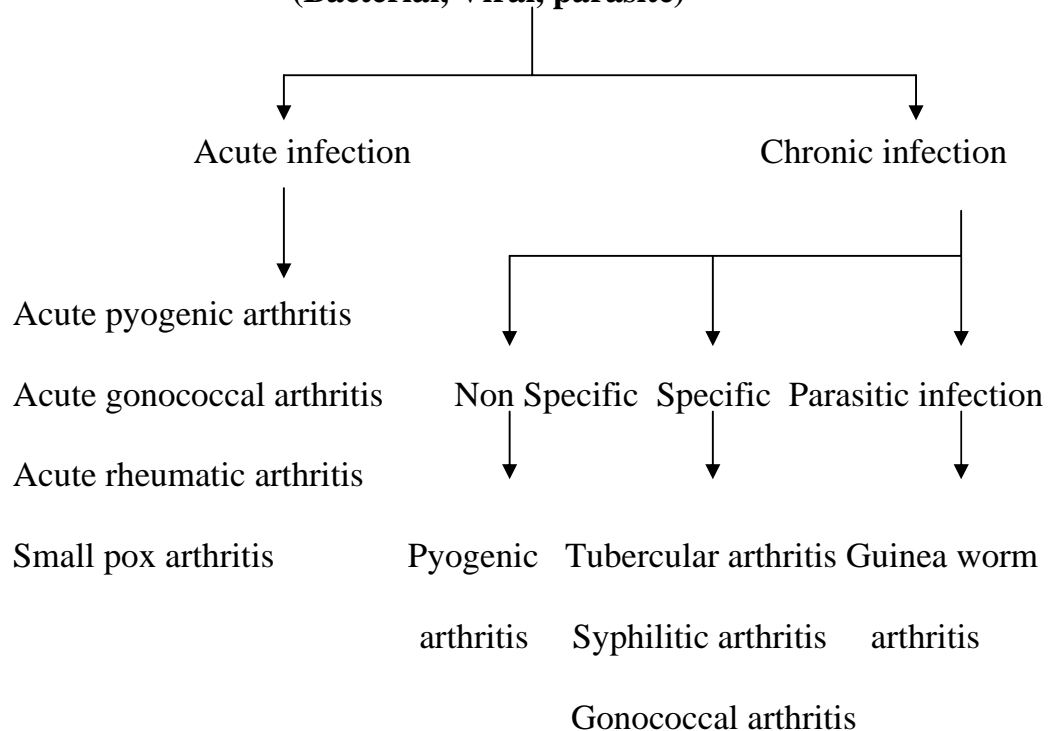
important for normal motion as well as shock absorption. Hyaluronic acid provides lubrication to the synovial membrane surface in addition to another protein structure called Lubricin and is involved in the lubrication of articular cartilage. The substance moving over the surface of joints is called Boundary Lubrication. A second mechanism of lubrication of cartilage is effected by fluid being squeezed out of the cartilage on to the surface when weight bearing occurs.

CLASSIFICATION OF JOINT DISEASES

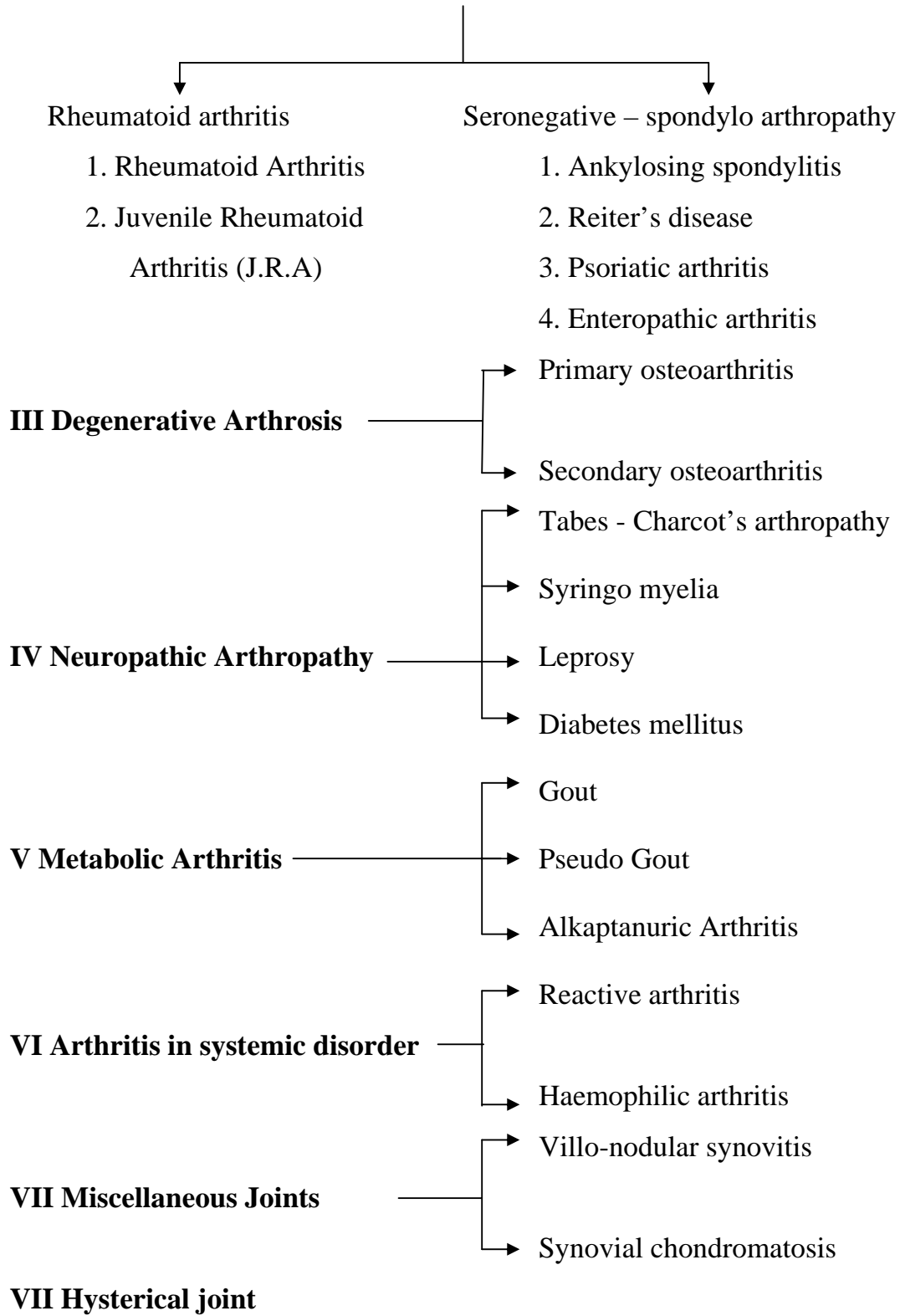
(Ref – Natarajan’s Text book of Orthopaedics and Traumatology)

I. Infective Arthritis

(Bacterial, Viral, parasite)



II. Rheumatoid Arthropathy



RHEUMATOID ARTHRITIS

Rheumatoid arthritis embrace an amazing array of hereditary and acquired disorder with a wide variety of clinical features. Rheumatoid arthritis is a disease of unknown cause, and the current thinking is that an interplay between genes, infectious agent contributes to initiate an autoimmune disease mechanism that results in inflammation, dominantly at limb joints, often with destructive features. The term rheumatoid arthritis was first used by sir Archibald Garrod to describe a chronic non-suppurative inflammatory arthropathy (Rheuma - flux, eidos - resemblance), a condition resembling rheumatism.

We are all familiar with the saying regarding rheumatic fever, “it licks the joints but bites the heart.” Contrarily it can be said of rheumatoid arthritis, “it bites the joints, licks all other systems of the body and barks at the treating physician.”

DEFINITION:

Rheumatoid arthritis is a highly inflammatory polyarthritis often leading to joint destruction, deformity and loss of function. Additive, symmetric swelling of peripheral joints is the hallmark of the disease. Extra-articular features and systemic symptoms can commonly occur and may antedate the onset of joint symptoms. Chronic pain, disability and excess mortality are unfortunate sequelae.

FREQUENCY:

The world wide incidence of RA is approximately 3 cases per 10,000 population and the prevalence rate is approximately 1%. First degree relatives of patients with RA have an increased frequency of disease (2-3 %). Disease concordance in monozygotic twins is approximately 15-20% suggesting that non-genetic factors play an important role. Because world wide frequency is relatively constant, a ubiquitous infectious agent has been postulated to play an etiologic role.

SEX:

Females are 2-3 times more likely to develop RA than males.

AGE:

The frequency of RA increases with age and peaks in persons aged 35-50 years. Nevertheless, the disease is observed in both elderly persons and children.

AETIOLOGY:

The cause of rheumatoid arthritis is unknown. Genetic, environment, immunologic, and infectious factors may play significant roles. Socioeconomic, psychological and lifestyle factors may influence disease outcome.

1. Genetic:

Approximately 60% of patients with RA carry the so called shared epitope of the HLA-DR4 cluster, which constitutes one of the peptide binding sites of certain HLA-DR molecules associated with RA. In addition, HLA-DR1 also carries this shared epitope and confers risk in certain areas.

2. Environmental:

For many decades, numerous infectious agents have been suggested to induce RA. Among these are Mycoplasma organisms, Epstein-Barr and Rubella viruses and others.

This supposition is further supported indirectly by the following:

- Occasional reports of flulike disorders preceding the start of arthritis.
- The inducibility of arthritis in experimental animals with different bacteria or bacterial products (eg, streptococcal cell walls)
- The presence of bacterial products including bacterial RNA in patient joints.
- The activity of several agents that have antimicrobial effects as disease-modifying drugs (e.g. antimalarials).

3. Immunologic:

All of the major immunologic elements play a fundamental role in the initiation, propagation and maintenance of the autoimmune process of RA. The exact orchestration of the cellular and cytokine events that lead to pathologic consequences, such as synovial proliferation and subsequent joint destruction, is complex. It involves T and B Lymphocytes, antigen-presenting cells (e.g. B cells, macrophages, dendritic cells) and numerous cytokines. Aberrant production and regulation of both pro and anti-inflammatory cytokines and cytokine pathways are found in RA.

T cells are assumed to play a pivotal role in the initiation of RA and the key player in this respect is assumed to be the Th1 CD4 cells.

These cells may subsequently activate macrophages and other cell populations, including synovial fibroblasts. The latter 2 populations are the main producers of the proinflammatory cytokines TNF-alpha and IL-1 that appears to be the major driving forces of inflammation.

B cells are important in the pathologic process because they may serve as antigen-presenting cells and activated T cells produce numerous autoantibodies (e.g. RF, Citrullinated proteins) and secrete cytokines.

Experimental models suggest that synovial macrophages and fibroblasts may become autonomous and thus lose responsiveness to T-cell activities in the course of the disease.

IMMUNOPATHOLOGY:

The pathological hallmark of RA is synovial membrane proliferation outgrowth associated with erosion of articular cartilage and subchondral bone. In early stages, the most obvious histological changes are confined to the synovial microvasculature which shows evidence of endothelial damage, infiltration by polymorpho nuclear leucocytes and obliteration by thrombus. In chronic phase, polymorpho nuclear leucocytes are less obvious but the synovium is infiltrated by large number of inflammatory cells (macrophages, T&B lymphocytes, dendritic cells, plasma cells). The plasma cells in the subsynovium synthesize large quantities of immunoglobulin, much of which is IgM and IgG rheumatoid factor. They have the ability to form immune complexes that can activate complement and is important in either initiating or prolonging local inflammation within the joint. Antigen-Antibody complexes formed within the joint cavity can become trapped in hyaline cartilage and fibrocartilage, where they cause changes in matrix macro molecules. Ultimate destruction of cartilage, bone, tendons and ligaments probably results from proteolytic enzymes, metallo proteinases.

CLINICAL FEATURES:

Patients often present with constitutional complaints including malaise, fever, fatigue, weight loss and myalgias. Most patients with the disease have an insidious onset. It may begin with systemic features, such as fever, malaise, arthralgias and weakness, before the appearance of joint inflammation and swelling.

JOINT FEATURES:

RA is typically a distal, symmetrical, small joint polyarthritis involving proximal interphalangeal and metacarpophalangeal joints of the hands, wrist, metatarsophalangeal joints, ankles, knees and cervical spine. The shoulders, elbows and hips are less frequently involved, but can be a major source of morbidity. Any synovial joint in the body may be affected. In addition periarticular synovial structures such as bursae and tendon sheaths are commonly inflamed.

Most common symptoms described by patients are pain and pronounced stiffness. The later frequently exhibits a diurnal rhythm, worse on rising in the morning and then recurring towards the evening, Perhaps reflecting the diurnal variation in plasma cortisol levels. The affected joints are frequently tender, swollen and warm and there may be limitation of both active and passive movements. Progressive destruction of the articular cartilage, subchondral bone and periarticular soft tissues eventually combine to produce the characteristic deformities seen in long standing RA.

UPPER LIMBS:

1. Hands and wrists:

Early in the disease there may be soft tissue swelling around the affected joints. Involvement of the proximal interphalangeal joints gives a spindle shaped appearance to the fingers and soft tissue swelling can be observed over the ulnar styloid and in the 2nd and 3rd metacarpophalangeal joints (MCP). Tenosynovitis of the long flexor tendons in the palm of the hand may exacerbate stiffness of the fingers and cause “Trigger finger”. Similar synovitis of the wrist within the flexor retinaculum may cause compression of the median nerve with the typical features of Carpal Tunnel Syndrome. Persistent synovitis with erosion of the articular surfaces, weakening of the joint capsules and muscle weakness, with or without tendon rupture will inevitably lead to deformities.

i) Volar subluxation of fingers at the MCP Joints:

Occurs as a result of destruction of the articular cartilage and subsequent instability of these joints.

ii) Ulnar deviation and subluxation of the fingers:

Occurs as a result of instability of the MetaCarpophalangeal joints. The fingers may tend to drift in an ulnar direction because of the ulnar vector of the action of both flexor and extensor finger tendons.

iii) Swan Neck deformity:

Develops from hyper extension of the proximal interphalangeal joints in conjunction with flexion of distal interphalangeal joints with subsequent contracture of the intrinsic muscles which become extensors rather than flexors of the proximal interphalangeal joints.

iv) Boutonniere (Button-Hole) deformity:

Results from flexion contractures of proximal interphalangeal joints associated with hyper extension of distal interphalangeal joints. A similar process at the carpometacarpal joint of the thumb may give rise to the Z-thumb deformity.

v) Piano-Key sign:

Can be detected when weakening of the distal radio ulnar ligament by synovitis allows the distal ulna to migrate dorsally so that it overrides the radius. The ulna can be depressed by pressure like a piano key.

vi) Carpal collapse and fusion:

May occur late in the disease when instability of the wrist may lead to collapse of the carpal bones, causing foreshortening of the carpal and ultimately, spontaneous fusion of the wrist.

2. Elbows and Shoulders:

Involvement of the elbows is less common than of the wrist but severe destruction may occur, leading to pronounced deformity and disability. There may be inflammation of the subacromial bursae or supraspinatous tendon in addition to glenohumeral joint synovitis, producing a typical painful arc syndrome.

LOWER LIMBS:

1. Feet and Ankles:

Active synovitis of the metatarso phalangeal joints leads to spreading of fore foot. Subluxation of metatarsal heads into the soles results in cockup and valgus deformities causing painful walking and difficulty with foot wear. Pain arises in the ball of foot (metatarsalgia). Which vary in intensity from walking on pebbles to like walking on broken glass. Valgus deformity of the hind foot is usual and excacerbated by rupture of the tibialis posterior tendon.

2. Knee :

Involvement of knee is an important cause of disability from an early stage of disease. Synovial proliferation is usually most obvious in the supra patella pouch and there may be pronounced wasting of the quadriceps as a result of reflex muscle inhibition. Synovial effusion typically produces posterior knee pain in the early stages by stretching the posterior capsule of the joint. This may lead to the development of a popliteal cyst (Baker's cyst). Valgus deformity of the knee are usual consequence of loading.

3. Hip:

Involvement of hip is uncommon. Pain is usually present in the groin, buttock and abduction of hip are reduced ultimately leading to fixed flexion deformity of the joint.

AXIAL SKELETON:

Spinal involvement is limited to upper cervical articulation. Neckpain and stiffness are common and leads to erosion of bones and ligaments in cervical spine. Vertebral arteries may also be compressed resulting in vertebro basilar insufficiency with vertigo or syncope especially on downward gaze. The risk of cord compression is greatest in those with a subluxation exceeding 8mm and there is also vertical subluxation of the atlanto axial joint. Instability of atlanto axial joint results from erosion of the Odontoid peg or rupture of supporting ligaments. Symptoms suggestive of atlanto axial disease includes high cervical pain radiating to the occiput and temporal regions, exacerbated by neck movements. Brisk tendon jerk, positive Hoffman sign, upgoing plantar response, loss of proprioception, vibration sense indicates damage to posterior column.

OTHER JOINTS:

Hoarseness of the voice may occasionally be caused by effusion within the cricoarytenoid joints. Temporomandibular joint disease causes pain on chewing and restricts opening of mouth.

2. Extraarticular Features:

These tend to be more numerous and severe in those with high titres of rheumatoid factor in blood. Three major pathological phenomena dominate the disease.

1. Inflammation of membranes
2. Nodule formation
3. Vasculitis.

i) Rheumatoid Nodules:

Subcutaneous and intracutaneous nodules are the hall mark of the disease in ¼ th of patients. They are firm, non-tender swellings that occur on the extensor surface of the fore arm and olecranon sites, where repeated minor trauma could initiate their formation. They may also develop in many other tissues including eye (Scleromalacia), pleura, pericardium, parenchyma of lungs and heart.

ii) Haematological manifestation:

1. Anaemia:

Moderate normochromic normocytic anaemia is a finding in active RA. Factors that are related to the inflammatory process probably contribute to this anaemia. There may be ineffective erythropoiesis and red blood cell survival is reduced. Iron binding capacity is typically reduced in active rheumatoid arthritis.

2. Thrombocytosis, Leukopenia is a finding in patients with Felty's Syndrome.

iii) Vasculitis:

Intimal hyperplasia of the small terminal digital vessels causes very limited cutaneous lesions (Nail fold infarcts, rashes, splinter haemorrhages). In contrast severe life threatening tissue infection may develop when there is involvement of large blood vessels by leucocytoclastic or necrotizing vasculitis.

iv) Lung involvement:

1. Pleurisy:

The fluid has more protein, low glucose, low complement levels and is typically positive for RA factor.

2. Nodules (Caplan syndrome):

More in upper than lower zones. Cavitation may occasionally lead to haemoptysis.

3. Pulmonary fibrosis:

It causes progressive dyspnoea, clubbing of fingers, fine late inspiratory crepitations.

4. Obliterative Bronchiolitis:

Manifesting with an acute onset of breathlessness. Many patients have evidence of airway obstruction. Bronchiectasis also appears to be more common.

v) Cardiac involvement:

1. Pericardial effusion can be found by ultra-sonography in patients with seropositive nodular disease. Constrictive pericarditis is more common and presents with dyspnoea, right sided heart failure, peripheral oedema.
2. Valvulitis: Granulomatous thickening of the cusps of the aortic valve occurs more frequently than in the mitral valve, rarely producing incompetence.

vi) Eye involvement:

Common in RA and may be due to localized tissue involvement.

1. Episcleritis:

Appears as a raised lesion in the anterior sclera with hyperaemia of the deeper layers.

2. Scleritis:

Is less common and may lead to progressive thinning of the sclera (scleromalacia) and even perforation.

3. Keratoconjunctivitis sicca (dry eyes) due to secondary Sjogren's syndrome.

4. Corneal melting is a rare manifestation. Clinical features are pain, redness and blurred vision with corneal thinning.

vii) Peripheral Nerve involvement:

Peripheral neuropathies can be produced by proliferating synovium causing compression of nerves. A mild glove and stocking sensory neuropathy is relatively common in RA.

viii) Muscle involvement:

Is attributed to the reflex inhibition and wasting resulting from severe joint pain.

ix) Liver pain:

There may be mild hepatosplenomegaly and asymptomatic elevation of the serum alkaline phosphatase.

x) Bone involvement:

Juxta – articular osteoporosis is an early feature. A small proportion of patients may develop osteomalacia.

xi) Felty's syndrome:

Lymphadenopathy is common. It is more obvious in patients with Felty syndrome (Rheumatoid arthritis, Splenomegaly, Leucopenia). Other features include anaemia, thrombocytopenia, persistent vasculitic leg ulceration, cutaneous pigmentation, weight loss and recurrent infection.

DIAGNOSIS:

The American College of Rheumatology (1988 revised) developed the following criteria for the classification of rheumatoid arthritis.

1. **Morning Stiffness:** This occurs in and around the joints and lasts at least 1 hour before maximal improvement.
2. **Arthritis of 3 or more joint areas:** At least 3 joint areas simultaneously have soft tissue swelling or fluid (not bony overgrowth) observed by a physician. The 14 possible areas are right or left proximal interphalangeal (PIP), metatarsophalangeal (MTP) joints.
3. Arthritis of hand joints of at least one area swollen in a wrist, MCP, or PIP joint.
4. Symmetric arthritis with simultaneous involvement of the same joint areas on both sides of the body. Bilateral involvement of PIPs, MCPs, and MTPs is acceptable without absolute symmetry.
5. **Rheumatoid nodules:** Subcutaneous nodules are present over bony prominences or extensor surfaces or in juxta-articular regions.
6. **Serum Rheumatoid Factor:** Abnormal amounts of serum RF are demonstrated by any method for which the result has been positive in fewer than 5% of healthy control subjects.

7. Radiographic changes typical of RA on posteroanterior hand and wrist radiographs, which must include erosions or unequivocal bony decalcification localized in or most marked adjacent to the involved joints. Osteoarthritic changes alone do not qualify.

A patient can be classified as having RA if 4 of 7 criteria are present. Criteria 1- 4 must be present for at least 6 weeks, and a physician must observe criteria 2 - 5. These criteria are intended as a guideline for classification of patients, often for research purposes. They do not absolutely confirm or exclude a diagnosis of RA in a particular patient, especially in those with early arthritis.

COMPLICATIONS:

RA is not fatal, but complications of the disease may shorten survival by a few years in some individuals. In general, RA is progressive and cannot be cured. In some, the disease gradually becomes less aggressive and symptoms may even improve. However, if bone and ligament destruction and any deformities have occurred, the effects are permanent. According to one survey, 70% of patients with RA believe that the disease prevents them from living a fully productive life.

Lymphoma and other cancers: Alterations in the immune system associated with RA may play a role in the higher risk for lymphoma observed in patients with RA. Aggressive treatments for RA that suppress the immune system may help preventing this cancer, but more research is

needed to evaluate this possibility. Other cancers that may occur with increased frequency in patients with RA include prostate and lung cancers.

Macrophage activation syndrome: This is a life-threatening complication of RA and requires immediate treatment. Patients should be aware of symptoms, which include persistent fever, weakness, drowsiness, and lethargy.

PROGNOSIS:

The following factors at presentation are associated with a poor prognosis.

- Higher baseline disability.
- Female gender.
- Involvement of Metatarsophalangeal joints.
- Positive Rheumatoid Factor.
- Disease duration of over 3 months.

Disease that remains persistently active for more than a year is likely to lead to joint deformities and disability around 80% will be moderately to severely disabled within 20 years. The overall mortality rate for patients with RA is reportedly 2.5 times that of the general population. Much of the excess mortality derives from infection, vasculitis and poor nutrition. The average life span is reduced by 8 – 15 years in RA.

INVESTIGATIONS:

No pathognomonic test is available to confirm the diagnosis of RA; instead, the diagnosis is made using clinical, laboratory, and imaging features.

1. Haematological:

- Normochromic normocytic anaemia is frequently present in active RA.
- The WBC count is usually normal, but a mild leucocytosis may be present.
- Eosinophilia when present usually reflects severe systemic disease.
- The Erythrocyte Sedimentation Rate is increased in nearly all patients with active RA.
- The levels of acute phase reactants including Ceruloplasmin and C-reactive protein are also elevated.

2. Immunological:

Rheumatoid factor (RF):

- The presence of rheumatoid factor does not establish the diagnosis of RA, but can be of prognostic significance. RA factor are auto antibodies reactive with the Fc position of IgG. Presence of RF can be detected by several tests such as Rose Waaler, Latex fixation test and other slide agglutination test. The test can be employed to confirm a diagnosis in individuals

with suggestive clinical presentation and if present in high titer, to designate patients at risk for severe systemic disease. Other conditions associated with RA are SLE, chronic liver disease, sarcoidosis, interstitial pulmonary fibrosis, hepatitis B, tuberculosis, syphilis, malaria. If RF is present in high titres (more than 1/40) and if the clinical points favours the diagnosis of RA the test can be taken as diagnostic.

- Antinuclear antibodies: These are present in approximately 40% of patients with RA.
- Newer antibodies (anti-CCP): Recent studies of antibodies to cyclic citrullinated peptide suggest a sensitivity and specificity equal to Rheumatoid factor.

3. Synovial Fluid analysis:

Confirms the presence of inflammatory arthritis. The fluid is usually turbid, with reduced viscosity, increased protein content.

An inflammatory synovial fluid (WBC count > 2000/ μ L) is present with counts generally from 5,000 – 50,000/ μ L.

Usually, neutrophil predominance (60% - 80%) is observed in the synovial fluid (in contrast with mononuclear cell predominance in the synovium).

4. Synovial Biopsy:

Villus formation with thickening of synovial layer and infiltration with abnormal cells.

5. Radiographic Evaluation:

Diagnosis is supported by a characteristic pattern of abnormalities including tendency towards symmetric involvement.

- Soft tissue changes, juxtoarticular osteoporosis may become apparent within weeks of onset.
- Loss of articular cartilage and bone erosion develop after months of sustained activities. Joint space changes, alignment, deformities, subluxation, bony ankylosis develops in the late stage.

6. Arthroscopy: In acute RA synovium is oedematous, diffusely erythematous and friable. In more chronic condition it becomes thickened.

7. MRI: Used in patients with abnormalities of the cervical spine.

8. Sonography: This allows recognition of effusions in joints that are not easily accessible. High resolution ultrasound images may allow visualization of tendon sheaths, changes and degree of vascularization of the synovial membrane and even erosions.

9. Bone Scanning: Findings may help to distinguish inflammatory from non-inflammatory changes in patients with minimal swelling.

10. Densitometry: Findings are useful to diagnose changes in bone mineral density indicative of osteoporosis.

11. Other Tests: HLA – DR4 may constitute a helpful marker in early undifferentiated arthritis.

12. Other Procedures: Joint aspiration, and biopsies (skin, nerve, rectum and kidney) maybe considered if vasculitis is suggested.

13. Urine analysis, Bio-Chemical analysis.

DIFFERENTIAL DIAGNOSIS:

- Acute viral arthritis (Rubella, Hepatitis B, Parvovirus)
- Bacterial endocarditis
- Acute Rheumatic fever
- Sarcoidosis
- Reactive arthritis (Reiter's disease)
- Psoriatic arthritis
- Inflammatory bowel disease
- Systemic Lupus Erythematosus
- Sjogren's syndrome
- Polymyositis
- Vasculitis syndrome
- Polyarticular gout
- Calcium pyrophosphate disease
- Osteoarthritis.

JUVENILE RHEUMATOID ARTHRITIS:

The American College of Rheumatology has defined it as arthritis of one or more joints with onset below the age of 16 years and persisting for atleast 6 weeks with explicit exclusion of other specific diseases such as juvenile ankylosing spondylitis, juvenile psoriatic arthritis, infectious and post infectious arthritis and other rheumatic diseases. Prevalence is in the range of 0.4 – 1.3 per 1000 children.

Juvenile Rheumatoid Arthritis is an autoimmune disease with major histocompatibility complex (MHC) associated with genetic predisposition. The classical IgM, Rheumatoid Factor is usually negative but is believed that some children have hidden IgA Rheumatoid Factor.

CLINICAL FEATURES:

Three major types of onset are described according to the presentation during first 6 months of disease.

1. Pauciarticular onset JRA:

This accounts for about 60% of patients. Four or less joints usually large are involved in an asymmetrical fashion. Joint swelling rather than joint pain is the usual complaint.

2. Polyarticular onset JRA:

Occurs in 30% of patients and is common in girls. Five or more joints (both large and small) are affected within the first 6 months of

onset. Increased joint pain in proportion to the degree of joint swelling is the usual complaint. Fever and malaise can be significant.

3. Systemic onset JRA:

About 10% of patients with JRA may have an acute onset of the disease with prominent systemic features that may precede the joint manifestation. Illness usually begins as an intermittent fever with a characteristic peak, twice daily. This is accompanied by a characteristic maculopapular rash with central clearing. Hepatosplenomegaly and lymphadenopathy are common. Pericarditis and interstitial lung disease may be present. Antinuclear antibodies are positive but rheumatoid factor is negative.

MATERIALS AND METHODS

The disease “**Udhira Vatha Suronitham**” has been dealt in the book “Yugi Vaithya Chinthamani”. The clinical study on Udhira Vatha Suronitham was done in Post Graduate Department of Podhu Maruthuvam, Government Siddha Medical College, Palayamkottai. The study involved 20 In-Patients and 20 Out-Patients of either sex.

Selection of Patients:

Patients with following criteria were screened and selected for study.

- Pain and swelling in minor joints of hand and feet
- Swelling of ankle and knee joints
- Swelling of hind foot
- Fatigue
- Anorexia
- Pyrexia

Evaluation of clinical parameters:

In this study, a detailed clinical history regarding the patient’s age, occupation, socio-economic status was recorded at the time of admission or first visit. Special attention was laid on the joint pain, swelling, early morning stiffness, regarding their nature, site of occurrence, mode of onset, deformity and severity. The seasonal variation and precipitating

factors like emotional stress, trauma and change of climate were enquired. Constitutional symptom like easy fatiguability, anorexia, loss of weight, pyrexia were noted. Extra articular features like conjunctivitis, iritis, episcleritis, vasculitis etc., were noted.

Study of siddha aspect of diagnosis:

A case sheet was prepared on the basis of siddha methodology i.e. Poriyal Arithal, Pulanal Arithal, Vinathal, Uyir Thathukkal, Udal Kattugal, Envagai Thervugal etc. In addition an individual case sheet was maintained for each case in the In-Patient ward.

Clinical investigations:

The diagnostic test such as blood test TC, DC, ESR, Hb, Sugar, Urea, Serum Cholesterol, Rheumatoid factor, Urine analysis for sugar, Albumin, Deposits and stool examination for Ova and cyst were carried out to rule out any systemic illness.

Pharmacological evaluation of the trial medicines and acute toxicity study of internal trial medicine were conducted at the Pharmacology Department in Government Siddha Medical College, Palayamkottai. Bio-chemical analysis of the test medicine was conducted at the Department of Bio-chemistry in Government Siddha Medical College, Palayamkottai.

Management:

The treatment is aimed to neutralize the vitiated vatham, pitham and kabham.

The trial medicine used in the present study are as follows.

1. Kirubagara Shanmuga Chenduram – 130mg with Chukku, Milagu and Omam Choornam - 1g with Murungai Pattai Charu, twice daily (internal).
2. Vathathirkku Poosa Nochi Ennei (external application).

Further the patients were kept in dietic restriction and adviced to do pranayamam, joint exercises to maintain the general well-being of the individuals.

RESULTS AND OBSERVATION

For the clinical study, 20 In-patients and 20 Out-patients were selected and treated in PG-I, Pothu Maruthuvam Department, G.S.M.C Hospital, Palayamkottai. Results were observed with respect to the following criteria.

1. Sex distribution
2. Age distribution
3. Religion
4. Thinai
5. Paruvakaalam
6. Socio-economic status
7. Aetiological factors
8. Mode of onset
9. Duration of illness
10. Clinical manifestations
11. Associated symptoms
12. Systemic examination
13. Individual joint involvement
14. Deformities of joints
15. Gradation of pain, joint swelling and restricted movements

16. Grading of Rheumatoid arthritis

17. Disturbances in Mukkutram

a. Derangement of Vatham

b. Derangement of Pitham

c. Derangement of Kabham

18. Involvement of Ezhu Udal Thathukkal

19. Envagai Thervugal

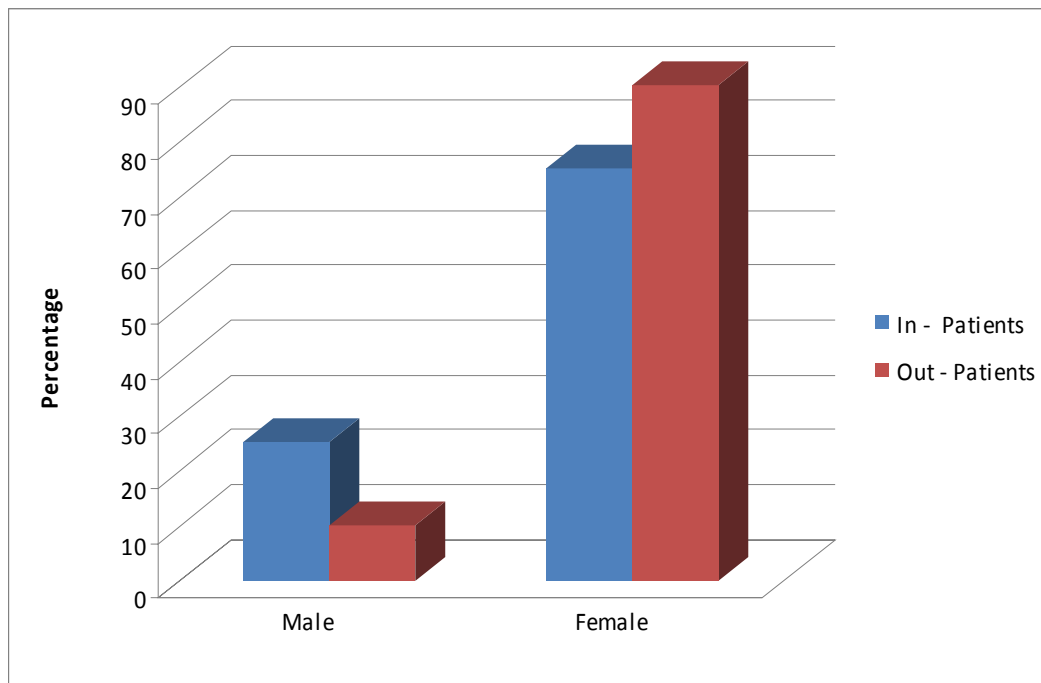
20. Grading of results.

1. Sex Distribution:

Table – 1. Illustrates sex distribution and its relative percentage.

Sl. No.	Sex	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Male	5	25	2	10
2	Female	15	75	18	90

From the above table, it is clear that the incidence is more in females.



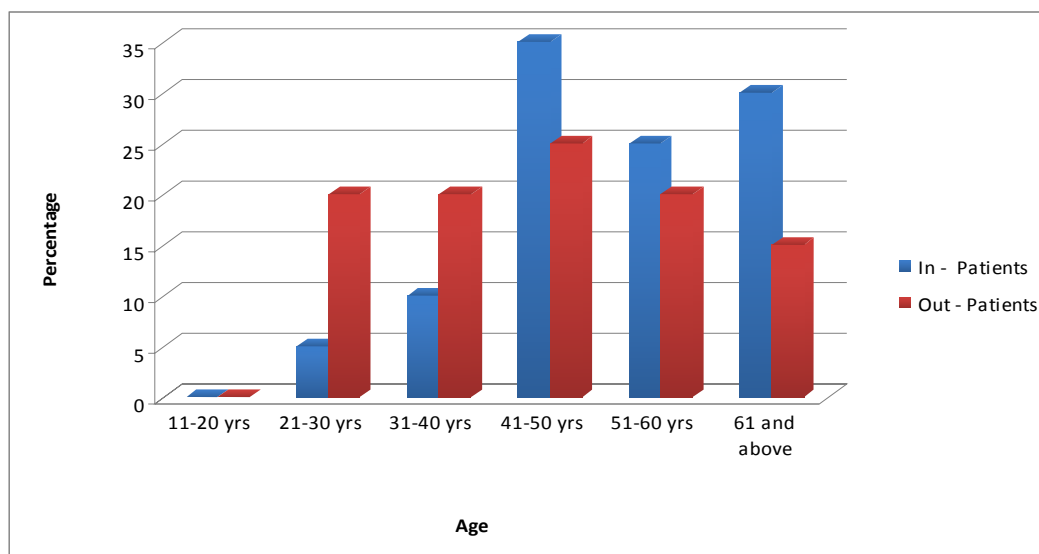
Sex Distribution

2. Age Distribution:

Table – 2. Illustrates age distribution and its relative percentage.

Sl. No.	Age	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	11-20 yrs	-	-	-	-
2	21-30 yrs	1	5	4	20
3	31-40 yrs	2	10	4	20
4	41-50 yrs	7	35	5	25
5	51-60 yrs	5	25	4	20
6	61 and above	6	30	3	15

The above table shows that the incidence is more in 4th, 5th and 6th decades.



Age Distribution

In siddha literature, age of the individual is fixed as 100 and is divided into 3 Kaalam as

Vatha Kaalam - First 33 years and 4 months,

Pitha Kaalam - Second 33 years and 4 months,

Kabha Kaalam - Third 33 years and 4 months.

Out of 20 In-patients, 10% of the cases were in Vatha Kaalam, 80% of cases were in Pitha Kaalam and 10% of the cases were in Kabha Kaalam.

Out of 20 Out-patients, 75% of the cases were in Pitha Kaalam. This shows that majority of the cases were affected in Pitha Kaalam.

3. Religion

Table – 3. Illustrates the incidence of disease with respect to religion

SI. No.	Religion	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Hindus	16	80	18	90
2	Muslims	4	20	2	10
3	Christians	-	-	-	-

This shows that the incidence is more among Hindus.

4. Thinai:

Table - 4. Illustrates the distribution with respect to Thinai (the habitat of the patients).

SI. No	Thinai	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Kurinji	-	-	-	-
2	Mullai	-	-	-	-
3	Marutham	19	95	20	100
4	Neithal	1	5	-	-
5	Paalai	-	-	-	-

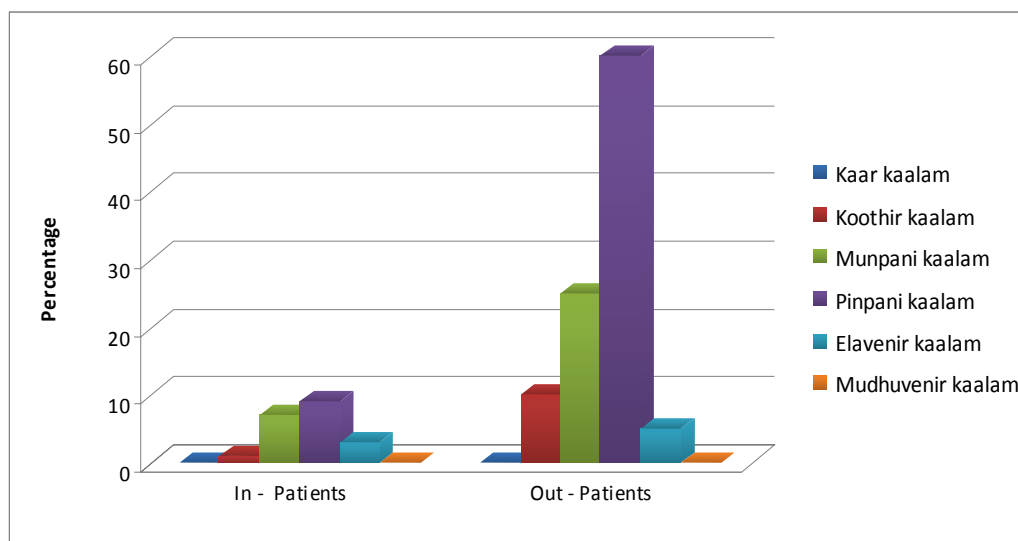
The above table shows, most of the patients were from Marutha Nilam.

5. Paruva Kaalam:

Table – 5. Illustrates the incidence of the disease with respect to Kaalam.

SI. No.	Paruva Kaalam	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Kaar kaalam	-	-	-	-
2	Koothir kaalam	1	5	2	10
3	Munpani kaalam	7	35	5	25
4	Pinpani kaalam	9	45	12	60
5	Elavenir kaalam	3	15	1	5
6	Mudhuvenir kaalam	-	-	-	-

From the above table it is clear that majority of patients were admitted in Munpani and Pinpani Kaalam.



Paruva kaalam

6. Socio-Economic status:

Table – 6. Illustrates the Socio-Economic status.

SI. No	Socio-Economic Status	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Rich	-	-	-	-
2	Middle class	3	15	6	30
3	Poor	17	85	14	70

The above table shows, most of the patients affected by this disease belongs to Poor Socio-Economic status.

7. Aetiological factors:

Table – 7. Illustrates the Aetiological factors.

SI. No.	Aetiological factors	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Positive family history	4	20	3	15
2	Positive previous history	7	35	6	30
3	Miscellaneous	9	45	11	55

The above table shows that most of the patients had Miscellaneous causes.

8. Mode of Onset:

Table – 8. Illustrates the Mode of Onset.

SI. No.	Mode of Onset	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Acute	3	15	4	20
2	Gradual	17	85	16	80

The above table shows that most of the cases had gradual onset.

9. Duration of Illness:

Table – 9. Illustrates the Duration of Illness.

SI. No.	Duration of Illness	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Below 1 month	1	5	1	5
2	1-3 months	2	10	3	15
3	3-6 months	3	15	4	20
4	6-9 months	9	45	7	35
5	9 months-1year	3	15	2	10
6	More than 1 year	2	10	3	15

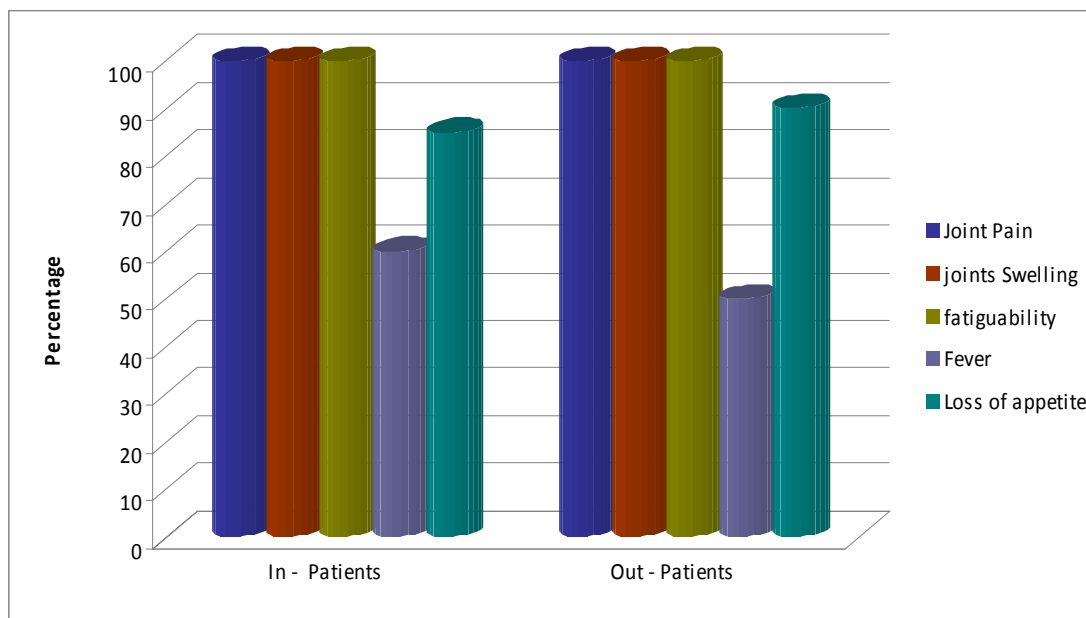
From the table it is clear that most of the cases were affected with the duration of 6 - 9 months.

10. Clinical Manifestations:

Table – 10. Illustrates the Symptoms of the Disease.

SI. No.	Symptoms	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Joint Pain	20	100	20	100
2	Swelling of the joints	20	100	20	100
3	Easy fatiguability	20	100	20	100
4	Fever	12	60	10	50
5	Loss of appetite	17	85	18	90

The above table shows that all the patients presents with the main clinical features of joint pain, swelling of joints and fatigue.



Clinical Manifestations

11. Associated Symptoms:

Table – 11. Illustrates the associated symptoms.

Sl. No	Associated Symptoms	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Morning stiffness	20	100	10	100
2	Restriction of movements	20	100	10	100
3	Difficulty to walk	8	40	1	10
4	Neck pain	3	15	2	10
5	Sleeplessness	9	45	6	30
6	Constipation	12	60	9	45

From the above table it is clear that all the patients had early morning stiffness and restriction of movements.

12. Systemic Examination (Extra articular features):

Table – 12. Illustrates signs of Systemic Examination.

SI. No	Signs	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Subcutaneous nodules	6	30	4	20
2	Muscle wasting	8	40	6	30
3	Ophthalmic manifestation	-	-	-	-
4	Hepatomegaly	-	-	-	-
5	Splenomegaly	-	-	-	-
6	Respiratory system	-	-	-	-
7	Cardiovascular system	-	-	-	-
8	Nervous system	3	15	2	10

Out of 20 In-Patients, 30% of the cases had subcutaneous nodules, 40% of the cases had muscle wasting and 15% of the cases had central nervous system involvement.

Out of 20 Out-Patients, 20% of the cases had subcutaneous nodules, 30% of the cases had muscle wasting and 10% of the cases had central nervous system involvement.

13. Individual joints involvement:

Table – 13. Illustrates the incidence of individual joints involvement.

Sl. No.	Joints involved	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Proximal inter phalangeal Joints	20	100	20	100
2	Metacarpo-phalangeal Joints	20	100	20	100
3	Wrist Joint	20	100	20	100
4	Elbow Joint	8	40	9	45
5	Shoulder Joint	5	25	6	30
6	Temporomandibular Joint	-	-	-	-
7	Sternoclavicular Joint	2	10	1	5
8	Cervical spine	3	15	2	10
9	Thoracic spine	-	-	-	-
10	Lumbar spine	2	10	3	15
11	Hip Joint	2	10	1	5
12	Knee Joint	18	90	17	85
13	Ankle Joint	20	100	18	90
14	Meta-tarso phalangeal Joints	12	60	11	55

From the above table it is clear that in all the patients proximal interphalangeal joints, metacarpo-phalangeal joints, wrist joint gets affected.

14. Deformity of Joints:

Table – 14. Illustrates the distribution with respect to Deformity of Joints.

S. No	Deformity	In-Patients		Out-Patients	
		No of cases	Percentage	No of cases	Percentage
1	Swan neck deformity	1	5	2	10
2	Foot deformity	2	10	3	15
3	Boutonniere deformity	1	5	-	-
4	Ulnar deviation of fingers	-	-	1	5

From the table it is clear that in both Out-Patients and In-Patients 15% and 10% of the cases had foot deformity.

Swan neck deformity was seen in 5% of In-patients and 10% of Out-patients.

Boutonniere deformity was seen in 5% of In-patients.

Ulnar deviation of fingers was seen in 5% of Out-patients.

15. Gradation of Pain, Joint swelling and restriction of movements

Table – 15. Illustrates the grades of signs and symptoms.

S. No.	Signs and symptoms	In-Patients						Out-Patients					
		Mild		Moderate		Severe		Mild		Moderate		Severe	
		No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
1	Pain	5	25	8	40	7	35	6	30	10	50	4	20
2	Joint swelling	6	30	9	45	5	25	10	50	8	40	2	10
3	Restriction of movements	5	25	10	50	5	25	7	35	10	50	3	15
4	Muscle wasting	4	20	4	20	-	-	2	10	4	20	-	-

From the above table it is clear that most of the patients have moderate pain, joint swelling and restriction of movements.

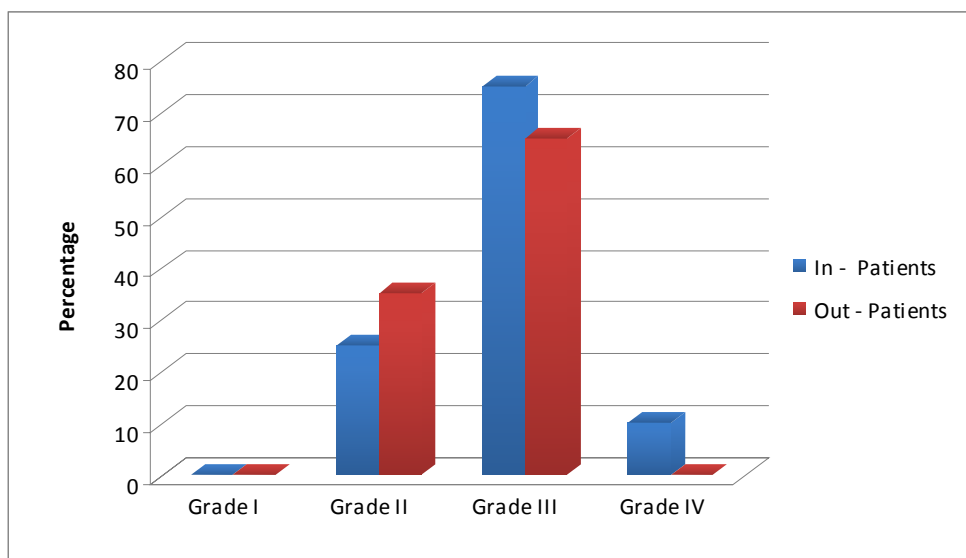
Among 20 In-Patients, muscle wasting is mild in 20% of cases and moderate in 20% of cases. Among 20 Out-Patients, muscle wasting is mild in 10% of cases and moderate in 20% of cases. No severe muscle wasting was noted.

16. Grading of Rheumatoid Arthritis:

Table – 16. Illustrates the Grading of Rheumatoid Arthritis.

SI. No	Grading of rheumatoid arthritis	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	I – no restriction in normal activities	-	-	-	-
2	II – moderate restriction	5	25	7	35
3	III – marked restriction	13	75	13	65
4	IV – confined to bed	2	10	-	-

Most of the cases belong to grade III with marked restriction and inability to perform day-to-day activities.



Grading of Rheumatoid Arthritis

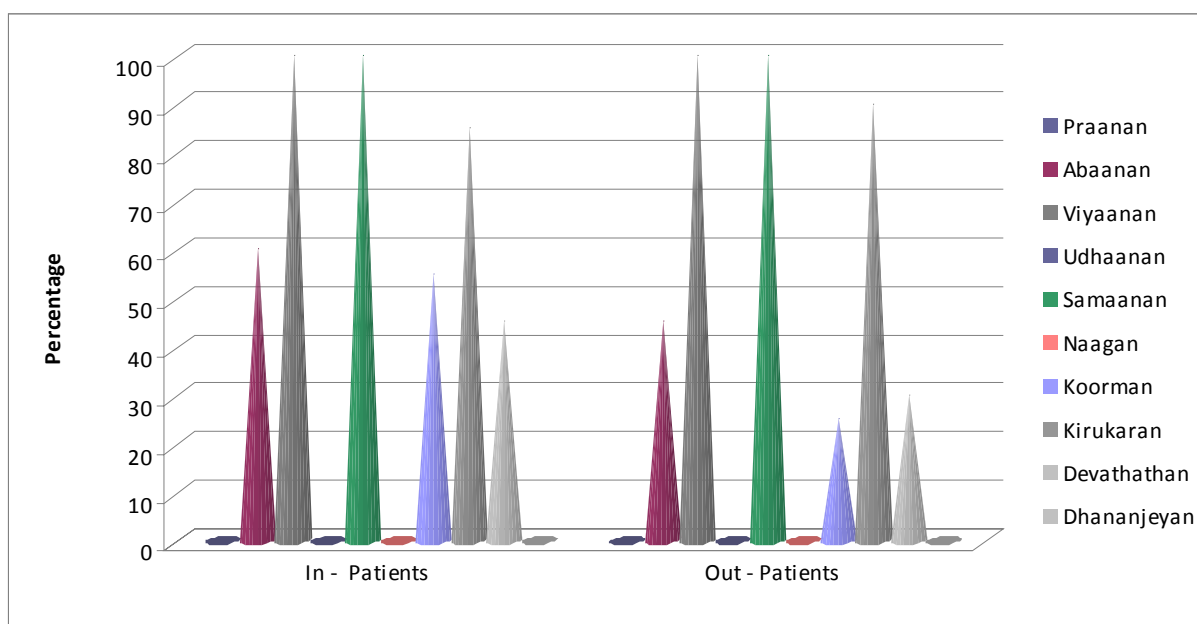
17. Disturbances in Mukkutram:

Table – 17. Illustrates the disturbances in Mukkutram.

a. Disturbances in Vatham:

SI. No	Vatham	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Praanan	-	-	-	-
2	Abaanan	12	60	9	45
3	Viyaanan	20	100	20	100
4	Udhaanan	-	-	-	-
5	Samaanan	20	100	20	100
6	Naagan	-	-	-	-
7	Koorman	11	55	5	25
8	Kirukaran	17	85	18	90
9	Devathathan	9	45	6	30
10	Dhananjeyan	-	-	-	-

In all the cases Viyaanan, Samaanan gets affected.

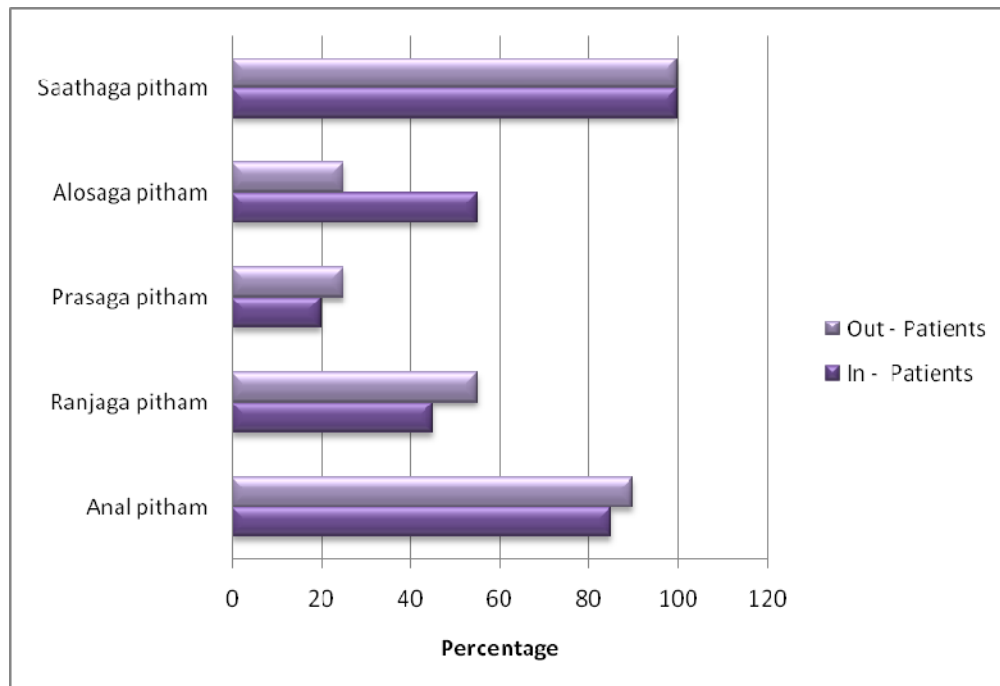


Disturbances in Vatham

b. Disturbances in Pitham:

SI. No	Pitham	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Anal pitham	17	85	18	90
2	Ranjaga pitham	9	45	11	55
3	Prasaga pitham	4	20	5	25
4	Alosaga pitham	11	55	5	25
5	Saathaga pitham	20	100	20	100

All the cases gets affected with Sathaga pitham and in most of the cases Anal pitham gets affected.

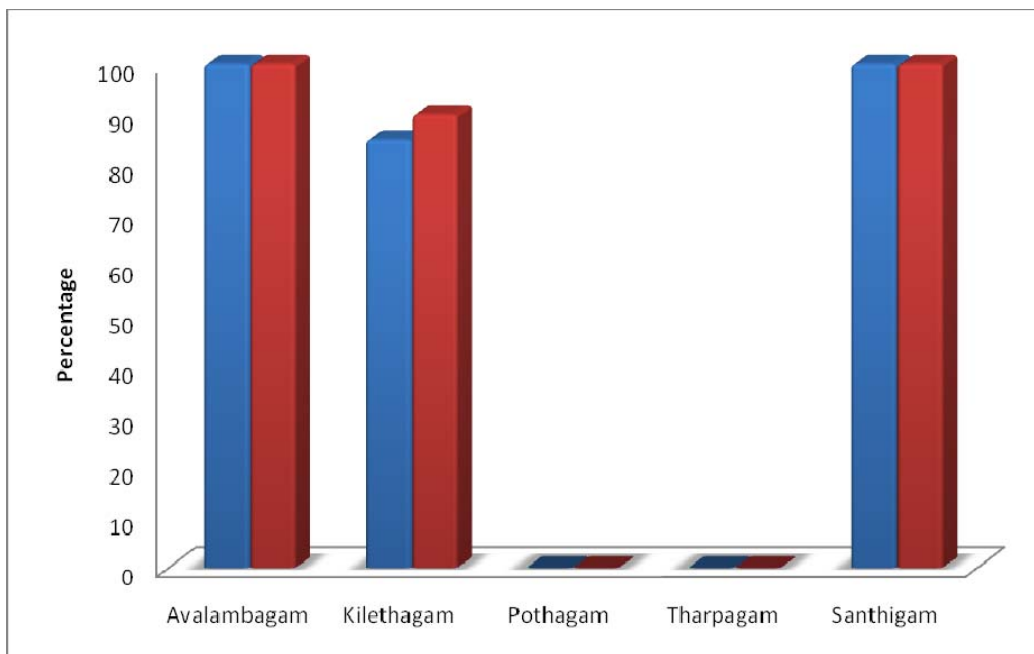


Disturbances in Pitham

c. Disturbances in Kabham:

SI. No	Kabham	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Avalambagam	20	100	20	100
2	Kilethagam	17	85	18	90
3	Pothagam	-	-	-	-
4	Tharpagam	-	-	-	-
5	Santhigam	20	100	20	100

Table shows that all the cases gets affected with Avalambagam and Santhigam.



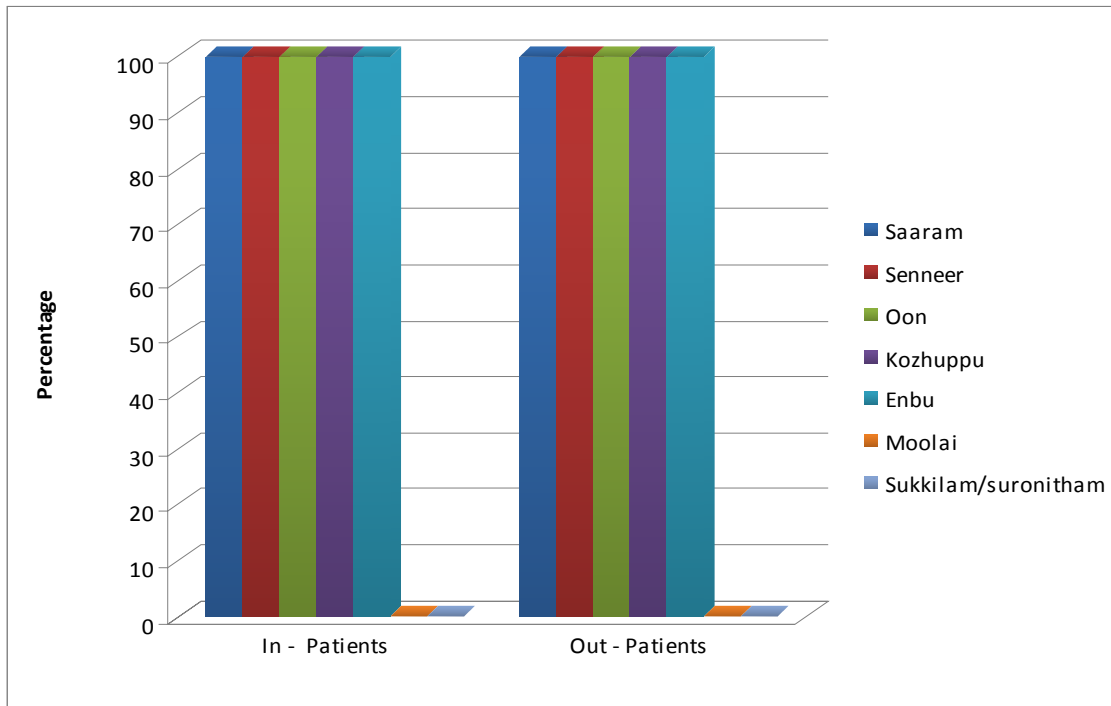
Disturbances in Kabham

18. Involvement of Udal Thathukkal:

Table – 18. Illustrates the Involvement of Seven Udal Thathukkal.

SI. No	Udal thathukkal	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Saaram	20	100	20	100
2	Senneer	20	100	20	100
3	Oon	20	100	20	100
4	Kozhuppu	20	100	20	100
5	Enbu	20	100	20	100
6	Moolai	-	-	-	-
7	Sukkilam/Suronitham	-	-	-	-

Table shows, in all the cases Saaram, Senneer, Oon, Kozhuppu and Enbu gets affected



Disturbances in Udal Thathukkal

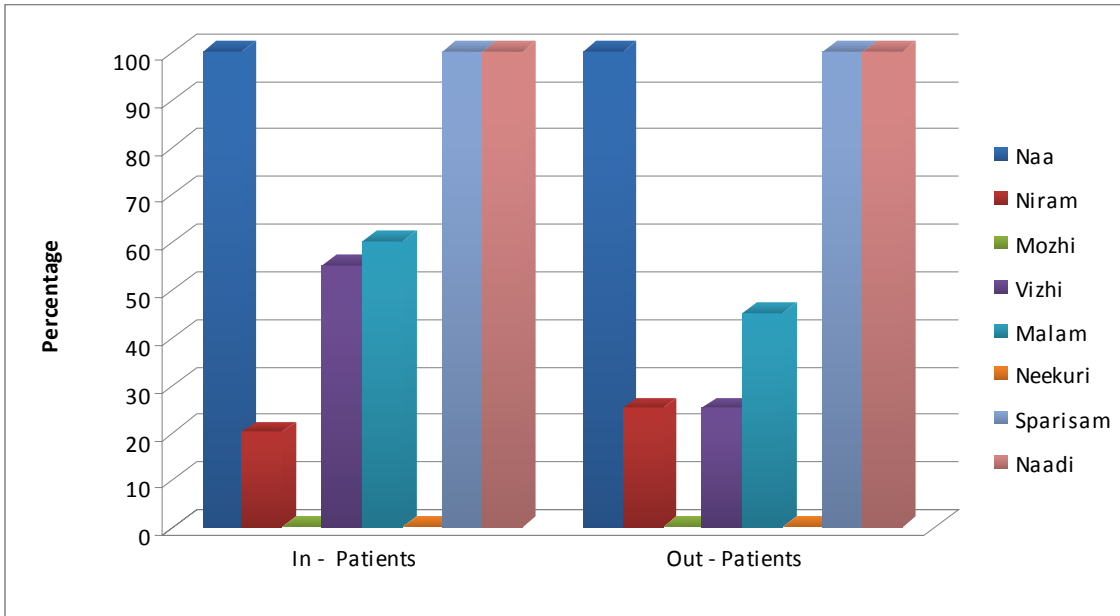
19. Envagai Thervugal:

Table – 19. Illustrates the condition seen in Envagai Thervugal.

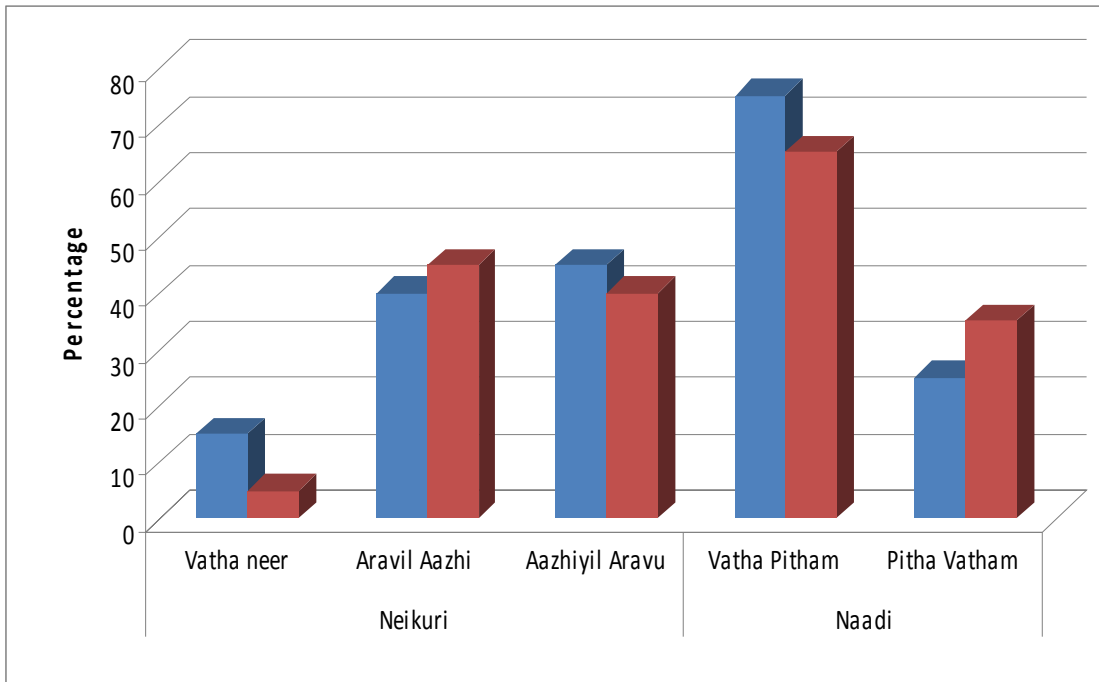
SI. No	Envagai thervugal	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Naa	20	100	20	100
2	Niram	4	20	5	25
3	Mozhi	-	-	-	-
4	Vizhi	11	55	5	25
5	Malam	12	60	9	45
6	Moothiram				
	Neerkuri	-	-	-	-
	Neikuri				
	Vatha neer	3	15	2	10
	Aravil Aazhi	8	40	9	45
	Aazhiyil Aravu	9	45	8	40
7	Sparisam	20	100	20	100
8	Naadi				
	Vatha Pitham	15	75	13	65
	Pitha Vatham	5	25	7	35

In all the cases, Naa, Sparisam gets affected. In all the cases Neerkuri and Neikuri was studied.

Most the cases showed Vatha Pitha Naadi and a few showed Pitha Vatha Naadi.



Envagai Thervugal



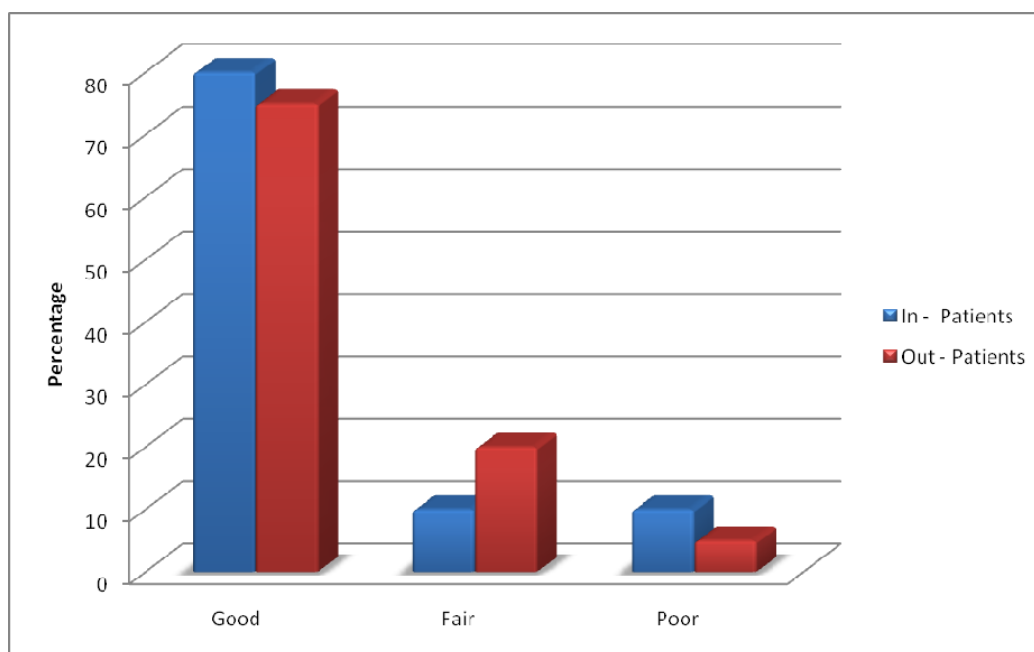
Neikuri and Naadi

20. Gradation of Results:

Table – 20. Illustrates the Gradation of results.

Sl. No	Gradation of results	In - Patients		Out - Patients	
		No. of Cases	Percentage	No. of Cases	Percentage
1	Good	16	80	15	75
2	Fair	2	10	4	20
3	Poor	2	10	1	5

Out of 20 In-Patients, 80% of cases showed good response and 10% cases fair response. Out of 20 Out-Patients, 75% of cases showed good response and 20% of cases showed fair response. Poor response was seen 10% of IP cases and 5% of OP cases.



Gradation of Results

DISCUSSION

“Uthira Vatha Suronitham”, a Vatha disease mentioned by Yugi Muni causes a large burden on society interms of direct costs and indirect costs from psychosocial and economic factors. Despite significant advances over the past decades, Uthira Vatha Suronitham continues to be a challenging disease with exacerbation and remission. The clinical variability of which suggests that it might represent the end result of a number of different disease pathways. Therefore a vigorous search is underwent to find out a new medicine for effective cure.

The characteristic features of “Uthira Vatha Suronitham” are

- Pain and Swelling of peripheral joints.
- Anorexia
- Fatigue
- Fever etc.

The disease has been compared with the “Rheumatoid Arthritis” in modern clinical entity. The similarities of the disease has been studied in detail through their clinical features, diagnostic criteria of American Collge of Rheumatology and investigations.

20 Out-Patients and 20 In-Patients were selected based on both siddha and Modern parameters and were given the trial drugs. The patients were treated for a period of 20-50 days. Out-Patients were

reviewed once in two days and clinical and pathological assessment for In-Patients were carried out daily.

A detailed history including Age, Sex, Socio-economic status, Occupation, Family History, Paruva Kaalam etc were observed regarding their influence in the causation of disease and its aggravation.

Sex Distribution:

Among 20 In-Patients, 25% were males and 75% were females.

Among 20 Out-Patients, 10% were males and 90% were females.

From this study it is clear that the incidence was higher in females than in males indicating Udhira Vatha Suronitham is predominant in females.

Age Distribution:

The study reveals that the incidence of disease was more predominant in 4th, 5th and 6th decades of life which correlates with actual incidence of the disease during 4th and 5th decades mentioned in literature. Further it was concluded that majority of cases were affected in their Pitha Kaalam (i.e. Middle 33 years and 4 months).

Religion:

The incidence is more among Hindus. This may be due to the existence of higher proportion of Hindus in the society.

Thinai:

Out of 20 In-Patients, 95% of the cases were from **Marutha Nilam** and 5% of the cases were from Neithal Nilam, which is prone for vatha

diseases. All the Out-Patients were from Marutha Nilam. According to siddha literature Marutha Nilam is “Disease free zone”. The result does not coincide with the literature. This may be due to alteration in food habits and activities.

Paruva kaalam:

Udhira Vatha Suronitham basically a vatha disease was common during Muthuvenir Kaalam and Kaar Kaalam in which the vatham gets increased. But the incidence of disease gets aggravated in Munpani and Pinpani Kaalam. This is due to variation in food habits, life style and climatic conditions.

Socio-Economic Status:

Majority of the cases belonged to poor economic conditions where malnutrition, lowered immune responses and emotional stress made them more prone to this disease.

Aetiological Factors:

Out of 20 In-Patients, 20% of the cases had positive family history, 35% of the cases had positive previous history and 45% of the cases had miscellaneous causes.

Out of 20 Out-Patients, 15% of the cases had positive family history, 30% of the cases had positive previous history and 55% of the cases had miscellaneous causes. This shows that the aetiology for the cause of the disease remains unknown. However change in food habits,

life style all predispose to the dearrangement of three humors resulting in the causation of disease.

Mode of Onset:

Out of 20 In-Patients, 85% of the cases had gradual onset and 15% of the cases had acute onset.

Out of 20 Out-Patients, 80% of the cases had gradual onset and 20% of the cases had acute onset. Failure to follow medical advice regarding dietary restrictions, stress and strain, change in life style all accounts for the disease to become chronic.

Duration of Illness:

Most of the cases were affected with the duration of illness between 6 – 9 months. 10% of IP cases and 15% of OP cases were affected with duration of illness of more than 1 year.

Clinical Manifestations:

Among 20 In-Patients, all the cases had joint pain, swelling, morning stiffness, restriction of movements and easy fatiguability, 85% of the cases had loss of appetite, 60% of the cases had constipation, 45% of the cases had sleeplessness, 40% of the cases had difficulty in walking, 60% of the cases had fever and 15% of the cases had neck pain.

Among 20 Out-Patients, all the cases had joint pain, swelling, morning stiffness, restriction of movements and easy fatiguability, 90%

of the cases had loss of appetite, 45% of the cases had constipation, 30% of the cases had sleeplessness, 50% of the cases had fever, 10% of the cases had difficulty in walking and 10% of the cases had neck pain.

Joint pain was classified into mild, moderate and severe. Out of 20 In-Patients, mild pain was observed in 25% of the cases, moderate pain in 40% of the cases and severe pain in 35% of the cases.

Out of 20 Out-Patients, mild pain was observed in 30% of the cases, moderate pain was observed in 50% of the cases and severe pain in 20% of the cases.

Swelling of joints was noticed in all the cases and was measured by means of a non-elastic measuring tape. Area of maximum level of swelling around the joints was measured both before and after treatment. The joints subjected to measurements were knee joint, wrist joint, proximal interphalangeal joints of hand.

Out of 20 In-Patients, mild swelling was observed in 30% of cases, moderate swelling in 45% of cases and severe swelling in 25% of cases.

Out of 20 Out-Patients, mild swelling was observed in 50% of cases, moderate swelling in 40% of cases and severe swelling in 10% of cases.

Measurements taken after the treatment reveals that, out of 20 In- Patients 80% of the cases had marked reduction in swelling and 20% of the cases had moderate reduction in swelling. Out of 20 Out-Patients,

65% of the cases under regular treatment had marked reduction in swelling and 30% of the cases had moderate reduction in swelling. After treatment, the early morning stiffness which occurred for a period of 1 – 3 hrs has been reduced to 10 – 20 mins. Restriction of movements were seen in all the cases. Since facilities are inadequate (Goniometer) restriction of movement of the patients were assessed by asking the patients to move the joint in a particular direction. When the active movements were impossible, movements were considered as restricted. After treatment with the trial drug, most of the cases had increased range of movements.

Systemic Examination:

Out of 20 In-Patients, 30% of the cases had subcutaneous nodules, 40% of the cases had muscle wasting and 15% of the cases had nervous system involvement (Exaggerated Deep Tendon Reflexes).

Out of 20 Out-Patients, 20% of the cases had subcutaneous nodules, 30% of the cases had muscle wasting and 10% of the cases had nervous system involvement.

Incidence of Individual Joint Involvement:

Out of 20 In-Patients, all the cases had the involvement of proximal interphalangeal, metacarpo phalangeal joints, wrist joint and ankle joint, 90% of the cases had the involvement of knee joints, 40% of the cases had the involvement of elbow joints, 60% of the cases had the

involvement of metatarso phalangeal joints, 25% of the cases had the involvement of shoulder joints, 10% of the cases had the involvement of sternoclavicular joint, hip joint and lumbar spine and 15% of the cases had the involvement of cervical spine.

Out of 20 Out-Patients all the cases had the involvement of PIP, MCP and wrist joints, 85% of the cases had the involvement of knee joints, 45% of the cases had the involvement of elbow joints and 30% of the cases had the involvement of shoulder joints. Cervical spine and lumbar spine gets affected in 10% and 15% of the cases respectively. This study reveals that in majority of the cases, the smaller and peripheral joints are involved.

Deformity of Joints:

Irregular food habits, change in life style, lack of joint motion, stress all accounts for the deformity of joints.

Among 20 IP cases, 10% of the cases showed foot deformity, 5% of cases showed button hole deformity.

Among 20 OP cases, 15% showed foot deformity, 10% showed swan neck deformity, 5% showed ulnar drift of hand.

Grading of Rheumatoid Arthritis (Functional status):

Grading of rheumatoid arthritis was done to assess the severity of the disease.

- Grade I** - No restriction to perform normal activities.
- Grade II** - Moderate restriction but with adequate ability to perform most of the activities of day-to-day life despite some discomfort or limitation of motion.
- Grade III** - Marked restriction with inability to perform most activities of daily life, occupation.
- Grade IV** - Incapacitation, with confinement to bed or wheel chair.

Among 20 In-Patients, 25% of the cases belonged to Grade II, 75% of the cases belonged to Grade III and 10% of the cases belonged to Grade IV.

Among 20 Out-Patients, 35% of cases belonged to Grade II and 40% of the cases belonged to Grade III.

Disturbances in Vatham:

Among 20 In-Patients and 20 Out-Patients, Viyaanan and Samaanan gets affected in all the cases leading to pain and restriction of movements in joints. Abaanan gets affected in 60% of In-Patients and 45% of Out-Patients producing constipation. Koorman gets affected in 55% of In-Patients and 25% of Out-Patients leading to disturbance of vision due to cataract formation. Kirukaran gets affected in 85% of In-Patients and 90% of Out-Patients producing loss of appetite.

Devathathan was dearranged in 45% of In-Patients and 30% of Out-Patients producing sleeplessness.

Disturbances in Pitham:

Among 20 In-Patients and 20 Out-Patients, Saathaga Pitham was affected in all the cases causing difficulty in carrying out day-to-day activities, Anal Pitham was affected in 85% of In-Patients and 90% of Out-Patients causing loss of appetite. Ranjaga Pitham was affected in 45% of In-Patients and 55% of Out-Patients producing anaemia. Prasaga Pitham was affected in 20% of In-Patients and 25% of Out-Patients producing pallor of the skin. Alosaga Pitham was affected in 55% of In-Patients and 25% of Out-Patients causing disturbance of vision due to cataract formation in the eyes.

Disturbances in Kabham:

Among 20 In-Patients and 20 Out-Patients, Avalambagam and Santhigam gets affected in all the cases. Affected Santhigam causes pain and swelling of joints. Kilethagam gets affected in 85% of In-Patients and 90% of Out-Patients leading to loss of appetite. Since Santhigam and Kilethagam gets affected, Avalambagam also gets dearranged.

Involvement of Seven Udhal Thathukkal:

Among 20 In-Patients and 20 Out-Patients, Saaram, Senneer, Oon, Kozhuppu and Enbu was affected in all the cases.

Affected Saaram produced fatigue in patients.

Affected Senneer produced reduction in udal vanmai

(Anaemia, increased ESR, positive rheumatoid factor).

Affected Oon produced muscle wasting.

Affected Kozhuppu produced restriction of movements in joints.

Affected Enbu produced joint pain, joint deformity.

Envagai Thervugal:

Among 20 In-Patients and 20 Out-Patients, 50% of IP cases and 60% of OP cases showed Vatha Pitha Naadi, 50% of IP cases and 40% of OP cases showed Pitha Vatha Naadi. Naa was affected in all the cases producing coated tongue due to constipation or paleness of the tongue due to anaemia.

Niram was affected in 20% of In-Patients and 25% of Out-Patients producing pallor of the skin due to anaemia.

Vizhi was affected in 55% of In-Patients and 25% of Out-Patients producing pallor of conjunctiva due to anaemia and in a few disturbance of vision due to cataract formation.

Malam was affected in 60% of In-Patients and 45% of Out-Patients producing constipation.

Sparisam was affected in all the cases producing swelling, hyperaemia and warmth in the painful joints and also pallor of skin due to anaemia.

Regarding Moothiram, neerkuri was normal in all the cases. Neikuri showed Vatha Neer (Spread like snake) in 15% of In-Patients and 10% of Out-Patients.

40% of In-Patients showed thontha neer with Aravil Aazhi pattern and remaining 45% of In-Patients showed thontha neer with Aazhiyil Aravu appearance.

Among the 95% of Out-Patients, 45% showed thontha neer with Arvil Aazhi appearance and 40% showed thontha neer with Aazhiyil Aravu appearance.

Investigations:

Among 20 In-Patients and 20 Out-Patients, 45% and 55% of the cases showed decreased Hb% respectively. All the cases showed increased ESR. Blood sugar was found to be high in 10% of IP cases and 5% of OP cases. All others showed normal blood sugar, urea, serum cholesterol and serum bilirubin. RA factor was positive in 60% of Out-Patients and 55% of In-Patients. Anti-Nuclear Antibodies (ANA) test was done in 2 cases and showed positive results. Synovial fluid analysis was done in One Patient in a private lab to differentiate inflammatory arthritis. It showed abnormalities like increased leucocyte count, presence of mucin clot etc. and confirmed the presence of inflammatory arthritis. At the end of the

treatment there was mild rise in Hb%, decrease in ESR and normal blood sugar.

X-ray of both hands with wrist joints was taken in all the cases and it showed soft tissue swelling, reduction in joint spaces, synovial thickening, periarticular erosion, osteoporosis, deformities etc confirming Rheumatoid arthritis. X-ray of cervical spine of few patients showed cervical spondylosis.

Management:

The main aim of treatment is to keep the Trithodam in equilibrium state, and to keep the inflammatory process at a minimum there by preserving joint motion, maintaining healthy muscles and preventing secondary joint stiffness and deformity, constitutional symptoms at a minimum.

“விரேசனத்தால் வாதம் தரமுடும்”

Hence all the patients were given Agasthiyar Kulambu – 130mg with Inji Surasam and were put on diet to take only butter milk. The trial drug was given from the next day of viraesanam.

1. Internally:

Kirubagara Shanmuga Chenduram – 130mg with Chukku, Milagu and Omam Choornam 1gm with Murungai Pattai Chaaru, twice daily. In cases with mild inflammation the drug was given for

a period of 20 days and the results were favouring. In severe joint inflammation the drug was given for a period of 20 days. A gap of 5 days was given and were advised to take head bath with omam. Again the course was started for a period of 20 days. So severe cases were treated for about 48-50 days.

2. Externally:

Vathathirkku Poosa Nochi Ennei was used for external application. All the In-Patients were given thokkanam with the medicated oil. Ottradam was done over the inflammatory joints using Tamarind leaves, Vatha Narayanan leaves in few cases.

The patients were advised to follow

- Dietic restrictions
- Savasanam for 10 minutes
- Deep relaxation technique for 20 minutes
- Physical exercises and
- Life style modifications

The ingredients of Kirubaga Shanmuga Chenduram were known to possess Anti Vatha Property. Further the drugs also holds the action of Deobstruent, Febrifuge, Alterative, Nutrient etc, all of which contributes to the bringing down of vitiated humors to equilibrium state. Further the drug is administered with Chukku, Milagu and Omam Chooranam along with Murungai Pattai Charu

all of which possess Anti Vatha Property in particular Milagu as got anti vatha action. This inturn helps to pacify the vitiated vatham, there by bringing down the other vitiated humors to equilibrium state.

வாதநோய் ஹாரம்:

"அரத்தையோ டிருமஞ்சள் கோஷ்டம் மிந்தும்
 அகில் தேவதார முடனாம் பலிண்டும்
 ஆயிலுடன் புங்கெருக்கு முதியோர் கூந்தல்
 அறுகன் வேரட்டவர்க்கஞ் சதுரக்கள்ளி
 உரத்த சிறுமுட்டியுடன் பேராமுட்டி
 யுளுந்துடனே கொள்ளதுவின் குடிநீர் நொச்சில்
 ஓங்கு மாவிலங்கை தசமுலங்கள்ளி
 யுயர் குப்பைமேனி கரும்போளங் காயம்
 பருத்திவிரை நல்லெண்ணெய் வேம்பினைண்ணெய்
 பகர் சிற்றாமணக்கெண்ணெய் விளக்கினைண்ணெய்
 பரிவிறுந் தழுதரழை கழறுழாயும்
 பருங்கிரந்தி தகரமுடன் சரளங்குக்கில்
 வருத்தமறு சதகுப்பை யிலந்தை வித்தும்
 மருதணியுஞ் சாரணை குங்கிலியம் வீழி
 வரசமுறும் பூங்குழலாய் சொல்லக்கேளாய்
 வாதத்தின் ஹாரங்களை வகுத்ததாமே"

- அகத்தியர் வைத்திய சதகம், பக்கம் - 40

The drugs that are included in the preparation of Nochi Ennei, Viz, Nochi, Erukku, Koshtam, Sathakuppai, Gingelly oil were known to possess Anti Vatha property thus helping in harassing of Vatha disease.

Pre-clinical screenings:

Qualitative analysis of Trial Medicines:

The trial medicine Kirubagara Shanumaga Chenduram is found to contain the following constituents, Calcium, Sulphate, Chloride, Ferrous iron, Unsaturated compound, Mercury all of which owes to its action.

Calcium constituent is important for the formation of bones and helps in treating the osteoporotic changes that occurs in Uthira Vatha Suronitham.

Iron constituent, essential for the synthesis of Haemoglobin is present in the trial medicine in Ferrous form. This form of iron is more soluble and gets readily absorbed from the intestinal lumen.

Pharmacological Analysis:

Pharmacological studies of trial medicine, Kirubagara Shanmuga Chenduram showed that it has got significant Analgesic, Anti-pyretic and Anti inflammatory action in Albino rats.

Pharmacological study of Vathathirkku Poosa Nochi Ennei showed that it has got significant Anti inflammatory action in albino rats.

Toxicological Analysis:

Toxicological studies of trial medicine proved that the medicines did not produce any untoward effects in Acute toxicity study done on albino rats.

Assessment of Effects of Management:

All the 20 In-Patients and 20 Out-Patients were treated with the trial medicines. The results were assessed on the basis of subjective and objective improvement in the range of movements, reduction in pain, swelling, reduction in erythrocyte sedimentation rate and sense of well being. At the end of treatment the results were categorized as follows.

- Good** - Complete subsidence of pain, disappearance of swelling, improvement in general health and normal range of movements of the extremities.
- Fair** - Relief of pain, reduction in swelling and increased range of movements.
- Poor** - No improvement.

American College of Rheumatology indicates a responder who has showed improvement in the following parameters.

Improvement in joint counts and improvement in three of the following.

1. Patient assessment
2. Physician assessment

3. Erythrocyte sedimentation rate
4. Pain scale
5. Functional questionnaire

Among 20 In-Patients,

80% of the cases showed good response.

10% of the cases showed fair response.

10% of the cases showed poor response.

Among 20 Out-Patients,

75% of the cases showed good response.

20% of the cases showed fair response.

5% of the cases showed poor response.

The Poor response is due to lack of dietic restrictions and change in life style.

After discharge, the patients were advised to attend the Out-Patients ward of Post Graduate, Podhu Maruthuvam Department for further follow up. During the treatment, dietic restrictions was strictly followed. Patients were instructed to avoid exposure to chill weather and to take bath in warm water.

SUMMARY

Aetiology, pathology, pathogenesis, clinical features, course, prognosis of disease were collected from a number of literature both in siddha system as well as in modern system of medicine. The aetiology lies in the altered equilibrium of three humors (especially vitiated vatham) with increased incidence during Pitha Kaalam (4th, 5th decades).

The study was done in 40 patients of either sex of varying age groups who fulfilled the stipulated criteria. Out of which 20 patients were admitted in the In-Patient ward and 20 patients were treated as Out-Patients. Diagnosis was done after the evaluation of history, clinical features, Envagai thervugal and lab results. Clinical and pathological assessment was carried out on the basis of both siddha and modern aspects.

Trial Medicines were prepared after proper purification. All the patients were treated with Kirubagara Shanmuga Chenduram – 130mg with 1gm of Chukku, Milagu and Omam Choornam with Murungai Pattai Chaaru twice daily along with the external application of Vathathirkku Poosa Nochi Ennei. Patients were observed for 20-50 days. The responses were assessed once in two days for Out-Patients and daily for the In-Patients. No untoward effects were observed clinically in any of these cases. During the course of treatment, patients were advised to

follow dietic restrictions, yoga therapy, physical exercises and life style modifications. Clinically marked reduction of pain and swelling in joints, reduction in early morning stiffness, increase in the range of movements, along with the sense of well being was noted. The laboratory investigation results were also encouraging after the treatment.

The ingredients of the trial medicine were found to have anti-vatha property pharmacological analysis of the trial drug showed significant Analgesic, Anti-pyretic and Anti-inflammatory action. The external drug was also found to possess significant Anti – inflammatory action.

Qualitative Analysis of Medicine showed the presence of calcium, sulphate, chloride, ferrous iron, unsaturated compound, mercury which owes its action.

Toxicological studies revealed the safety of the medicine in acute toxicity.

CONCLUSION

Preclinical studies showed significant activity and safety of the trial drug. Treatment of Uthira Vatha Surnoitham patients with the trial drugs showed remarkable improvement in reducing the pain and inflammation of joints. No untoward effects were reported during the treatment period.

Further followup with trial medicines showed improvement in generalized well being as they could carry out their day-to-day activities better than earlier.

Because of the encouraging results both preclinically and clinically, it is concluded that treatment of Uthira Vatha Suronitham patients with the trial drugs, Kirubagara Shanmuga Chenduram, Vathathirkku Poosa Nochi Ennei will be very effective in the point of efficacy and safety.

ANNEXURE - I

PREPARATION AND PROPERTIES OF INTERNAL MEDICINE

KIRUBAGARA SHANMUGA CHENDURAM

வாலை ரசம்	- 1 பலம் (35கி)
இலிங்கம்	- 1 பலம் (35கி)
வீரம்	- 1 பலம் (35கி)
பூரம்	- 1 பலம் (35கி)
தாளகம்	- 1 பலம் (35கி)
கந்தகம்	- 1 பலம் (35கி)
மனோசிலை	- 1/4 பலம் (8.75கி)

சுத்திமுறைகள்:

வாலை இரசம் எடுக்கும் விதம்:

சித்திர மூலவேர்ப்பட்டை நான்குபங்கு எடுத்து இடித்து இலிங்கத் தூள் 1 பங்கு சேர்த்து பதங்கக் கருவியில் இட்டு முறைப்படி எரிக்க, இரசம் மேற்சட்டியில் ஒட்டிக்கொள்ளும் இதை பிரித்து எடுத்து சேகரித்துக் கொள்ளவும். பின்பு இதனை ஒரு தூய துணியில் இட்டு பிழிந்தெடுக்கவும் இதற்கு வாலை இரசம் என்று பெயர்.

இலிங்கம்:

பழச்சாறு, பசும்பால், குப்பைமேனிச்சாறு, இம்மூன்றையும் சமஎடை கூட்டி இலிங்கத்திற்கு சுருக்கிட்டு எடுக்க சுத்தியாகும்.

வீரம்:

இளநீரில் சிறிது சூடனைக் கலந்து ஒரு பாணையில் இட்டு வீரத்தைக் துலாயந்திரமாக நீரில் படாமல் அரைமணி நேரம் எரித்து எடுக்க சுத்தியாகும்.

பூரம்:

கம்மாறு வெற்றிலை, மிளகு ஆகிய இரண்டையும் $\frac{1}{4}$ பலம் வீதம் எடுத்து சிறிது நீர் விட்டு அரைத்து கற்கத்தை 1 படி நீரில் கலந்து 1 பலம் பூரத்தை சீலையில் முடிந்து துலாயந்திரமாக நீரில் அமிழும் படி செய்து சிறு தீயால் எரிக்கவும். நீர் $\frac{3}{4}$ பங்கு சுண்டிய பிறகு பூரத்தை எடுத்து கழுவி வெயிலில் உலர்த்தி எடுக்க சுத்தியாகும்.

கந்தகம்:

கந்தகத்தை ஒரு இரும்பு கரண்டியில் இட்டு சிறிது பசு வெண்ணெய் இட்டு உருக்கி பசும்பாலில் சாய்க்கவும். இவ்விதம் 30 முறை செய்ய சுத்தியாகும். ஒவ்வொரு முறையும் புதிய பாலை உபயோகிக்க வேண்டும்.

தாளகம்:

1 பலம் தாளகக் கட்டி எடுத்து சுண்ணாம்புக் கல்லின் இடையில் வைத்து பனங்கள்ளினால் பத்து தரம் தாளித்து எடுத்து கழுவி உலர்த்திக் கொள்ள சுத்தியாகும்.

மனோசிலை:

மனோசிலைக்கு எலுமிச்சம் பழச்சாறு விட்டு 1 சாமம் அரைத்து உலர்த்தி எடுத்துக் கொள்ள சுத்தியாகும்.

செய்முறை:

இரசம், கந்தகம் நீங்கலாக மற்ற சரக்குகளை கல்வத்திலிட்டு கம்மாறு வெற்றிலைச் சாறு தெளித்து அரைக்கவும். கந்தகத்தை தனியாக கல்வத்திலிட்டு கம்மாறு வெற்றிலைச் சாறு சிறிது சிறிதாக விட்டு குழம்பு

பதமாக அரைத்து ஒரு சிறு குடுவையின் உட்புறத்திலும் வாய்மூடி அகலின் உட்புறத்திலும் சந்தில்லாமல் பூசி நிழலில் உலர்த்தி அதனில் முன் அரைத்து வைத்துள்ள தூளில் 3/4 பாகமிட்டு அழுத்தி நடுவே பள்ளம் செய்து அதனில் வாலை இரசம் விட்டு மிகுதியுள்ள தூளை போட்டு அழுத்தி மேல் மூடி மண்சீலை ஏழு செய்து நிழலில் உலர்த்தவும்.

இரண்டு படி சோற்றுப்பை வறுத்து அதனுடன் பத்து பலம் பிரண்டையை கூட்டி இடித்து பிசறி இவை கொள்ள தக்க ஒரு மட்குடுவையில் மூன்று விரல்கடை உயரம் போட்டழுத்தி, சீலை செய்து வைத்துள்ள சிறு குடுவையை நடுவில் வைத்து மிகுதியுள்ள உப்பை மேலே கொட்டி பரப்பி அழுத்தி வாய்க்கு ஓடு கொண்டு மூடி மண்சீலை செய்து உலர்த்தி அடுப்பில் ஏற்றி ஒரு சாமம் தீபாக்கினியாகவும், ஒரு சாமம் கமலாக்கினியாகவும், இரண்டு சாமம் காடாக்கினியாகவும் எரித்து ஆறவிட்டு பார்க்க குடுவையில் சிவந்து உருகி இருக்கும். இதை அரைத்து சீசாவில் பத்திரப் படுத்தவும்.

அளவு, அனுபானம், தீரும் நோய்:

பலவித வாத ரோகங்கள், உட்குத்து, புறவீச்சு, இவற்றிக்கு,

சுக்கு

மிளகு

ஓமம்

குரணத்தில், திரிகடி பிரமாணம் எடுத்து,

முருங்கைப்பட்டை சாறு கூட்டி கலந்து

1/2 - 1 குன்றி (65மி.கி - 130மி.கி) எடை செந்தூரம், இரு வேளை, 20

நாள் தர குணமாகும்.

ஆதாரம்:

பதார்த்த குணவிளக்கம் - தாது சீவ வகுப்பு, பக்கம் - 55.

PREPARATION OF EXTERNAL MEDICINE

வாதத்திற்கு பூச நொச்சி எண்ணெய்:

“நொச்சிச் சாறு நானாழி நேரதா யெண்ணெய்யுக்கு
பச்சைத் தகரம் வெண்கோஷ்டம் பகரும் குப்பை யெருக்கம்வேர்
கச்சக் கட்டு முலையாளே காய்ச்சி வடித்து மேல்பூசக்
குத்திக் குடையும் வாதமெல்லாம் கூகூ வென்று குடிபுகுமே.”

- ▶ தகரை விதை - 6 விராகனெடை (25.2கி)
- ▶ வெள்ளைக்கோஷ்டம் - 6 விராகனெடை (25.2கி)
- ▶ சதகுப்பை - 6 விராகனெடை (25.2கி)
- ▶ எருக்கன்வேர் - 6 விராகனெடை (25.2கி)
- ▶ நொச்சிச்சாறு - 4 படி (8 லி)
- ▶ நல்லெண்ணெய் - 5 உழக்கு (1680 மி.லி)

செய்முறை:

தகரை விதை, வெள்ளைக்கோஷ்டம், சதகுப்பை, எருக்கன்வேர் இவற்றை
இடித்து எடுத்துக் கொள்ளவும். நொச்சிச்சாறு, நல்லெண்ணெய் இவற்றுடன்
மேற்கண்ட பொடியை சேர்த்து எரித்துக்கொண்டு, பதத்தில் இறக்கி வடிகட்டிக்
கொள்ளவும்.

தீரும் நோய்:

வலியோடு கூடிய வாயு, வீக்கத்தில் பூசவும். உடனே வலி நிற்கும்.

ஆதாரம்:

வைத்திய திரட்டு (குஞ்சாவூர் சரஸ்வதி மஹால் வெளியீட்டு எண் - 184,
பக்கம் - 4).

PROPERTIES OF THE TRIAL DRUG

I. KIRUBAGARA SHANMUGA CHENDURAM.

1. இரசம்:

Synonyms	- Kaaram, Soodham, Punniyam, Karpam, Samam, Sathu, Eesan, Vinnineer, Vinmarunthu, Sukkilam, Gnanam. (Ref: Dhasanga Nigandu)
Common Name	- Quick Silver, Mercury
Chemical Name	- Hydrargyrum
Suvai	- All the six tastes chiefly of sweet taste
Veeriyam	- Veppam, Seedha Veeriyam
Pirivu	- Attains the Pirivu of the adjuvent in which it is administered
Action	- Alterative, Tonic, Diuretic, Deobstruent and Sialogogue

It is the chief metallic element in siddha system of medicine known by the name of Sivam, that which takes mankind beyond the reach of diseases. It is appreciated well as the emperor of all the drugs in siddha system. As this includes the tri duty of the omni-potent, in rejuvenating the body, it is almost kept in line with HIM.

Gunam:

“சிவலிந்தா மிசஞ் செய்யுஞ் செய்யநற் குணங்கள் செப்பில்

.....”

“பெருரோக மேகங் காசம் பிளவை காமாலை சூலை

சுரமகோ தரங்கி ரந்தி சொல்வலி வாதங் குன்மம்

மரிமுறி கிரந்தி பாண்டு மார்படைப்பு யோனிப்புற்று.”

- பதார்த்த சூடாமணி பாடல் எண் 287, 288.

இரசத்தால் மேகம், காசம், பிளவை, காமாலை, சூலை, மகோதரம், சுரம், கிரந்தி, வாதநோய்கள், வலி, குன்மம், பாண்டு, மார்படைப்பு, யோனிப்புற்று முதலிய நோய்கள் தீரும்.

2. இலிங்கம்:

Synonyms : Inguligam, Kadaivanni karpam,
Sandagam, Samarasam, Maniraagam,
Vanni, Aankuri.

Common Name : Cinnabar

Chemical Name : Red sulphide of Mercury

Veeriyam : Veppam

Action : Alterative

Gunam:

“சாதிலிங் கத்தின் றன்மை சாற்றிடிற் குணமே யாதி

சூதரே ராகுங் குட்டஞ் சூலைதீக் குன்மங் குத்து

வாதமே வலி சுரங்கள் வளர்சன்னி பாண்டு வாயு

ஓதிடுங் கோழை யீழை யுரை தரு மிவையே யாதி.”

- பதார்த்த குண சூடாமணி பாடல் எண். 291

இலிங்கம் குட்டம், சூலை, குன்மம், வாதம், வலி, சுரம், சன்னி, பாண்டு முதலிய பிணிகளை நீக்கும்.

3. பூரம்:

Synonyms	- Rasakarpooram
Chemical Name	- Hydragyrum subchloride
Suvai	- Salt and Acrid
Veeriyam	- Veppam
Pirivu	- Acrid
Action	- Alterative, Sialogogue, Antiseptic

Gunam:

“இடைவாத சூலை யெரிசூலை குன்மந்
தொடைவாழை வாதமஞ் சேணி-யிடையாதே
வொக்குரசு கர்ப்பூர மொன்றே யளவொடுநல்
இக்குவெல்லத் தேழுநா ளீ.”

- குணப்பாடம் தாதுசீவம், பக்கம் - 210

நல்ல இரசு கர்ப்பூரத்தை அளவுடன் கரும்பு வெல்லத்தில் ஏழுநாள்
கொடுக்க இடுப்பை பற்றிய சூலை, எரிச்சலை தருகின்ற சூலை, வாத குன்மம்,
தொடை வாழை, வாத இரத்த நோய் முதலியன தீரும்.

4. வீரம்:

Synonyms	- Meenakshi myndhan, Saarithin sathru, Parimithru, Sarakuchunnam, Cochiveeran
Chemical Name	- Hydragyrum perchloride
Suvai	- Acrid and salt

Veeriyam	- Veppam
Pirivu	- Acrid
Action	- Alterative, Antiseptic, Disinfectant, Caustic.

Gunam:

“கரமண்ட வாயு சன்னி தொடர்வலி குமர கண்டன்
வருவிஷக் கண்ட மரலை வாதம்விற் புருதி கோழை
உரைபெரு நோய்க ரப்பனுட் குத்துப் புறவீச் சீழை
சருவிய கிரந்தி குட்டஞ் சவ்வீர்ந் தொலைக்கு மாமே.”

- பதார்த்த சூடாமணி, பாடல் எண்- 299

சுரம், அண்டவாயு, சன்னி, குமரகண்டவலி, கண்டமாலை, வாதம்,
தொடர்வலி, கரப்பான், உட்குத்து, புறவீச்சு, கிரந்தி, குட்டம் முதலிய
நோய்களை நீக்கும்.

5. கந்தகம்:

Synonyms	- Kaarilaiyin naadham, Sakthi, Sendoorathathi, Deviuram, Ponvarni, Rasasuronitham.
Common Name	- Brim stone
Chemical Name	- Sulphur
Action	- Cholagogue, Laxative, Alterative, Antiseptic, Diaphoretic

- Gandakam is of four types according to its colour viz, White, Red, Golden and Black colour.
- The sulphur which is golden colour (Nellikai Gandakam) is used as medicine.

Gunam:

“நெல்லிக்காய் கெந்த கத்தி னெறிகேளாய் கவுசி குன்மம்
வல்லதாய் வாயு குட்டம் வலிவிடங் கடுங்கி ரந்தி
சொல்லிடுஞ் சுரங்க னெல்லாந் தொலைந்திடு மென்று முன்னர்
பல்வகை முனிவர் சித்தர் பகர்ந்தவா கடங்கள் சொல்லும்.”

- பதார்த்த சூடாமணி பாடல் எண் - 298

குன்மம், வாயு, குட்டம், கிரந்தி, சுரம், வலி முதலியன நெல்லிக்காய் கந்தியால் தீரும்.

6. மனோசிலை:

Synonyms	- Silai, Vil, Kunadi, Naan mugan, Devi, Thamarai-vasini, Sarasothi
Common Name	- Red orpiment, Realgar
Chemical Name	- Bisulphuret of arsenic
Action	- Alterative, Febrifuge, Nutrient

Gunam:

“புகன்மனோ சிலையின் நன்மை பெறல்லாத சன்னி வாயு
இகலான சுரமே வாத யிவைதமை நீக்கு மென்ப.”

- பதார்த்த சூடாமணி பாடல் எண் - 294.

சன்னி, வாயு, சுரம், வாதம், முதலியன மனோசிலையால் தீரும்.

7. தாளகம்:

Synonyms	- Peethagi, Aalambi, Maalam, Aridharam, Ponvarni, Maaldevi.
Common Name	- Yellow orpiment
Chemical Name	- Tri sulphuret of arsenic
Action	- Febrifuge, Alterative, Nutrient, Emetic, Expectorant, Antidote.

Gunam:

“தாளகந் தாளே யல்ல தரிதார மதன்கு ணங்கேள்
கேள்செயுங் குன்ம மல்லாற் கொடுமழு கண்ணி சன்னி
நாளுமே வருந்துகின்ற மண்டைநோய் நளிராந் காய்ச்சல்
மாளுமென் றுரைத்தாந் முன்னே வாகுதி யுண்ட மேலோந்.”

- பதார்த்த சூடாமணி பாடல் எண் - 295

தாளகத்தால் குன்மம், அழுகண்ணி, சன்னி, மண்டைநோய், காய்ச்சல்

முதலியன தீரும்.

துணை மருந்து:

1. சுக்கு:

English Name	- Dried Ginger
Botanical Name	- Zingiber officinale
Family	- Zingiberaceae
Part used	- Dried and scraped rhizome
Suvai	- Acrid

Thanmai	- Veppam
Pirivu	- Kaarppu
Constituents	- Camphene, Phellandrene, Zingiberine, Cineol, Borneol, Gingerol, Oleo resin – Gingerin, the active principle.
Action	- Stimulant, Stomachic, Carminative

Gunam:

“கேள்சுக்கின் குணத்தைச் சூலை கொடுகபம் வாத வீக்கம்

.....

மூள்வலி மூன்று தோஷம் முச்சுரந் தலைநோ யின்னும்”.

- பதார்த்த சூடாமணி பாடல் எண் - 277

சுக்கினால் சூலை, கபம், வாதவீக்கம், நீர்க்கோவை, மந்தம், குன்மம், இருமல், சுவாசகாசம், தோடம் முதலியன நீங்கும்.

2. மிளகு:

English Name	- Black pepper
Botanical Name	- Piper nigrum
Family	- Piperaceae
Part used	- Dried unripe fruit
Suvai	- Bitter, acrid
Thanmai	- Veppam
Pirivu	- Acrid
Constituents	- Piperine, piperidine, chavicin, a soluble pungent resin. Piperine possess mild anti pyretic and antiperiodic action.

Action - Acrid, Carminative, Antiperiodic,
Resolvent, Rubefacient, Stimulant,
Antivatha, Antidote.

Gunam:

“வாதம் அருசிபித்தம் மரமூலம் ஓதுசன்னி
யாசமபஸ் மாரம் அடன்மேகம் காசமிவை
நாசங் கறிமிளகினால்.”

- பதார்த்த சூடாமணி.

மிளகினால் பாண்டு, கபம், கிராணி, குன்மம், வாதநோய்கள்,
பித்தம், மூலம், சன்னி, அபஸ்மாரம், மேகம், காசம், முதலியன நீங்கும்.

3. ஓமம்:

English Name - Bishops weed
Botanical Name - Carum copticum, Benth
Family - Umbelliferae
Part used - Seeds
Constituents - Essential oil, thymol
Action - Stomachic, Antispasmodic,
Carminative, Antiseptic, Stimulant,
Tonic, Sialogogue.

Gunam:

“ஓமம் கூறரும் வலியே வாயு
கறையுற்ற விரைச்சன் மந்தங் கழிச்சலு மாரற்று மென்ப”

- பதார்த்த சூடாமணி, பாடல் எண் - 240

இதனால் வலி, வாயு, இரைப்பு, மந்தம், கழிச்சல் குணமாகும்.

அனுபானம்:

1. முருங்கைப்பட்டை

Botanical Name	- Moringa oleifera
Family	- Moringaceae
Part used	- Stem bark
Suvai	- Bitter, Astringent, Sweet.
Thanmai	- Thatpam
Pirivu	- Acrid
Constituents	- 4-benzylisothiocyanate alkaloid, Resin

Gunam:

“வாய்வொடுவி டங்களுமேற்
பட்டைக்குப் போமே பறந்து”

- குண பாடம் - மூலிகை, பக்கம் - 773

முருங்கை மரப்பட்டையினால் வளிக்குற்றமும், சில நஞ்சுகளும் நீங்கும்.

II. VATHATHIRKU POOSA NOCHI ENNEI

1. நொச்சி:

Botanical Name	- Vitex negundo
Family	- Verbenaceae
Part used	- Leaves
Suvai	- Bitter, Astringent, Acrid

Thanmai	- Veppam
Pirivu	- Acrid
Constituents	- Essential oil, resin
Action	- Leaves are externally Anti – parasitic.

Gunam:

“வந்தமுதல் நண்பாகி வாதத்தை யேயுறவாற்
சிந்துவா ரங்கனலுந் தீ”

- குணபாடம் மூலிகை பக்கம் - 628

நொச்சியிலை வளிக்குற்றத்தை தன்னிலையில் நிற்க செய்யும்.

Leaves are very efficacious in dispelling inflammatory swellings of joints from acute rheumatism.

2. வெள்ளை கோஷ்டம்:

Botanical Name	- Costus speciosus
Family	- Scitamineae
Part used	- Root and tuber
Suvai	- Bitter
Thanmai	- Veppam
Pirivu	- Acrid
Constituents	- β -sitosterol, β -glucoside, gracillin
Action	- Stomachic, Expectorant, Tonic, Stimulant, Diaphoretic.

Gunam:

“தளர்விலாக் கோட்டங் கண்ணோய் சயங்காச கவாசம் வாதம்
அளவிலாச் சுரங்கள் வந்தி யருமீழை விக்கல் மாற்றும்”

- பதார்த்த சூடாமணி, பாடல் - 245.

கோஷ்டம் - சுவாசகாசம், கண்ணோய், வாதம், சுரம், வாந்தி
முதலியவற்றை போக்கும்.

3. எருக்கு :

Botanical Name	- Calotropis gigantea
Family	- Asclepiadaceae
Part used	- Root
Suvai	- Bitter, acrid, sweet
Thanmai	- Veppam
Pirivu	- Acrid
Constituents	- Cautchoue, yellow bitter resin, Calotropin, giganteol.
Action	- Alterative, Febrifuge, Stimulant, Tonic, Diaphoretic, Emetic.

It is known as vegetable mercury and is used in chronic rheumatism.

Gunam:

“மன்னையுங் கையெடுக்க வைத்தெயிற்றி னேயகற்றி
யுன்னு பிணிப்பணியை யோட்டுதலாற் சென்னேன்”

- குண பாடம் - மூலிகை, பக்கம் - 153

எருக்கு வாதநோய்களுக்கு நன்மருந்தாகும், பல நோய்களையும்
போக்கும்.

4. தகரை விதை:

Botanical Name	- Cassia tora
Family	- Caesalpinaceae
Part used	- Seeds
Suvai	- Bitter, salt
Thanmai	- Veppam
Pirivu	- Acrid
Constituents	- Glucoside resembling chrysophanic acid. Seeds contains emodin allied to chrysophanic acid in characteristics.
Action	- Externally Germicide, Antiparasitic

5. சதகுப்பை:

Botanical Name	- Anethum sowa
Family	- Umbelliferae
Part used	- Seeds
Suvai	- Sweet, acrid
Thanmai	- Veppam
Pirivu	- Acrid
Constituents	- Contains volatile oil, fixed oil. The volatile oil contains anethine, phellandrene, d-limonene, apiol, carvol.
Action	- Carminative, Stomachic, Aromatic, Stimulant, Diuretic, Resolvent, Emmenagogue, Galactagogue.

The seeds are bruised and boiled in water and are applied externally in rheumatic and other swelling of joints.

Gunam:

“வாதமொடு சூதிகர வாதம் சிரகநேரய்

.....

ஞாலச் சதகுப்பை நூடு.”

- குண பாடம் - மூலிகை, பக்கம் - 422

சதகுப்பை வளிநேரய், தலைவலி, காதுவலி முதலியவற்றை நீக்கும்.

6. நல்லெண்ணெய் :

Botanical Name	- Sesamum indicum
Family	- Pedaliaceae
Parts used	- Seeds
Suvai	- Sweat
Thanmai	- Veppam
Pirivu	- Sweat
Constituents	- Oil contains 70pc of liquid fats consisting of the glycerides of oleic, linoleic acids and 12-14pc of solid fats, stearin, palmitin and myristin, crystalline substance sesamin and sesamol.
Action	- Seeds are Laxative, Emollient and Demulcent, Diuretic, Nutritive.

Gunam:

“இவ்வண்ணை காந்தி பித்த மிளைப்புநேத் திரத்தின் ரோகம்
கவ்வைசேர் சிரவ லிப்புக் கபாலமுட் டணஞ்சி ரங்கே
டெவ்வமர் கிருமி போக்கு மெழி லுங்கண் ணொளியு முண்டாம்
செவ்வையாம் பெலனு முண்டா மென்னவே செப்பி னாரே”

- பதார்த்த சூடாமணி, பாடல் - 33

எள்ளெய்யால் பித்த நோய்கள், இளைப்பு, கண்ணோய்கள், தலைவலி
முதலியன நீங்கும். காந்தி, கண்ணொளி உண்டாகும்.

ANNEXURE II

BIO – CHEMICAL ANALYSIS OF

KIRUBAGARA SHANMUGA CHENDURAM

PREPARATION OF THE EXTRACT:

100mg Of Chenduram was weighed accurately and was placed in a clean beaker. Then a few drops of conc. Hydrochloric acid is added and evaporated it well. After evaporation the contents were cooled and a few drops of concentrated Nitric acid is added and evaporated well. After cooling the contents, 20 ml of distilled water was added and dissolved well. Then it was transferred to 100 ml volumetric flask and made up to 100ml with distilled water. The mixture was mixed well and filtered. Then it was taken for analysis.

Qualitative Analysis

S.no	Experiment	Observation	Inference
1.	<u>TEST FOR CALCIUM</u> 2ml of the above prepared extract is taken in a clean test tube. 2 ml of 4% Ammonium Oxalate solution is added to it.	A white precipitate is formed.	Indicates the presence of Calcium.

2.	<u>TEST FOR SULPHATE</u> 2ml of the extract is added to 5% Barium Chloride solution.	White precipitate is formed.	Indicates the presence of Sulphate.
3.	<u>TEST FOR CHLORIDE</u> The extract is treated with Silver Nitrate solution.	A white precipitate is formed.	Indicates the presence of Chloride.
4.	<u>TEST FOR CARBONATE</u> The substance is treated with Concentrated HCl.	No brisk effervescence is formed.	Absence of Carbonate.
5.	<u>TEST FOR ZINC</u> The extract is added with Potassium Ferro Cyanide solution.	No white precipitate is formed	Absence of Zinc
6.	<u>TEST FOR IRON- FERRIC</u> The extract is treated with Glacial Acetic Acid and Potassium Ferro Cyanide.	No blue colour is formed.	Absence of Ferric Iron.
7.	<u>TEST OF IRON - FERROUS</u> The extract is treated with concentrated Nitric Acid and Ammonium Thio Cyanate.	Blood red colour is formed.	Indicates the presence of Ferrous Iron.

8.	<u>TEST FOR PHOSPHATE</u> The extract is treated with Ammonium Molybdate and concentrated Nitric Acid.	No Yellow precipitate is formed.	Absence of Phosphate.
9.	<u>TEST FOR ALBUMIN</u> The extract is treated with Ferric Chloride	No yellow precipitate is formed.	Absence of Albumin.
10.	<u>TEST FOR TANNIC ACID</u> The extract is treated with Esbach's reagent	No blue black precipitate is formed.	Absence of Tannic Acid.
11.	<u>TEST FOR UNSATURATION</u> To the extract Potassium Permanganate solution is added.	It gets decolourised.	Indicates the Presence of Unsaturated Compound.
12.	<u>TEST FOR THE REDUCING SUGAR</u> 5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts. Add 8-10 drops of the extract and again boil it for 2 mts.	No colour change occurs.	Absence of Reducing Sugar.

13.	<p><u>TEST FOR AMINO ACID:</u></p> <p>One or two drops of the extract is placed on a filter paper and dried well. After drying, 1% Ninhydrin is sprayed over the same and dried well.</p>	No Violet colour is formed.	Absence of Amino Acid
14.	<p><u>TEST FOR MERCURY:</u></p> <p>The extract is treated with Ammonia and boiled (till the ammonia caeses off) and then Potassium Iodide is (1% solution) added</p>	A scarlet Precipitate Is formed	It indicates the presence of Mercury

ANNEXURE III

PHARMACOLOGICAL ANALYSIS

ANALGESIC STUDY ON KIRUBAGARA SHANMUGA

CHENDURAM

(In Albino rats by Hot Water Bath Method)

Aim:

To study the analgesic effect of Kirubagara Shanmuga Chenduram.

Preparation of the test medicine:

200mg of kirubagara shanmuga chenduram was taken. It was mixed with 1g of chukku, milagu and omam choornam and dissolved in 10ml of murungai pattai juice extract. A dose of 1ml was given to each rat. This 1ml contains 20mg of test medicine.

Procedure:

Three groups of healthy albino rats of both sexes were selected, each group having 3 rats, weighing between 100 to 150gm. The hot water bath was maintained at a 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 took 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.

To the Second group paracetamol 20mg per 100gm of body weight was given and was kept as standard.

To the third group test medicine was given.

30 minutes after the administration of medicines, 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.

Study of Analgesic Action by Hot water bath method using Kirubagra Shanmuga Chenduram.

Serial No.	Name of Drug / Groups	Dose /100 gram body weight	Initial Reading (Seconds)	After Drug administration	
				$\frac{1}{2}$ hr. (Average)	1 hr. (Average)
1	Control	2ml	2.1	2.5	2.5
2	Ibuprofen	20mg	2	5.5	6.7
3	Kirubagara Shanmuga Chenduram	20mg	2.1	3	4.85

Inference:

It is observed that Kirubagara Shanmuga Chenduram has got Significant Analgesic Action.

ANTI-PYRETIC STUDY ON KIRUBAGARA

SHANMUGA CHENDURAM

(By Yeast induced Method)

Aim:

To study the anti-pyretic activity of the Kirubagara Shanmuga Chenduram.

Procedure:

Three groups of healthy albino rats were taken, each weighing about 100-200gm, each group consisting of 2 rats. All the rats were made hyperthermic by subcutaneous injection of 12% suspension of Yeast at a dose of 100ml/100mg body weight.

10 hrs later one group of rats were given the test drug Kirubagara Shanmuga Chenduram with Chukku, Milagu, Omam Choornam and Murungai Pattai Chaaru at a dose of 1 ml consisting of 20 mg/100 gm of body weight. The other group received distilled water at a dose of 1 ml/100 gm of body weight and kept as control. The last group was given Paracetamol at a dose of 20 mg/ 100 gm body weight and kept as standard.

The mean rectal temperature for 3 groups was recorded at 0 hr, 1½ hrs, 3 hrs and 4 ½ hrs after the drug administration. The difference in mean temperature between the 3 groups were noted and compared.

**Study of Anti-Pyretic Action by Yeast Induced Method using the
drug, Kirubagara Shanmuga Chenduram**

Sl No.	Name of Drug / Groups	Dose / 100 gram body weight	Initial Temperature in centigrade	After Drug administration			Mean temperature
				1 ½ hr	3.0hr	4 ½ hr	
1.	Control	2ml	36.0 37.0	36.0 37.0	36.0 38.0	37.0 39.0	38.0
2.	Standard (paracetamol)	20mg	37.0 38.0	37.0 37.0	36.5 36.5	35.0 34.0	34.5
3.	Kirubagara Shanmuga Chenduram	20mg	37.5 37.5	37.0 37.5	36.5 37.0	36.5 36.5	36.5

Inference - The test drug Kirubagara Shanmuga Chenduram has
Significant Anti-Pyretic Action.

ACUTE ANTI-INFLAMMATORY STUDY ON KIRUBAGARA SHANMUGA CHENDURAM

(By Hind paw Method in Albino Rats)

Aim:

To study the Acute Anti-inflammatory effect of Kirubagara Shanmuga Chenduram.

Preparation of the test medicine:

200mg of kirubagara shanmuga chenduram was taken. It was mixed with 1g of chukku, milagu and omam choornam and dissolved in 10ml of murungai pattai juice extract. A dose of 1ml was given to each rat. This 1ml contains 20mg of test medicine.

Procedure:

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

First group was kept as control by giving distilled water of 2ml / 100gm of body weight. The second group was given Ibuprofen at dose of 20mg / 100gm of body weight. The third group received the trial medicine, Kirubagara Shanmuga Chenduram at a dose of 20mg / 100gm of body weight.

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

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

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

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

Study of Acute Anti-inflammatory effect by Hind-paw method using

Kirubagara Shanmuga Chenduram:

Serial No.	Name of Drug/ Groups	Dose /100 gram body weight	Initial Reading average	Final reading average	Mean difference	Inflammation (Percentage)	Inhibition (Percentage)
1	Control	2ml	0.55	1.4	0.85	100	Nil
2	Ibuprofen	20mg	0.55	0.85	0.3	35.2	64.8
3	Kirubagara Shanmuga Chenduram	20ml	0.5	0.75	0.25	29.4	71.6

Inference:

It is observed that Kirubagara Shanmuga Chenduram has got Significant Acute Anti-inflammatory Action.

CHRONIC ANTI-INFLAMMATORY STUDY ON KIRUBAGARA SHANMUGA CHENDURAM

(Cotton pellet Granuloma Method)

Aim:

To study the chronic anti-inflammatory activity of Kirubagara Shanmuga Chenduram in rats by cotton pellet implantation (Granuloma) method.

Preparation of the test medicine:

200mg of kirubagara shanmuga chenduram was taken. It was mixed with 1g of chukku, milagu and omam choornam and dissolved in 10ml of murungai pattai juice extract. A dose of 1ml was given to each rat. This 1ml contains 20mg of test medicine.

Procedure:

Cotton pellets each weighing 10mg was taken 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 anaesthetized with ether and cotton pellets were implanted subcutaneously into the groin, two on each side.

From the day of implantation, one group of animals received Kirubagara Shanmuga Chenduram at a dose of 20mg / 100gm of body

weight. The standard group of animals received Ibuprofen at a dose of 20mg / 100gm body weight. The control group of animals received 2ml of distilled water.

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

Study of Chronic Anti-inflammatory effect by cotton pellet method using Kirubagara Shanmuga Chenduram.

Sl No.	Name of Drug/ Groups	Dose /100 gram body weight	Pellet weight	Pellet weight of the Granuloma of drugs	Mean difference	Inflammation (Percentage)	Inhibition (Percentage)
1	Control	2ml	10mg	250mg	-	100	Nil
2	Ibuprofen	20mg	10mg	56mg	-	22.4	77.6
3	Kirubagara Shanmuga Chenduram	20mg	10mg	130mg	-	52	48

Inference:

It is observed that Kirubagara Shanmuga Chenduram has Significant Chronic Anti-inflammatory action.

ACUTE ANTI-INFLAMMATORY STUDY ON VATHATHIRKKU POOSA NOCHI ENNEI

(By Hind-paw Method in Albino Rats)

Aim:

To study the acute anti-inflammatory study on Vathathirkku Poosa Nochi Ennei by hind paw method in albino rats.

Procedure:

Six albino rats weighing between 100 – 150 gm 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 the trial medicine, the hind paw volume of all the rats were measured. This was done by dipping the hind-paw up to the tibio-tarsal junction in mercury plethysmograph.

Subcutaneous injection of 0.1 ml of 1% carroginin (w/v) in water was made into plantar surface of both the hind paw of each rat. To the test group, Nochi ennei was applied topically and frequently over the inflamed surface in a thin layer. To the control group, no drug was applied over the inflamed surface. One and half an hour after injection, the hind paw volume was measured once again. The difference between the initial and final volume shows the amount of inflammation. Taking

the volume in the control group as 100% of inflammation, the anti-inflammatory effect of the group is calculated.

Study of Acute Anti-Inflammatory effect by Hind paw Method using Vathathirkku Poosa Nochi Ennei.

Sl No.	Name of Drug/ Groups	Dose /100 gram body weight	Initial Reading average	Final reading average	Mean difference	Inflammation (Percentage)	Inhibition (Percentage)
1	Control	2ml	0.55	1.4	0.85	100	Nil
2	Ibuprofen	20mg	0.55	0.85	0.3	35.2	64.8
3	Vathathirkku Poosa Nochi Ennei	External	0.45	0.75	0.3	35.2	64.8

Inference:

From the above experiment it is concluded that Vathathirkku Poosa Nochi Ennei has got Significant Acute Anti-inflammatory Action.

ANNEXURE - IV

ACUTE TOXICITY STUDY

Animals:

Wistar albino rats bred in the animal house attached to the Post Graduate, Pharmacology Department, Govt. Siddha Medical College, Palayamkottai were used.

Sex:

- Animals of both sexes were used.

Weight:

- Animals weighing between 80 – 120 gm were selected.

Food and water:

- The animals were maintained with standard animal feed and water ad-libitum.

Number of animals:

10 rats were divided into 5 groups, each group consisting of 2 rats.

Dose levels:

The following dose levels were arbitrarily fixed by presuming range of least toxic to high toxic doses.

I Group	100mg/100gm body weight of animal
II Group	200mg/100gm body weight of animal
III Group	400mg/100gm body weight of animal

IV Group 800mg/100gm body weight of animal

V Group 1600mg/100gm body weight of animal

Route of administration:

Oral administration.

Preparation of the test drug for administration:

The drug was weighed and taken. Then it was suspended in a solution containing Chukku, Milagu and Omam Choornam and Murungai Pattai Juice extract. The mixture was ground well before administration. The preparation was done in such a way so that 1ml of suspension contains 100mg of Kirubagara Shanmuga Chenduram. The drug was administered in the morning and was observed.

OBSERVATIONS:

The following details are recorded

1. Stimulation:

- Hyper activity
- Piloerection
- Twitching
- Rigidity
- Irritability
- Jumping
- Clonic convulsion
- Tonic convulsion.

2. Depression

- Ptosis
- Sedation
- Sleep
- Loss of Pinna Reflex
- Ataxia
- Loss of muscle tone
- Analgesia

3. Autonomic effects:

- Straub tail
- Laboured respiration
- Cyanosis
- Blanching
- Reddening
- Abnormal Secretion

At the end of 24 hours, the number of animals live or dead in each group was noted. The animals were morphologically examined for any adverse reactions. Individual weight of the animals were examined before and after administration of the drug.


















RESULT:


















The said parameters in acute toxicity study were observed on five groups (Group-I, Group-II, Group-III, Group-IV, Group-V). Group I to V were treated with the drug such as, 100mg, 200mg, 400mg, 800 mg, 1600mg/100 g body weight of the animal respectively.












From the observation of the animals, it is being found that the drug “Kirubagara Shanmuga Chenduram” did not produce any stimulation, depression, autonomic effects nor does it produce mortality even up to 1600 mg/100 g body weight of the animal.

So, it is inferred that the drug is found to be safe up to 1600 mg/100g body weight of the animal.

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ANNEXURE IV

Case -Sheet Proforma for “UDHIRA VATHA SURONITHAM”

P.G. POTHU MARUTHUVAM DEPARTMENT

GOVT. SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI.

Ward : Nationality :
I. P. No : Religion :
Bed. No : Date of Admission :
Name :
Age (Years) : Date of Discharge :
Gender : M F Result :
Occupation : Diagnosis :
Income : Medical officer :
Address :
.....
.....

Complaints & Duration:

.....
.....
.....

History of Present illness:

.....
.....
.....

Past history:

Family History :

Yes

No

If any :

Social Status:

low

Middle

Upper

Habits:	Yes	No	
Smoker :	<input type="checkbox"/>	<input type="checkbox"/>	_____
Alcoholic :	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tobacco chewer :	<input type="checkbox"/>	<input type="checkbox"/>	_____
Betel nut chewer :	<input type="checkbox"/>	<input type="checkbox"/>	_____
Food habits :	V <input type="checkbox"/>	M <input type="checkbox"/>	_____

GENERAL EXAMINATION:

Consciousness :

Nourishment :

Body temperature(⁰F) :

Blood pressure (mmHg) : /

Pulse rate/min :

Respiratory rate/min :

	Yes	No	
Anaemia	<input type="checkbox"/>	<input type="checkbox"/>	_____
Jaundice	<input type="checkbox"/>	<input type="checkbox"/>	_____
Cyanosis	<input type="checkbox"/>	<input type="checkbox"/>	_____
Clubbing	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pedal oedema	<input type="checkbox"/>	<input type="checkbox"/>	_____
Generalised lymphadenopathy	<input type="checkbox"/>	<input type="checkbox"/>	_____
Engorged veins	<input type="checkbox"/>	<input type="checkbox"/>	_____
JVP ↑	<input type="checkbox"/>	<input type="checkbox"/>	_____

IN SIDDHA ASPECTS

NILAM:

Kurinji Mullai Marutham
Neithal Paalai

KAALA IYALBU:

Kaarkaalam KoothirKaalam Munpani
Pinpani Ilavenir Mudhuvenir

IYMPORIGAL / IYMPULANGAL:

	1. Normal	2. Affected	
Mei	<input type="checkbox"/>	<input type="checkbox"/>	_____
Vaai	<input type="checkbox"/>	<input type="checkbox"/>	_____
Kan	<input type="checkbox"/>	<input type="checkbox"/>	_____
Mookku	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sevi	<input type="checkbox"/>	<input type="checkbox"/>	_____

KANMENTHIRIYANGAL / KANMAVIDAYANGAL:

	Normal	Affected	
Kai	<input type="checkbox"/>	<input type="checkbox"/>	_____
Kaal	<input type="checkbox"/>	<input type="checkbox"/>	_____
Vaai	<input type="checkbox"/>	<input type="checkbox"/>	_____
Eruvaai	<input type="checkbox"/>	<input type="checkbox"/>	_____
Karuvaai	<input type="checkbox"/>	<input type="checkbox"/>	_____

UYIR THATHUKKAL:

I. Vali:

	Normal	Affected	
Praanan	<input type="checkbox"/>	<input type="checkbox"/>	_____
Abaanan	<input type="checkbox"/>	<input type="checkbox"/>	_____
Viyanan	<input type="checkbox"/>	<input type="checkbox"/>	_____
Udhaanan	<input type="checkbox"/>	<input type="checkbox"/>	_____
Samaanan	<input type="checkbox"/>	<input type="checkbox"/>	_____
Naagan	<input type="checkbox"/>	<input type="checkbox"/>	_____
Koorman	<input type="checkbox"/>	<input type="checkbox"/>	_____
Kirukaran	<input type="checkbox"/>	<input type="checkbox"/>	_____
Devathathan	<input type="checkbox"/>	<input type="checkbox"/>	_____
Dhananjeyan	<input type="checkbox"/>	<input type="checkbox"/>	_____

II. Azhal:

	Normal	Affected	
Anal pitham	<input type="checkbox"/>	<input type="checkbox"/>	_____
Prasaga pitham	<input type="checkbox"/>	<input type="checkbox"/>	_____
Ranjaga pitham	<input type="checkbox"/>	<input type="checkbox"/>	_____
Aalosaga pitham	<input type="checkbox"/>	<input type="checkbox"/>	_____
Saathaga pitham	<input type="checkbox"/>	<input type="checkbox"/>	_____

III. Iyam:

	Normal	Affected	
Avalambagam	<input type="checkbox"/>	<input type="checkbox"/>	_____
Kilethagam	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pothagam	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tharpagam	<input type="checkbox"/>	<input type="checkbox"/>	_____
Santhigam	<input type="checkbox"/>	<input type="checkbox"/>	_____

UDAL THATHUKKAL:

	Normal	Affected	
Saaram	<input type="checkbox"/>	<input type="checkbox"/>	_____
Senneer	<input type="checkbox"/>	<input type="checkbox"/>	_____
Oon	<input type="checkbox"/>	<input type="checkbox"/>	_____
Kozhuppu	<input type="checkbox"/>	<input type="checkbox"/>	_____
Enbu	<input type="checkbox"/>	<input type="checkbox"/>	_____
Moolai	<input type="checkbox"/>	<input type="checkbox"/>	_____
Suronitham/ Sukkilam	<input type="checkbox"/>	<input type="checkbox"/>	_____

ENNVAGAI THERVUGAL:

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

Moothiram : _____

Neerkuri

Niram : _____

Edai : _____

Manam : _____

Nurai : _____

Enjal : _____

Nei kuri : _____

IN MODERN ASPECTS

SYSTEMIC EXAMINATION

Inspection:

Skin over the Joints	:	Normal	<input type="checkbox"/>	Reddish	<input type="checkbox"/>
Joint Swelling	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
MCP, PIP	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Wrist Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Elbow Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Shoulder Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Knee Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Ankle Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
MTP Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Cervical Spine:		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Muscle Wasting	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

Deformities:

	Yes	No
Swan neck deformity	<input type="checkbox"/>	<input type="checkbox"/>
Button hole deformity	<input type="checkbox"/>	<input type="checkbox"/>
Ulnar deviation of the Hand	<input type="checkbox"/>	<input type="checkbox"/>
Foot deformity	<input type="checkbox"/>	<input type="checkbox"/>

Palpation:

	Present	Absent
Local Temperature	<input type="checkbox"/>	<input type="checkbox"/>
Tenderness	<input type="checkbox"/>	<input type="checkbox"/>
Evidence of intra articular fluid	<input type="checkbox"/>	<input type="checkbox"/>
Local lymphadenopathy	<input type="checkbox"/>	<input type="checkbox"/>
Subcutaneous nodules	<input type="checkbox"/>	<input type="checkbox"/>
Rheumatoid vasculitis lesions	<input type="checkbox"/>	<input type="checkbox"/>
Pitting oedema	<input type="checkbox"/>	<input type="checkbox"/>

Movements:

	Yes	No
Pain	<input type="checkbox"/>	<input type="checkbox"/>
Range	<input type="checkbox"/>	<input type="checkbox"/>
Crepitus	<input type="checkbox"/>	<input type="checkbox"/>

Restriction of Movements:

Full restriction	<input type="checkbox"/>
Partial restriction	<input type="checkbox"/>
No restriction	<input type="checkbox"/>

Swelling of Joints:

Nil	<input type="checkbox"/>
Mild	<input type="checkbox"/>
Moderate	<input type="checkbox"/>
Severe	<input type="checkbox"/>

Grading of functions:

Grade I	<input type="checkbox"/>	Grade II	<input type="checkbox"/>
Grade III	<input type="checkbox"/>	Grade IV	<input type="checkbox"/>

SYSTEMIC EXAMINATION (EXTRA ARTICULAR FEATURES)

	Yes	No
Episcleritis/ scleritis :	<input type="checkbox"/>	<input type="checkbox"/>
Rheumatoid Nodules :	<input type="checkbox"/>	<input type="checkbox"/>
Peripheral Neuropathy :	<input type="checkbox"/>	<input type="checkbox"/>
Lymphadenopathy :	<input type="checkbox"/>	<input type="checkbox"/>
Vasculitic Lesions :	<input type="checkbox"/>	<input type="checkbox"/>
Evidence of local or systemic infection :	<input type="checkbox"/>	<input type="checkbox"/>

OTHER SYSTEM EXAMINATION:

CVS :
RS :
Abdomen :

RHEUMATOID ARTHRITIS DIAGNOSTIC CRITERIA

- 1) Morning stiffness (> 1 hr)
Yes No Never
- 2) Does it last for one hour
Yes No Never
- 3) Joints involved PIP – MCP – wrist – others
More than three Two Less
- 4) One in wrist, MCP, PIP
Yes No
- 5) Joint Pain interfering with work
Yes No Sometimes
- 6) Bilaterally Symmetrical
Yes No
- 7) Duration
> 6 weeks < 6 weeks
- 8) RA Nodules
Yes No

9) RA – factor positive

Yes

No

Not seen

10) C – Reactive protein

Yes

No

Not seen

11) Anti – CCP

Yes

No

Not seen

12) ESR

Elevated

Not

elevated

13) Joint deformity (Visible)

Yes

No

14) X – ray evidence

Yes

No

15) Joint mobility restricted

Yes

No

16) Muscular Atrophy

Yes

No

17) Fatigue

Yes

No

18) Family History

Yes

No

Total:

/ 18

LABORATORY INVESTIGATIONS:

BLOOD:

TC (Cells/cumm) :
DC (%) : P L E
Hb (gms%) :
E.S.R. (mm/hr) : 1/2 hr 1hr

Blood Sugar(mgs%) :

Fasting :
P.P. :
Random :
Blood Urea :
Serum Bilirubin :
R.A. Factor :
C.R.P. :

URINE:

Albumin : _____
Sugar : _____
Deposits : _____

MOTION TEST:

Ova : _____
Cyst : _____
Occult blood : _____

RADIOGRAPHIC EVALUATION:

Discharge case sheet Proforma for

“UDHIRA VATHA SURONITHAM”

P.G. POTHU MARUTHUVAM DEPARTMENT

GOVT. SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI.

Ward : Nationality :
I. P. No : Religion :
Bed. No : Date of Admission :
Name :
Age (Years) : Date of Discharge :
Gender : M F Result :
Occupation : Diagnosis :
Income : Medical officer :
Address :
.....
.....

S. No.	Symptoms	During admission	During Discharge
1.	Pain		
2.	Fever		
3.	Swelling		
4.	Early Morning stiffness		
5.	Restriction of movements		
6.	Muscle wasting		
7.	Deformity		
8.	Rheumatoid nodules		
9.	Loss of appetite		
10.	Disturbed sleep		
11.	Others if any		

Case - Sheet Proforma for

“UDHIRA VATHA SURONITHAM”

P.G. POTHU MARUTHUVAM DEPARTMENT

GOVT. SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI.

O. P. No : Treatment starting date :
Name : End of the treatment date :
Age (Years) : No. of days treated :
Gender : M F Diagnosis :
Occupation : Medical officer :
Income :
Address :
.....
.....

Complaints & Duration:

.....
.....
.....

GENERAL EXAMINATION:

Consciousness :
Nourishment :
Body temperature(⁰F) :
Blood pressure (mmHg) : /
Pulse rate/min :
Respiratory rate/min :

	Yes	No	
Anaemia	<input type="checkbox"/>	<input type="checkbox"/>	_____
Jaundice	<input type="checkbox"/>	<input type="checkbox"/>	_____
Cyanosis	<input type="checkbox"/>	<input type="checkbox"/>	_____
Clubbing	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pedal oedema	<input type="checkbox"/>	<input type="checkbox"/>	_____
Generalised Lymphadenopathy	<input type="checkbox"/>	<input type="checkbox"/>	_____
Engorged veins	<input type="checkbox"/>	<input type="checkbox"/>	_____
JVP ↑	<input type="checkbox"/>	<input type="checkbox"/>	_____

IN SIDDHA ASPECTS:

Nilam :

Kaalam :

Iym Porigal :

Kanmenthiriyam :

Mukkutram(Affected) :

Vatham :

Pitham :

Kabham :

UDAL THATHUKKAL :

ENVAGAI THERVUGAL :

Naa : _____

Niram : _____

Mozhi : _____

Vizhi : _____

Naadi : _____

Sparisam : _____

Malam : _____

MOOTHIRAM :

Neerkuri

Niram : _____

Edai : _____

Manam : _____

Nurai : _____

Enjal : _____

Nei kuri : _____

IN MODERN ASPECTS

SYSTEMIC EXAMINATION

Inspection:

Skin over the Joints	:	Normal	<input type="checkbox"/>	Reddish	<input type="checkbox"/>
Joint Swelling	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
MCP, PIP	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Wrist Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Elbow Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Shoulder Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Knee Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Ankle Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
MTP Joint	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Cervical Spine:	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Muscle Wasting	:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

Deformities:

	Yes	No
Swan neck deformity	<input type="checkbox"/>	<input type="checkbox"/>
Button hole deformity	<input type="checkbox"/>	<input type="checkbox"/>
Ulnar deviation of the fingers	<input type="checkbox"/>	<input type="checkbox"/>
Foot deformity	<input type="checkbox"/>	<input type="checkbox"/>

Palpation:

	Present	Absent
Local Temperature	<input type="checkbox"/>	<input type="checkbox"/>
Tenderness	<input type="checkbox"/>	<input type="checkbox"/>
Evidence of intra articular fluid	<input type="checkbox"/>	<input type="checkbox"/>
Local lymphadenopathy	<input type="checkbox"/>	<input type="checkbox"/>
Subcutaneous nodules	<input type="checkbox"/>	<input type="checkbox"/>

	Present	Absent
Rheumatoid vasculitis lesions	<input type="checkbox"/>	<input type="checkbox"/>
Pitting oedema	<input type="checkbox"/>	<input type="checkbox"/>

Movements:

	Yes	No
Pain	<input type="checkbox"/>	<input type="checkbox"/>
Range	<input type="checkbox"/>	<input type="checkbox"/>
Crepitus	<input type="checkbox"/>	<input type="checkbox"/>

Restriction of Movements:

Full restriction	<input type="checkbox"/>
Partial restriction	<input type="checkbox"/>
No restriction	<input type="checkbox"/>

Swelling of Joints:

Nil	<input type="checkbox"/>
Mild	<input type="checkbox"/>
Moderate	<input type="checkbox"/>
Severe	<input type="checkbox"/>

Grading of functions:

Grade I Grade II
Grade III Grade IV

SYSTEMIC EXAMINATION (EXTRA ARTICULAR FEATURES)

		Yes	No
Episcleritis/ scleritis	:	<input type="checkbox"/>	<input type="checkbox"/>
Rheumatoid Nodules	:	<input type="checkbox"/>	<input type="checkbox"/>
Peripheral Neuropathy	:	<input type="checkbox"/>	<input type="checkbox"/>
Lymphadenopathy	:	<input type="checkbox"/>	<input type="checkbox"/>
		Yes	No
Vasculitic Lesions	:	<input type="checkbox"/>	<input type="checkbox"/>
Evidence of local or systemic infection	:	<input type="checkbox"/>	<input type="checkbox"/>

OTHER SYSTEM EXAMINATION:

CVS :
RS :
Abdomen :

RHEUMATOID ARTHRITIS DIAGNOSTIC CRITERIA:

1) Morning stiffness (> 1 hr)
Yes No Never

2) Does it last for one hour
Yes No Never

3) Joints involved PIP – MCP – wrist – others
More than three Two Less

4) One in wrist, MCP, PIP
Yes No

5) Joint Pain interfering with work
Yes No Sometimes

6) Bilaterally Symmetrical

Yes No

7) Duration

> 6 weeks < 6 weeks

8) RA Nodules

Yes No

9) RA – factor positive

Yes No Not seen

10) C – Reactive protein

Yes No Not seen

11) Anti – CCP

Yes No Not seen

12) ESR

Elevated Not elevated

13) Joint deformity (Visible)

Yes No

14) X – ray evidence

Yes No

15) Joint mobility restricted

Yes No

16) Muscular Atrophy

Yes No

17) Fatigue

Yes No

18) Family History

Yes No

Total:

/ 18

LABORATORY INVESTIGATIONS:

BLOOD:

TC (Cells/cumm) :

DC (%) : P L E

Hb (gms%) :

E.S.R. (mm/hr) : 1/2hr 1hr

Blood Sugar(mgs%) :

Fasting :

P.P. :

Random :

Blood Urea :

Serum Bilirubin :

R.A. Factor :

C.R.P. :

URINE :

Albumin : _____

Sugar : _____

Deposits : _____

MOTION TEST :

Ova : _____

Cyst : _____

Occult blood : _____

RADIOGRAPHIC EVALUATION:

Affected Trihumors

Vatham

- Joint pain
- Joint Swelling
- Joint stiffness
- Restriction of movements

Pitham

- Inflammatory
- Changes in joints
(Redness, Warmth)

Kabham

- Erosion of bony margin
- Restriction of movements
- Changes in synovial fluid

→ **Abaanan** → Constipation

→ **Viyaanan** → Restriction of movements

→ **Samaanan** → Vitiating of Other Vayus
Loss of appetite

→ **Kirukaran** → Loss of appetite

→ **Devathathan** → Sleeplessness

→ **Anal Pitham** → Loss of appetite

→ **Ranjaga Pitham** → Anaemia

→ **Prasaga Pitham** → Pallor of skin

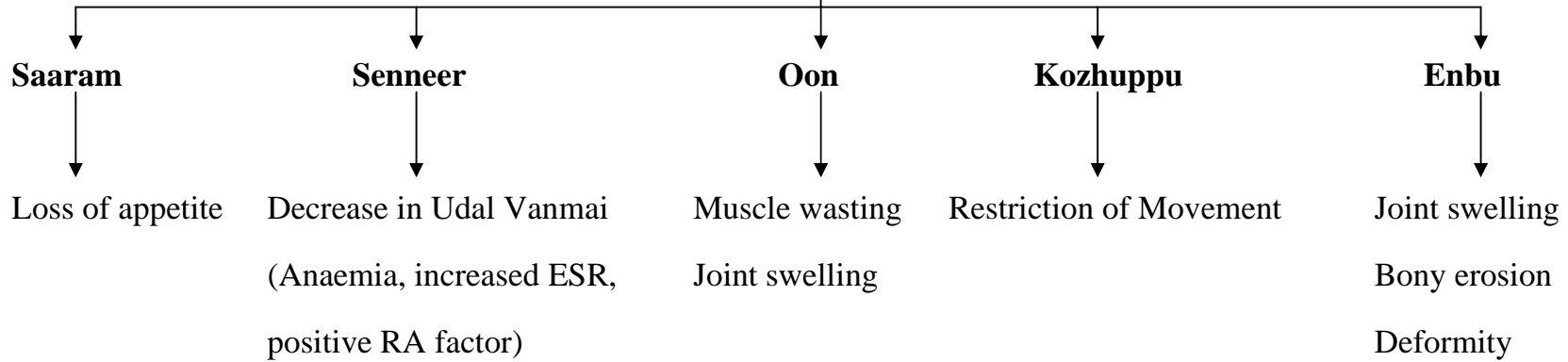
→ **Saathaga Pitham** → Difficulty in doing day to day activities

→ **Avalambagam** → Derangement of other kabha types

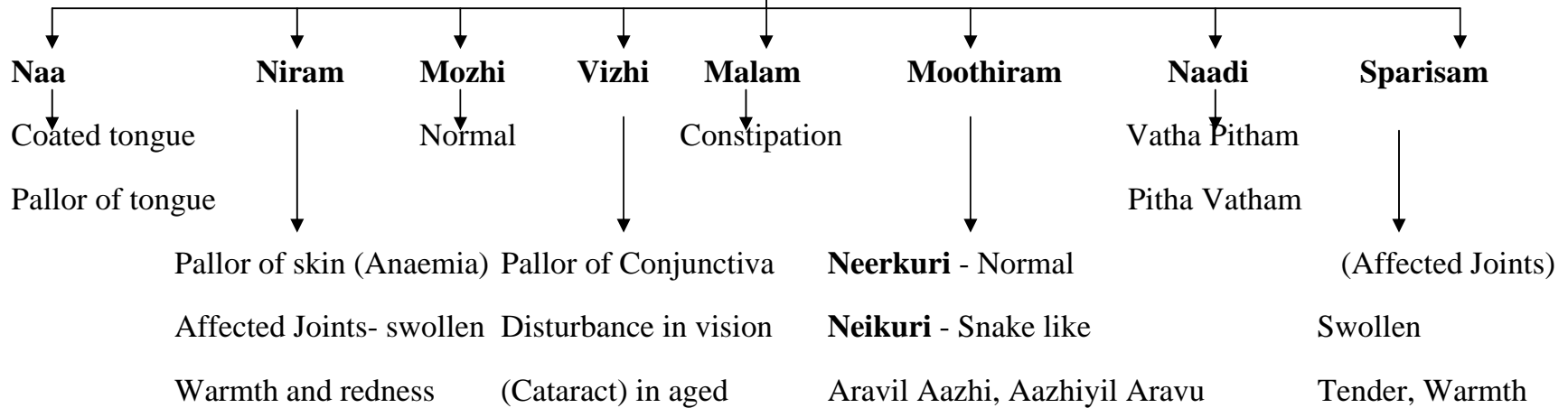
→ **Kilethagam** → Loss of appetite

→ **Santhigam** → Joint swelling
Restriction of movements.

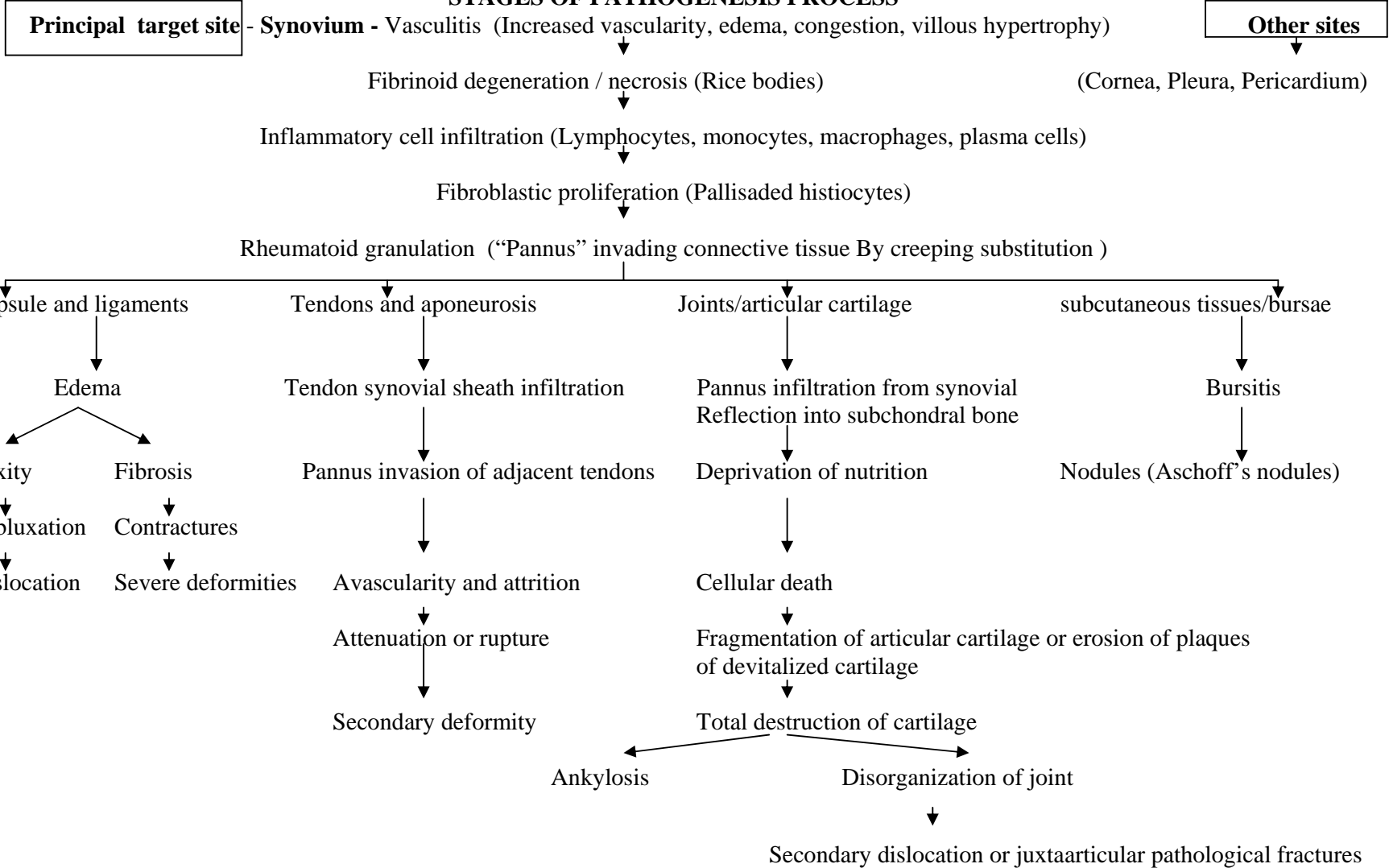
Affected Ezhu Udal Thathukkal



Diagnosis (Envagai Thervugal)



STAGES OF PATHOGENESIS PROCESS



INVESTIGATION CHART - IP CASES

Sl. No	IP. No	BT			AT			ESR (mm)				Hb%		BT				AT				RA factor		(BT & AT) Urine			Motion			
		TC CELLS/ur mm	DC%			TC CELLS/ur mm	DC%			1/2 hr	1 hr	1/2 hr	1 hr	BT	AT	BS	BU	SC	SB	BS	BU	SC	SB	BT	AF	Alb	Sug	Dep	Ova	Cyst
			P	L	E		P	L	E																					
1	691	10400	80	18	2	10200	78	20	2	68	116	32	62	75	78	79	19	156	0.3	80	17	154	0.3	+ve	+ve	Nil	Nil	Nil	Nil	Nil
2	725	9900	70	20	10	9800	75	23	2	76	158	36	70	76	78	80	24	158	0.2	92	20	155	0.2	+ve	+ve	Nil	Nil	Nil	Nil	Nil
3	959	9100	58	38	4	9200	63	35	2	10	22	6	12	75	77	110	23	160	0.5	100	22	161	0.3	-ve	-ve	Nil	Nil	Nil	Nil	Nil
4	1052	9400	60	38	2	9600	73	21	6	75	125	22	50	66	70	78	20	145	0.6	86	18	155	0.5	+ve	+ve	Nil	Nil	Nil	Nil	Nil
5	1003	9500	56	42	2	9700	62	34	4	25	55	11	23	81	82	87	17	151	0.4	85	18	160	0.3	+ve	+ve	Nil	Nil	Nil	Nil	Nil
6	1284	9600	62	32	6	9800	76	19	5	62	110	24	40	64	66	110	23	160	0.4	100	20	172	0.3	+ve	+ve	Nil	Nil	Nil	Nil	Nil
7	2865	8800	54	44	2	9000	56	40	4	35	70	15	25	65	68	145	36	180	0.7	118	32	178	0.6	+ve	+ve	Nil	Nil	Nil	Nil	Nil
8	3105	8500	68	30	2	8700	66	32	2	30	66	13	20	76	78	90	17	149	0.5	96	17	162	0.5	-ve	-ve	Nil	Nil	Nil	Nil	Nil
9	62	10100	71	26	3	10200	68	30	2	45	82	12	26	62	64	86	24	163	0.4	94	22	172	0.4	-ve	-ve	Nil	Nil	Nil	Nil	Nil
10	50	10000	72	26	2	10100	75	23	2	75	130	13	22	74	76	148	37	178	0.5	118	32	182	0.4	-ve	-ve	Nil	Nil	Nil	Nil	Nil
11	233	7600	67	28	5	7800	60	37	3	30	65	10	18	62	64	92	14	130	0.6	86	16	156	0.5	+ve	+ve	Nil	Nil	Nil	Nil	Nil
12	280	9000	62	36	2	9100	64	34	2	26	43	10	16	75	76	72	15	156	0.6	80	13	158	0.5	-ve	-ve	Nil	Nil	Nil	Nil	Nil
13	323	9500	56	40	4	9500	60	38	2	20	42	11	18	68	71	102	31	162	0.3	112	29	160	0.3	+ve	+ve	Nil	Nil	Nil	Nil	Nil
14	317	10200	68	30	2	10100	70	27	3	45	92	16	28	84	86	92	19	196	0.3	98	18	192	0.3	+ve	+ve	Nil	Nil	Nil	Nil	Nil
15	451	9200	60	38	2	9300	63	32	5	22	53	9	15	86	87	111	19	165	0.6	116	17	162	0.6	+ve	+ve	Nil	Nil	Nil	Nil	Nil
16	720	9800	60	32	8	10000	66	30	4	12	25	6	11	71	74	82	23	156	0.7	90	22	158	0.6	-ve	-ve	Nil	Nil	Nil	Nil	Nil
17	721	9200	63	35	2	9400	62	33	5	21	44	10	20	41	46	93	31	181	0.5	98	28	178	0.4	-ve	-ve	Nil	Nil	Nil	Nil	Nil
18	737	9000	64	34	2	9100	69	27	4	15	22	6	11	75	76	111	26	130	0.6	104	23	140	0.6	-ve	-ve	Nil	Nil	Nil	Nil	Nil
19	843	8900	62	30	8	8800	70	25	5	15	25	5	9	72	74	100	23	181	0.5	96	18	178	0.4	+ve	+ve	Nil	Nil	Nil	Nil	Nil
20	853	9200	48	48	4	9400	54	40	6	20	40	9	16	68	70	87	26	176	0.3	92	24	177	0.3	-ve	-ve	Nil	Nil	Nil	Nil	Nil

BT - Before Treatment BS - Blood Sugar (Random) SC - Serum Cholesterol SYNOVIAL FLUID ANALYSIS: IP No : 50

AT - After Treatment BU - Blood Urea SB - Serum Bilirubin APPEARANCE : Slightly turbid, FIBRIN CLOT: 2+, GLUCOSE DIFFERENCE - 30mg/dl, LEUCOCYTES: 11,000 cells/cumm

MUCIN CLOT: Poor, NEUTROPHILS: 72%.

INVESTIGATION CHART - OP CASES																														
Sl. No	OP. No	BT			AT			ESR (mm)				Hb%		BT				AT				RA factor		(BT & AT) Urine			Motion			
		TC CELLS/cu. mm	DC%		TC CELLS/cu. mm	DC%		1/2 hr	1 hr	1/2 hr	1 hr	BT	AT	BS (mg%)	BU (mg%)	SC (mg%)	SB (mg%)	BS (mg%)	BU (mg%)	SC (mg%)	SB (mg%)	BT	AT	Alb	Sug	Deposits	Ova	Cyst		
			P	L		E	P																						L	E
1	21349	9500	65	30	5	9600	72	26	2	17	34	8	13	74	76	79	15	149	0.4	82	13	152	0.3	- ve	- ve	Nil	Nil	Nil	Nil	Nil
2	20405	10000	68	30	2	10100	70	25	5	25	56	8	18	76	78	19	19	172	0.3	86	16	176	0.3	+ve	+ve	Nil	Nil	Nil	Nil	Nil
3	23799	6200	70	24	4	6500	73	25	2	65	110	20	32	58	63	64	15	146	0.5	73	14	150	0.4	+ve	+ve	Nil	Nil	Nil	Nil	Nil
4	23789	9400	56	40	4	9600	60	37	3	62	150	18	26	68	72	85	18	162	0.6	92	18	168	0.5	+ve	+ve	Nil	Nil	Nil	Nil	Nil
5	23880	8600	62	34	4	8800	72	24	4	70	165	23	48	62	66	72	23	176	0.4	86	21	180	0.3	+ve	+ve	Nil	Nil	Nil	Nil	Nil
6	24095	7300	55	42	3	7600	57	41	2	32	72	14	20	57	60	70	21	165	0.3	78	19	172	0.3	- ve	- ve	Nil	Nil	Nil	Nil	Nil
7	25438	9600	58	38	4	9500	52	42	6	12	35	7	13	68	70	84	18	158	0.4	92	16	164	0.4	+ve	+ve	Nil	Nil	2 - 3 Epi. Cells	Nil	Nil
8	25056	8800	64	42	4	8800	68	30	2	25	56	14	23	66	70	102	20	160	0.6	96	18	172	0.6	- ve	- ve	Nil	Nil	Nil	Nil	Nil
9	26115	9400	58	40	2	9100	62	34	4	10	22	8	14	74	76	79	20	178	0.5	76	19	176	0.6	+ve	+ve	Nil	Nil	Nil	Nil	Nil
10	26512	10200	73	24	3	10100	68	28	4	26	32	11	19	75	78	82	27	152	0.4	82	26	156	0.3	- ve	- ve	Nil	Nil	Nil	Nil	Nil
11	26387	9900	56	42	2	9900	52	46	2	18	36	10	22	64	66	118	32	162	0.5	116	33	168	0.5	+ve	+ve	Nil	Nil	Nil	Nil	Nil
12	28022	9500	67	28	5	9400	65	30	5	25	52	13	24	67	70	78	26	174	0.3	82	25	178	0.3	+ve	+ve	Nil	Nil	Nil	Nil	Nil
13	28982	8400	56	38	6	8400	58	38	4	19	35	8	15	74	76	86	19	152	0.4	92	19	156	0.3	- ve	- ve	Nil	Nil	Nil	Nil	Nil
14	72832	9100	72	26	2	9200	75	22	3	15	25	7	12	76	78	162	17	226	0.6	118	16	218	0.4	+ve	+ve	Nil	Nil	Nil	Nil	Nil
15	73919	9800	60	30	10	9700	63	30	7	24	47	10	21	71	72	72	17	140	0.8	86	17	142	0.7	+ve	+ve	Nil	Nil	Few Pus Cells	Nil	Nil
16	75868	9600	66	32	2	9300	68	30	2	48	90	22	38	68	69	92	25	152	0.4	96	24	155	0.4	- ve	- ve	Nil	Nil	Nil	Nil	Nil
17	75815	8700	64	32	4	8800	62	35	3	21	50	12	23	64	66	78	15	156	0.7	82	15	160	0.7	+ve	+ve	Nil	Nil	Nil	Nil	Nil
18	319	10400	61	33	6	10200	68	28	4	20	55	9	22	74	75	87	38	186	0.4	92	18	185	0.4	+ve	+ve	Nil	Nil	Nil	Nil	Nil
19	3137	9900	56	41	3	9900	58	40	2	15	32	9	18	76	77	78	22	176	0.5	84	21	178	0.5	- ve	- ve	Nil	Nil	Nil	Nil	Nil
20	6070	9800	70	28	2	9900	72	26	2	10	20	8	16	80	81	88	33	210	0.7	92	32	208	0.7	- ve	- ve	Nil	Nil	Nil	Nil	Nil

BT - Before Treatment
AT - After Treatment

BS - Blood Sugar (Random)
BU - Blood Urea

SC - Serum Cholesterol
SB - Serum Bilirubin

CASE SUMMARY OF IN-PATIENTS

S. No.	Ip. No.	Name	Age/Sex	Occupation	Duration of Illness	Date of Admission	Date of Discharge	No. of Days Treated		Total No. of days Treated	Treatment with Medicine/dose	Results
								IP	OP			
1	691	Kadhar Bheevi	59/F	House wife	6 months	07/03/07	04/04/07	29	12	41	1. (Internal) Kirubagara Shanmuga Chenduram- 130mg (Bd) with Chukku, Milagu and Omam Choornam -1gm with Murungai Pattai Chaaru 2. (External) Vathathirkku Poosa Nochi Ennei -30ml	Good
2	725	Isakkiammal	45/F	House wife	3 months	12/03/07	06/04/07	26	14	40		Good
3	959	Lakshmi	56/F	Cook	3 years	10/04/07	19/05/07	40	0	40		Good
4	1052	Mookkammal	50/F	House wife	7 months	20/04/07	11/05/07	22	28	40		Fair
5	1003	Subbaiya	72/M	Farmer	1 year	21/04/07	08/05/07	19	22	41		Good
6	1284	Rani	25/F	House wife	8 months	14/05/07	26/05/07	13	28	41		Good
7	2865	Annammal	65/F	House wife	9 months	20/11/07	01/12/07	21	20	41		Good
8	3105	Shankara vadivu	65/F	Servant	5 months	24/12/07	23/01/08	31	10	41		Good
9	62	Rani	47/F	House wife	8 months	09/01/08	13/02/08	36	7	43		Good
10	50	Chandra kumari	55/F	House wife	4 years	22/01/08	11/01/08	21	20	41		Good
11	233	Latha	32/F	Servant	2 months	28/01/08	11/01/08	15	7	22		Poor
12	280	Subbammal	60/F	House wife	7 months	01/02/08	18/02/08	18	7	25		Fair
13	323	Pappu	62/F	House wife	9 months	02/02/08	22/02/08	21	20	41		Good
14	317	Shahul Hameed	48/M	Carpenter	1 year	04/02/08	01/03/08	26	14	40		Good
15	451	Mayil vaganan	40/M	Server	7 months	15/02/08	10/03/08	24	21	45		Good
16	720	Mohammed	65/M	Watchman	8 months	17/03/08	31/03/08	15	14	29		Fair
17	721	Aiysha	60/F	House wife	4 months	17/03/08	31/03/08	15	28	43		Good
18	737	Lakshmanan	65/M	Farmer	10 months	19/03/08	04/04/08	17	14	31		Fair
19	843	Amirtha kani	45/F	Beedi worker	9 months	01/04/08	24/04/08	24	21	45		Good
20	853	Petchiyammal	48/F	Veg. Seller	1 month	03/04/08	28/04/08	26	14	40		Good

CASE SUMMARY OF OUT-PATIENTS

S. No.	Ip. No.	Name	Age/Sex	Occupation	Duration of Illness	Treatment Started Date	Treatment Ended Date	Total No. of days treated	Treatment with Medicine/dose	Results
1	21349	Selvi	45/F	Teacher	4 months	16/03/07	01/05/07	47	1. Internal - Kirubagara Shanmuga Chenduram - 130mg (Bd) with Chukku, Milagu and Omam Choomam - 1gm with Murungaipattai Chaaru 2. External - Vathathirkku Poosa Nochi Ennei - 30ml	Good
2	20405	Subashree	40/F	House wife	6 months	12/03/07	01/05/07	51		Good
3	23799	Sudha	27/F	Beedi worker	7 months	27/03/07	07/05/07	42		Good
4	23789	Muthulakshmi	60/F	House wife	9 months	27/03/07	09/05/07	44		Good
5	23880	Valli	38/F	Servant Maid	5 years	28/03/07	14/05/07	48		Good
6	24095	Shanthi	45/F	House wife	8 months	29/03/07	09/05/07	42		Good
7	25438	Shankamma	48/F	Servant Maid	4 years	05/04/07	16/05/07	41		Fair
8	25056	Kala	27/F	House wife	2 months	03/04/07	13/05/07	40		Good
9	26115	Lakshmi	55/F	House wife	8 months	09/04/07	19/05/07	40		Good
10	26512	Allimeena	26/F	House wife	1 month	10/04/07	21/05/07	42		Good
11	26387	Sautha Beevi	50/F	House wife	5 months	10/04/07	21/05/07	42		Fair
12	28022	Krishnammal	39/F	Cook	9 months	18/04/07	10/05/07	23		Poor
13	28982	Indhra	58/F	Beedi worker	2 months	23/04/07	16/05/07	24		Good
14	72832	Saraswathi	62/F	House wife	4 months	10/12/07	23/01/08	43		Good
15	73919	Ramakrishnan	60/M	Dhobi	9 months	17/12/07	04/02/08	50		Good
16	75868	Muthulakshmi	50/F	House wife	3 years	28/12/07	10/02/08	45		Good
17	75815	Kanagarathi	25/F	Teacher	8 months	28/12/07	14/02/08	49		Good
18	319	Avudaiammal	63/F	House wife	10 months	02/01/08	14/02/08	44		Good
19	3137	Kalavathi	35/F	Beedi worker	3 months	09/01/08	04/02/08	27		Poor
20	6070	Abdul Raheem	81/M	Shop worker	10 months	22/01/08	21/02/08	32		Good

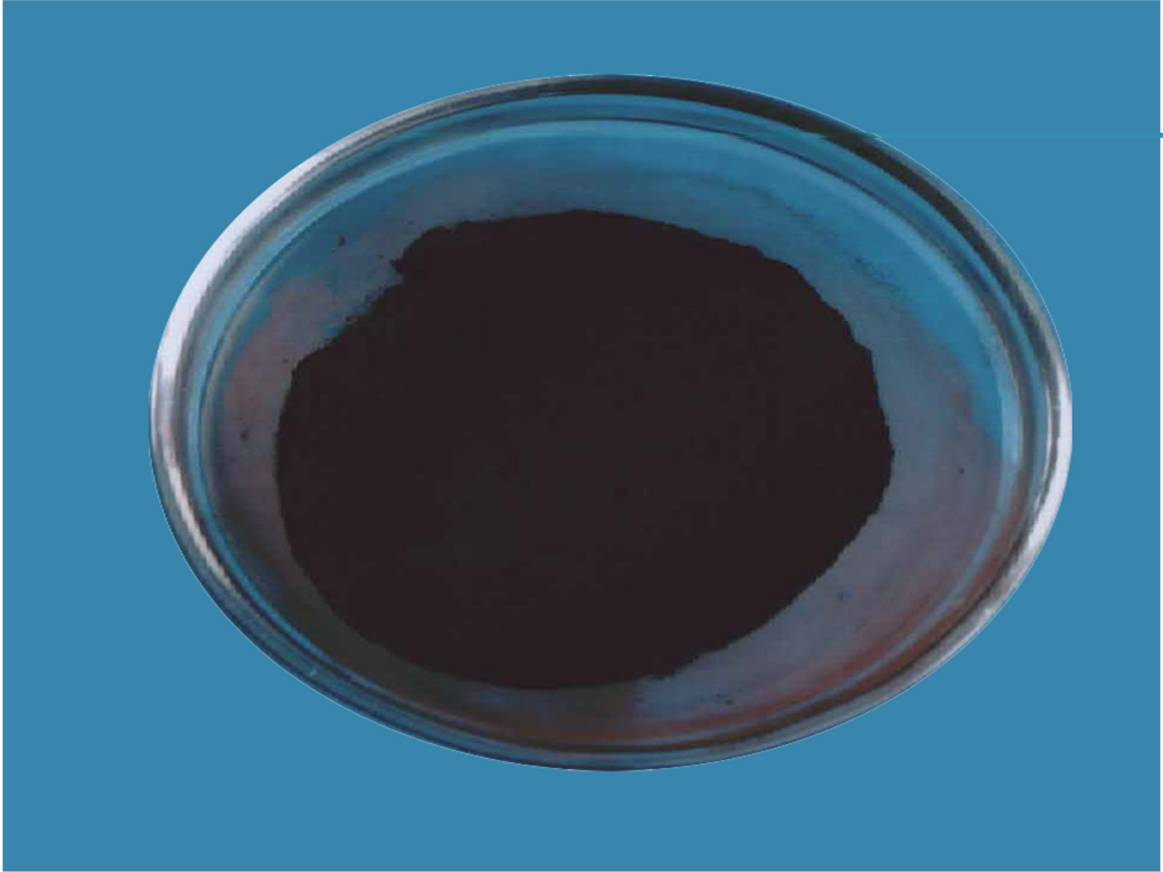
Radiological Examination of OP Patients

S. No	OP No	X – ray both hands with wrist joint, AP view	X – ray knee joints lateral and AP view	X – ray cervical spine, lateral view	X – ray foot with ankle joint, oblique view
1	21349	Rheumatoid arthritis	-	-	-
2	20405	Osteoporosis	-	-	-
3	23799	Soft tissue swelling, poly arthritis	-	-	-
4	23789	Osteoporosis	Osteo arthritis	-	-
5	23880	Rheumatoid arthritis with deformity	-	-	-
6	24095	Osteoporosis	-	Cervical spondylosis	-
7	25438	Rheumatoid arthritis with deformity	-	-	Osteoporosis
8	25056	Soft tissue swelling	-	-	-
9	26115	Poly arthritis	Osteo arthritis	-	-
10	26512	Soft tissue swelling	-	-	-
11	26387	Osteoporosis	Osteo arthritis	-	-
12	28022	Rheumatoid arthritis	-	-	Osteoporosis
13	28982	Osteoporosis	-	Cervical spondylosis	-
14	72832	Osteoporosis	Osteo arthritis	-	-
15	73919	Rheumatoid arthritis	-	-	-
16	75868	Osteoporosis	Osteo arthritis	-	-
17	75815	Periarticular erosion	-	-	-
18	319	Rheumatoid arthritis	-	-	Osteoporosis
19	3137	Periarticular osteoporosis	-	-	-
20	6070	Osteoporosis	Osteo arthritis	-	-

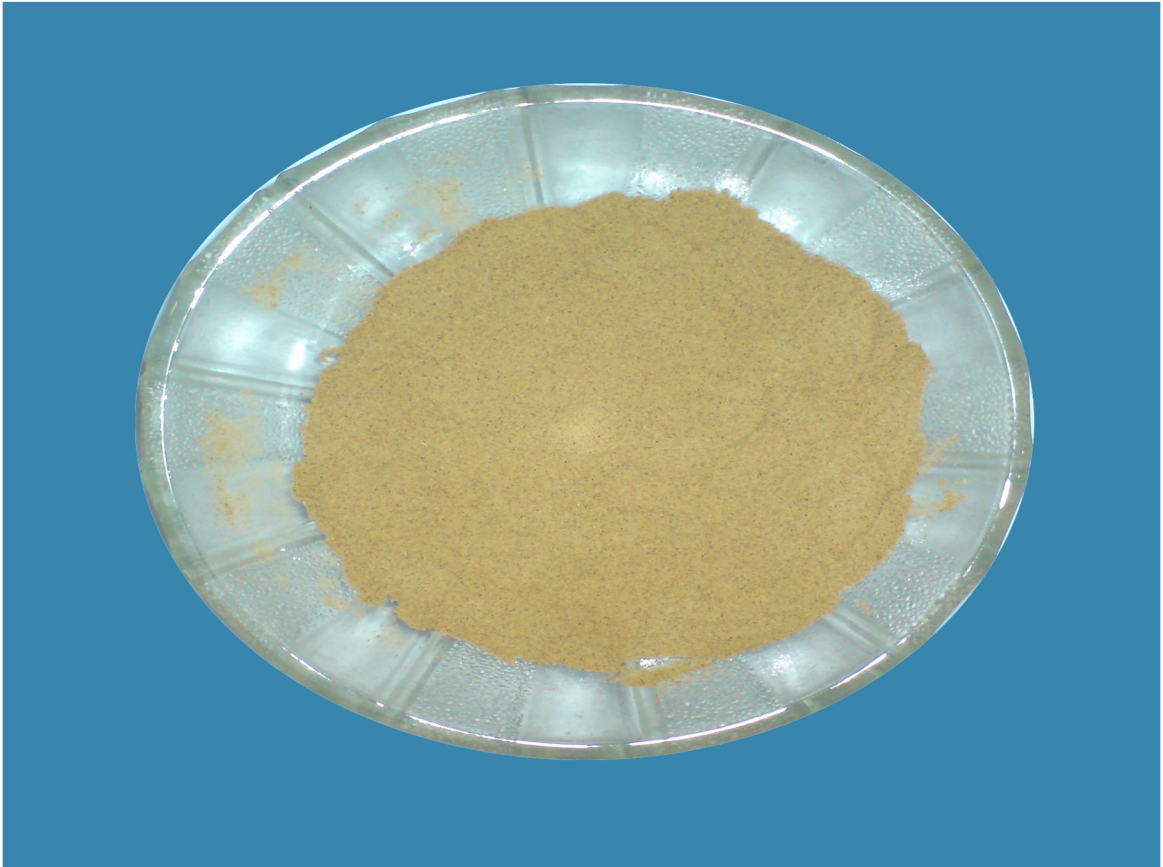
Radiological Examination of IP Patient

S. No	IP No	X – ray both hands with wrist joint – AP view	X – ray knee joints, lateral and AP view	X – ray cervical spine, lateral view	X – ray foot with ankle joint, oblique view
1	691	Rheumatoid arthritis	Osteo arthritis	-	-
2	725	Osteoporosis	-	-	Osteoporosis
3	959	Rheumatoid arthritis	-	-	-
4	1052	Rheumatoid arthritis	-	-	-
5	1003	Osteoporosis	Osteo arthritis	-	-
6	1284	Soft tissue swelling	-	-	-
7	2865	Rheumatoid arthritis	Osteo arthritis	-	-
8	3105	Osteoporosis	Osteo arthritis	-	-
9	62	Osteoporosis	-	-	-
10	50	Rheumatoid arthritis	-	-	osteoporosis
11	233	Soft tissue swelling	-	-	-
12	280	Poly arthritis	Osteo arthritis	-	-
13	323	Peri articular erosion	-	Cervical spondylosis	-
14	317	Rheumatoid arthritis with deformity	-	-	Osteoporosis
15	451	Osteoporosis	-	-	-
16	720	Osteoporosis	-	Cervical spondylosis	-
17	721	Peri articular erosion	Osteo arthritis	-	-
18	737	Osteoporosis	-	-	-
19	843	Rheumatoid arthritis	-	-	Osteoporosis
20	853	-	Osteo arthritis	-	-

PREPARED DRUGS
KIRUBAGARA SHANMUGA CHENDURAM



ADJUVANT
CHUKKU,MILAGU,OMAM CHOORANAM



NAME : SHANKARAMMA 48/F
OP NO : 25438



SWAN NECK DEFORMITY WITH ULNAR
DEVIATION OF FINGERS



HALLUS VALGUS WITH CROWDING OF TOES

INGREDIENTS OF KIRUBAGARA SHANMUGA CHENDURAM

கிருபாகர சண்முக செந்தூரம்

கிருபாகர சண்முக செந்தூரம்



INGREDIENTS OF VATHATHIRKKU POOSA NOCHI ENNEI



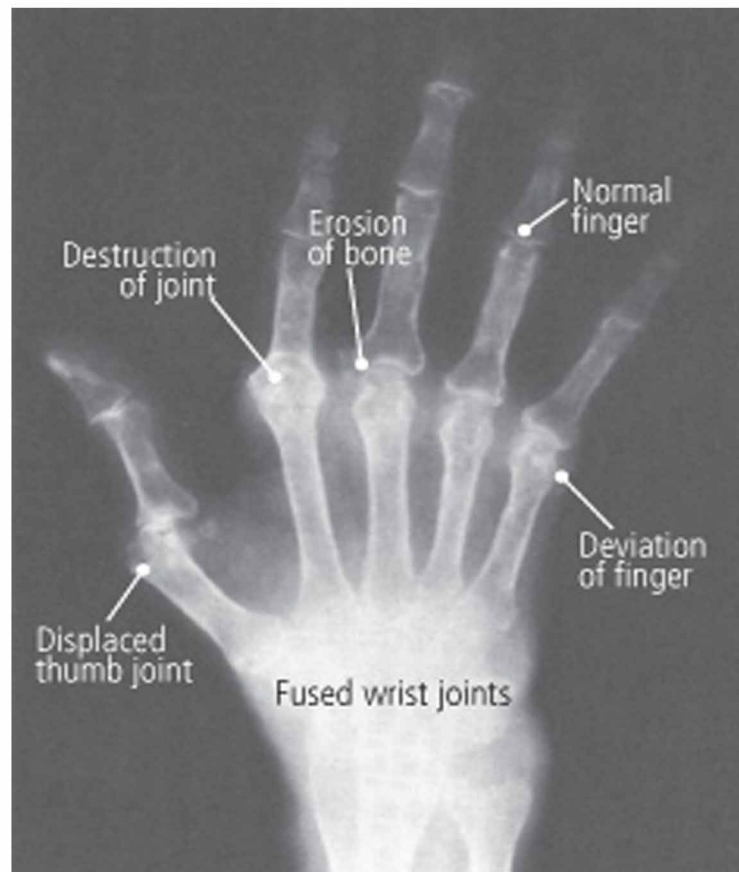
VATHATHIRKKU POOSA NOCHI ENNEI



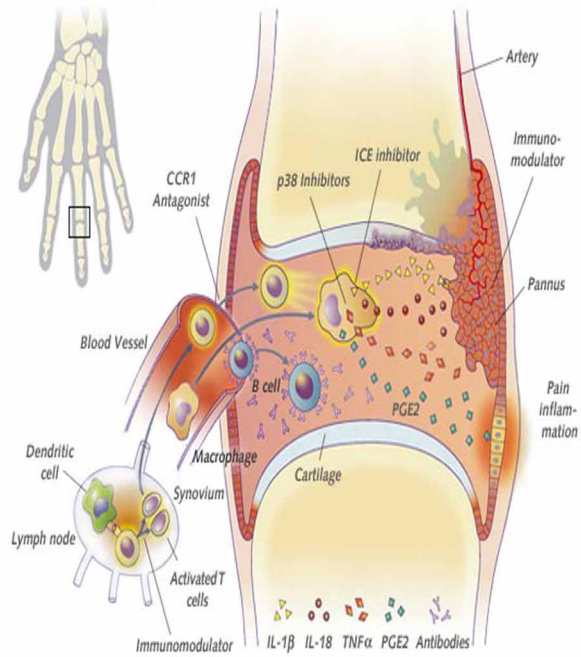
O.P.NO: 25438 SHANKARAMMA 48/F
RHEUMATOID NODULES



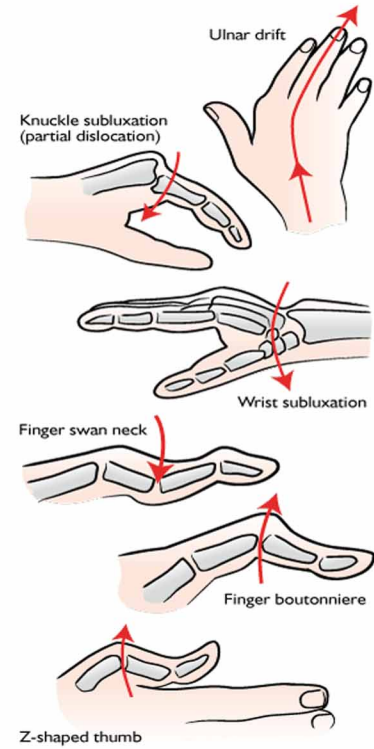
X - RAY CHANGES



PATHOGENESIS



DEFORMITIES OF HAND



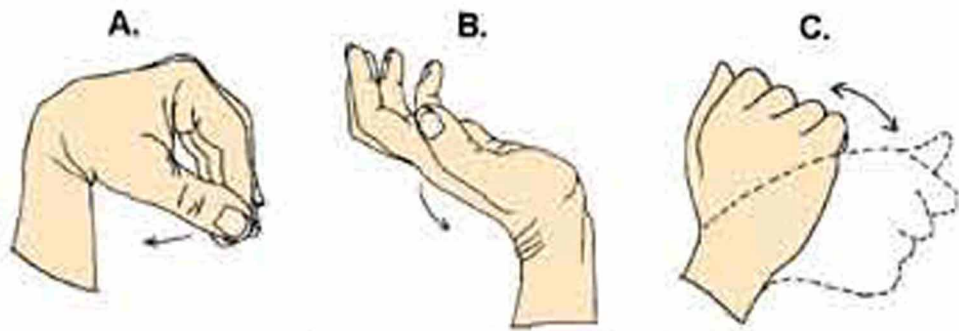
ULNAR DEVIATION OF FINGERS



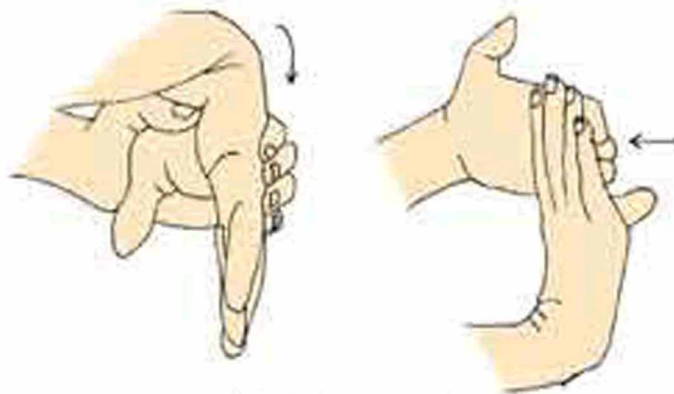
RHEUMATOID VASCULITIS



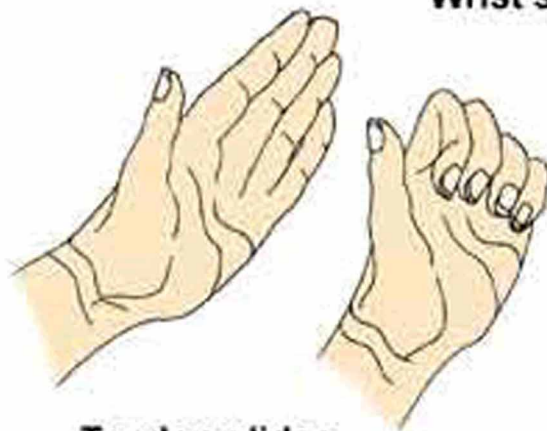
HAND EXCERCISES



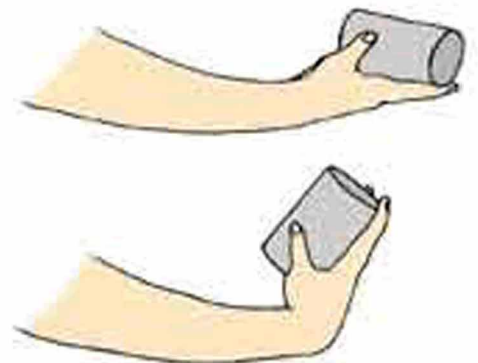
Active range of motion



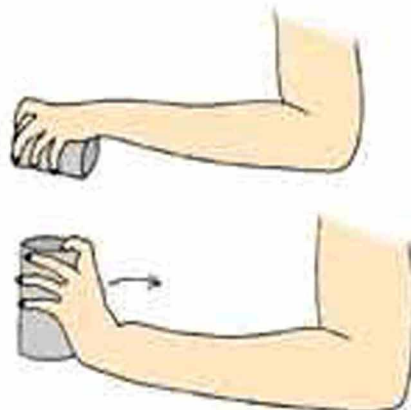
Wrist stretch



Tendon glides



Wrist flexion exercise



Wrist extension exercise



Grip strengthening

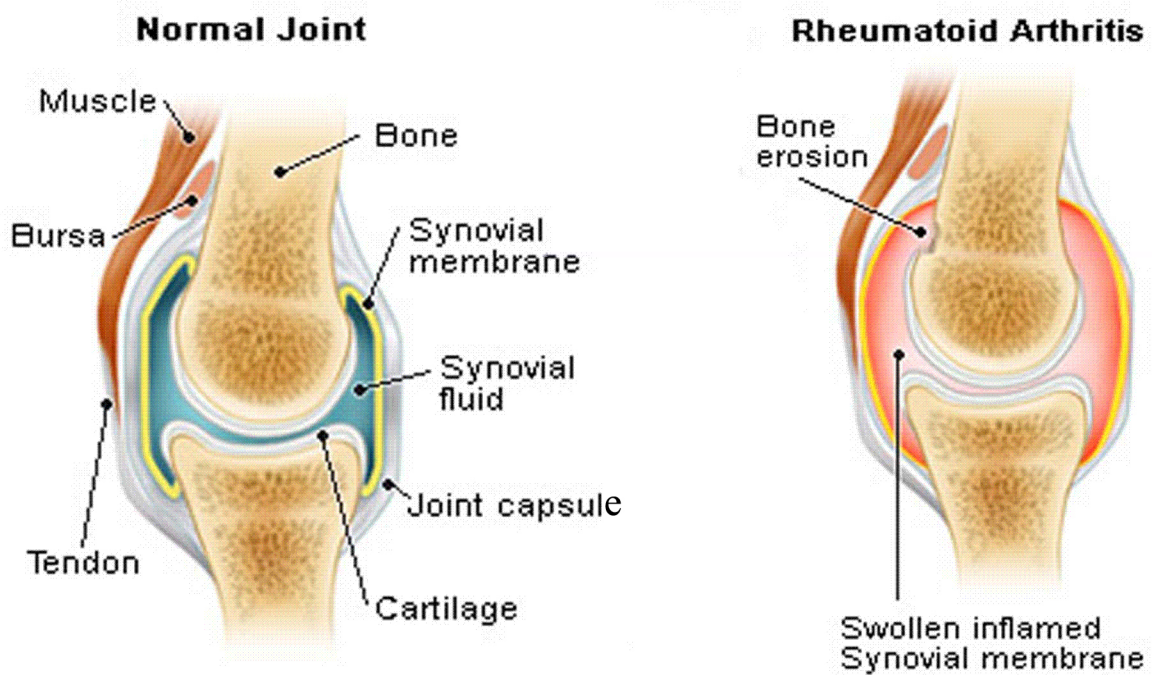
Name : Valli 38/F
OP.No:23880



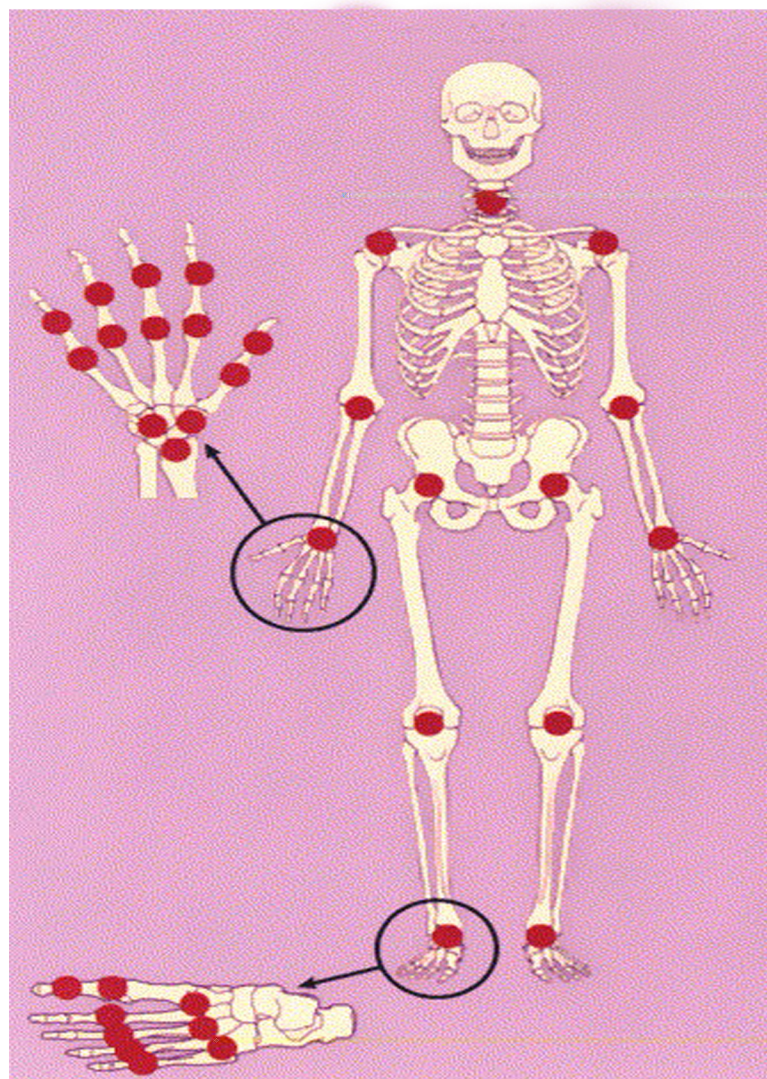
**BOUTONNIERE DEFORMITY, Z DEFORMITY
OF RIGHT HAND**



**HALLUS VALGUS WITH HAMMER TOES &
OVERLAPPING OF TOES**



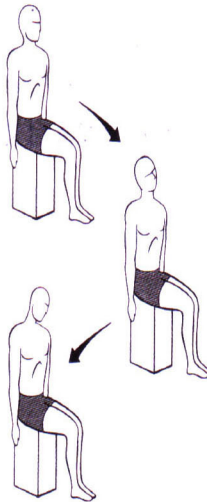
RHEUMATOID ARTHRITIS (JOINTS INVOLVED)



EXCERCISES

CERVICAL COLUMN

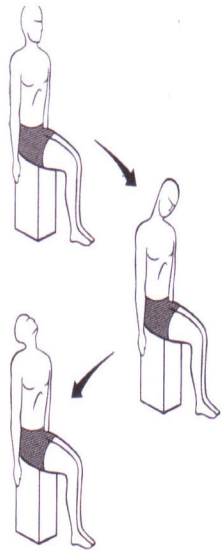
1



Method

- Sitting straight up, bend the head first to the left and then towards the right, keeping the gaze fixed straight ahead during the exercise.

2

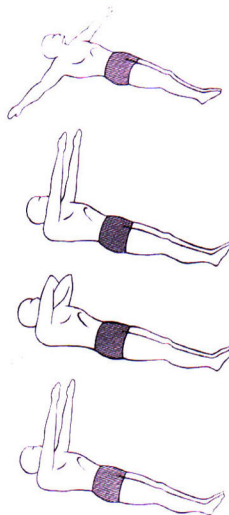


Method

- Bend the head and let it fall forwards till the chin touches the chest, and then slowly bend the head back as far as it goes.

ELBOW JOINT

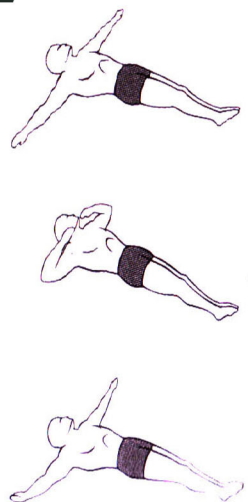
1



Method

- Raise arms vertically, then slowly cross them so that the right hand touches the left shoulder and the left hand touches the right shoulder.
- Bring arms back to a vertical position and revert to starting position.

2



Method

- While inhaling, press the elbows against the floor, then relax the arms by releasing the pressure while exhaling.

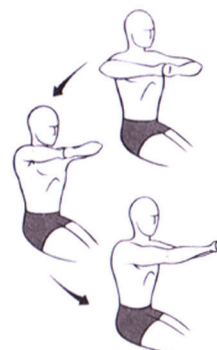
SHOULDER JOINT

Starting position

Sitting upon a stool, with hands joined across the chest.

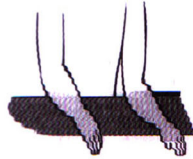
Method

- Turn joined hands away from the body, with the back of the hands facing the chest; extend the arms forwards and then revert to starting position by performing the same movements in an inverse direction.



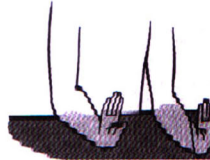
EXERCISES FOR WRIST AND FINGERS

1



Method

- Raise the hands without moving forearms.



2

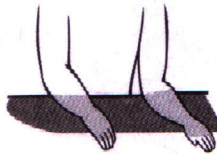


Method

- Sitting at the table with the hand over the edge. Bend and extend the hand from the wrist.
- Continue the same exercise by holding a maximum weight of 2 kg in each hand.

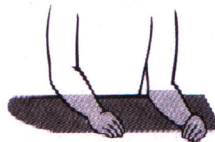
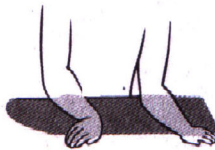


3



Method

- Move the hands along the table from side to side from the wrist, without moving the forearms.
- Carry out the same exercise, raising hands from the table, wrist upwards, making a semi-circular movement.

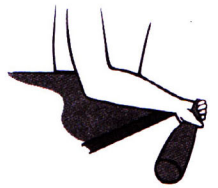


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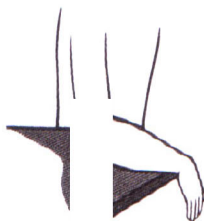


Method

- Rotate the forearm, making the palm face upwards, and then repeat the movement in the inverse direction, palm facing the floor.
- Continue the same exercise alternately with a weight in each hand, preferably holding an empty bottle.

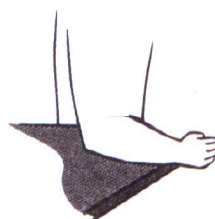


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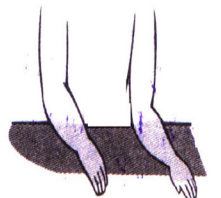


Method

- Rotate the hand in a circular motion in both directions.
- Continue the exercise alternately by holding in each hand a weight not exceeding 2 kg.

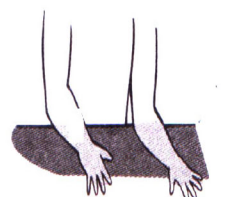


6



Method

- Spread the fingers and thumbs, separating each one.

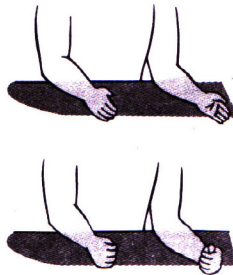


EXERCISES FOR WRIST AND FINGERS

7

Method

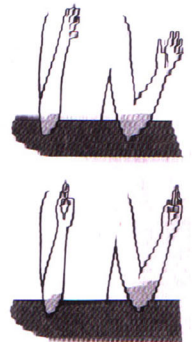
- Bend the arms at the elbows, bringing forearms up, open and close fists; revert to starting position.



8

Method

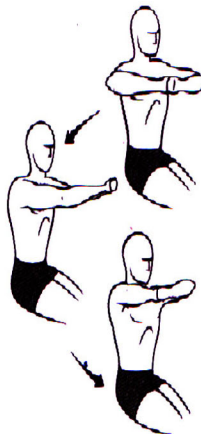
- Bring the tips of the each thumb and index finger together; repeat with each one of the fingers, extending the fingers between each movement.



9

Method

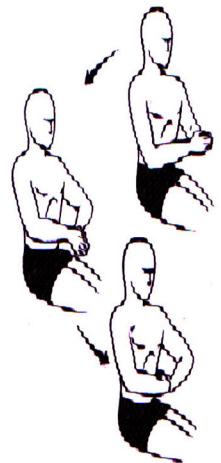
- Rotate the forearms so that the fingers face the chest; slowly stretch the arms forwards at shoulder level, keeping the palms together; revert to starting position by making the same movements in the inverse direction.



10

Method

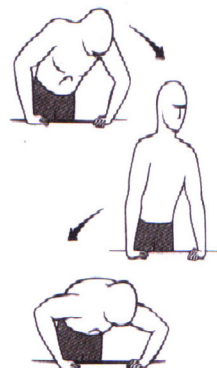
- Without separating the palms, direct the fingers first towards the floor and then towards the chest.



11

Method

- Bend downwards, letting the chest touch the table, straighten the arms and then repeat the movement again.



12

Practical Exercises

- Open and close a water-tap or a window, turn a key into a keyhole, button and unbutton a garment, knot a lasso, operate a switch, open and close a door, screw and unscrew a cover, pick up match sticks or needles and do writing exercises.

EXERCISES KNEE JOINT

1



Method

- First, pull the toes inwards towards the body, press the knee firmly against the floor and then raise the leg to the maximum level possible. Revert to starting position and repeat the exercise with the other leg.

2



Method

- Raise the leg slowly stretching the knee. Repeat the exercise picking up a weight of up to 3 kg with the foot.

3



Method

- Keeping legs bent try and move forwards.

4



Method

- Step on the stool by putting the affected leg up first and then climb down on the other side by putting the healthy leg forward. Repeat the exercise by practicing on a staircase.

ANKLES AND TOES

1



Method

- Pull the toes of both feet in first towards the body, then turn them inwards towards each other and then outwards without moving the legs.

2



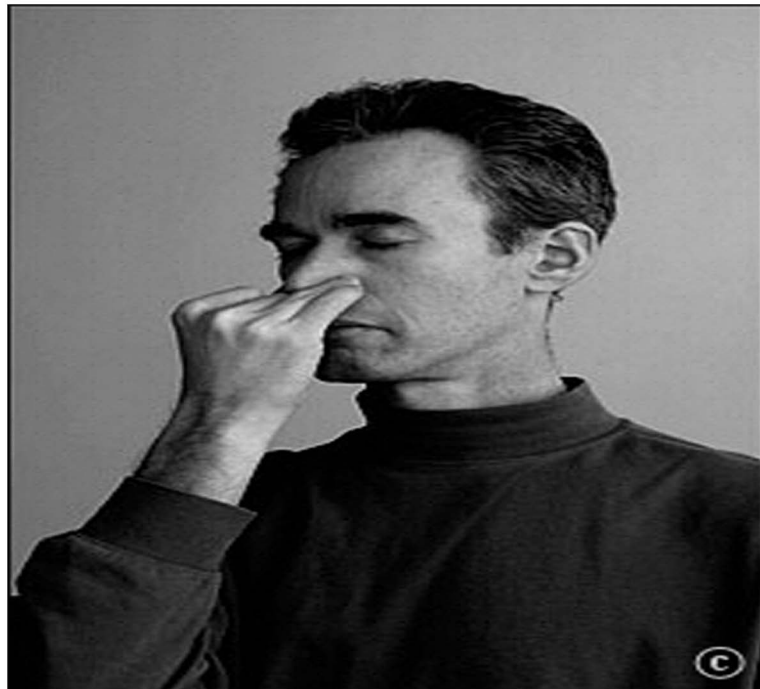
Method

- Bend and stretch the toes without moving the feet.

SAVASANA



PRANAYAMA USING NASIKA MUDRA



MUDRAS USED IN PRANAYAMA

CIN MUDRA



CINMAYA MUDRA



ADHI MUDRA



BRAHMA MUDRA

