EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Coden USA: EJBPBO
Volume: 13
Issue: 5
Year: 2026

EFFECTIVENESS OF MAYANA THYLAM PATTIKATTUTHAL (BANDAGE) IN RHEUMATOID ARTHRITIS (UTHIRAVATHA SURONITHAM)-A CASE SERIES OF OPD, GSMCH, PALAYAMKOTTAI

Pushpalatha A.[1]*, Thuraiprasath G.[2], Sathish Kumar S.[3], Ganesan G.[4], Sujatha S.[5]

*[1]PG Scholar, Department of Pura Maruthuvam, Govt. Siddha Medical college and Hospital, Palayamkottai, Tirunelveli, Tamilnadu, India.
[2]PG Scholar, Department of Sidhhar Yoga Maruthuvam, Govt. Siddha medical college and Hospital, Palayamkottai, Tirunelveli, Tamilnadu, India.
[3]Lecturer, Department of Pura Maruthuvam, Govt. Siddha Medical College and Hospital, Palayamkottai, Tirunelveli Tamilnadu, India.
[4]Professor and HOD, Department of Pura Maruthuvam, Govt. Siddha Medical College and Hospital, Palayamkottai, Tirunelveli Tamilnadu, India.

***Corresponding Author: Pushpalatha A.**

PG Scholar, Department of Pura Maruthuvam, Govt. Siddha Medical College and Hospital, Palayamkottai, Tirunelveli, Tamilnadu, India.
DOI: https://doi.org/10.5281/zenodo.19913253

How to cite this Article: Pushpalatha A.[1]*, Thuraiprasath G.[2], Sathish Kumar S.[3], Ganesan G.[4], Sujatha S.[5]. (2026). Effectiveness Of Mayana Thylam Pattikattuthal (Bandage) In Rheumatoid Arthritis (Uthiravatha Suronitham)-A Case Series Of Opd, Gsmch, Palayamkottai. European Journal of Biomedical and Pharmaceutical Sciences, 13(5), 230–241.
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Article Received on 05/04/2026 **Article Revised on 25/04/2026** **Article Published on 01/05/2026**

ABSTRACT

Patti kattuthal is one among the 32 types of siddha external therapy, which is widely used in the management of trauma, wound, contusion, boils, muscle spasms, sprain, abscess, dislocation of joints and fracture Pattikattuthal is usually dressed with therapeutic oils and here mayana thylam is chosen for pattikattuthal in rheumatoid arthritis as per therayar thyla varka churukkam. This study aims to determine the effectiveness of mayana thylam pattikattuthal (Bandage) in Rheumatoid arthritis (Uthiravatha suronithan)It was an observational study, case series conducted on 15 patients of Rheumatoid arthritis for the period of 21 days. Clinical features were documented before and after treatment. Statistical analyses were carried out paired t-test and McNemar test in SPSS software. Thus it provides the complimentary management in improving the quality of life further RCTs can be done to evaluate its efficacy in other type of arthritis.

KEYWORDS: Patti kattuthal, Rheumatoid arthritis, Mayana thylam.

1. INTRODUCTION

The siddha system of medicine is one of the ancient medical systems of the world. It has a vast repository of 32 types of both internal and external therapies. Kattu is one among the 32 external therapies.

PATTI KATTUTHAL or KATTU (Compress or bandage) is a form of compressive bandage using grinded or boiled wet plants parts, natural vinegar or inorganic salts. It is commonly used for treating in trauma, wound, contusion, boils, muscles, spasm, sprain, abscess, dislocation of joints and fracture. In siddha system siddhars classified the diseases on the basis of affected vital humours (vali,azhal,iyam) in to 4448. Siddhars classified different types of Neuro musculo skeletal diseases under 80 type of vatha noigal in text yugi vaidhya chinthamani Uthiravatha suronitham - one among 80 vatha diseases. The nearest correlation of rheumatoid arthritis can be made with uthiravatha suronitham in siddha literature.

Rheumatoid arthritis is a chronic inflammatory joint disease with multisystem involvement. It is also defined as a disease of unknown cause and it may an interplay between genes, sex hormones and an infectious agent contribute to initiating an autoimmune disease mechanism that results in inflammation of joints, proliferative and destructive changes in synovial membrane, peri-articular structures, skeletal muscles and perineural sheaths.

It is also defined as a generalised disease affecting the connective tissue of the whole body with focalised involvement of Musculoskeletal system. The etiology of Rheumatoid Arthritis is autoimmunity.

As per the siddha text of THERAYARTHAILA VARKA CHURUKKAM, mayana thylam is indicated in the management of joint pain. This study will evaluate the effectiveness of MAYANA THAILAM PATTI KATTUTHAL (BANDAGE) IN RHEUMATOID ARTHRITIS patients.

2. AIM

To determine the effectiveness of mayana thylam pattikattuthal (Bandage) in Rheumatoid arthritis (Uthiravathasuronitham) patients visiting department of Pura Maruthuvam OPD, Government Siddha Medical College and Hospital, Palayamkottai.

OBJECTIVE

To assess the reduction of pain, swelling, morning stiffness, tenderness, morning stiffness, warmth and restricted movements, before and after treatment by the effectiveness of mayana thylam pattikattuthal in Rheumatoid arthritis.

3. LITERATURE REVIEW SIDDHA ASPECT

EXTERNAL THERAPY

In Siddha literature there both form of internal and external medicine are mentioned. Thirty-two types of external therapies and procedures are deal with in classical Siddha text particularly in the ones authored by Theraiyar and Agathiyar.

“வெளிமருந் தேகட்டு பட்றொற்ற டம்பூச்சு
வேதுபொட் டணம்தொக்கணம்
மென்புலகமை பொடிதிமிரிதல்
கலிக்கதசி யமுதல்
மேவநா சிகாபரணமும்
களிம்புசிலை நிரவர்த்தி சுட்டிகைச்
லாகைபசை
களி பொடி முறிச்சல்கீறல்
காரமட்டை அமுவை கொம்புரிஞ்
சல்குருதி
கண்டுவாங் குதல்பிச்சிவை
வெளியமருந்து முப்பதித்தி ரண்டென்று கூறினர்
விண்ணுலவு சித்தராமால்
மேல்வர்த் தியும்பசை பிச்சுவை நசியமும்
மென்கலிங் கங்களோராண்
பொளிவர்த்தி பொடி நீரி நாசிகா
பரணமிவை
பொருமூன்று திங்களாகும்
உயர்சீலைக் களிம்பிவைக ளாறுதிங்
களாகுமென்
றோதினா ராயு ளமரோ" - (Gunapadam Thathu)

There are 32 types of external therapies in siddha literature, kattu is one among the 32 external therapy. PATTIKATTUTHAL or KATTU (compress or bandage) is a form of compressive bandage using grinded or boiled wet plant parts, natural vinegar or inorganic salts. It is commonly used for treating in trauma, wound, contusion, boils, muscles, spasm, sprain, abscess, dislocation of joints and fracture.

EXTERNALMEDICINE

மயன தைலம்

சித்தக மனற்கலுப் பயிரோம மரிசனந்
தேம்பிசா சேழுமுறையே
சேர்தொடி சதுப்பதிற் நட்த ததிற்பாதி
செப்பரைக் காலரைக்கா
லொத்த தொகை யிற்பாதி யிவைகளை
நெடுங்கடத்துள் ளடைத்தொருகலசமே
லுறவைத்து மண்ணிட்டு நூல்வரிந்
தெழுசீலை
யொவ்வப் பரிந்திரண்டின்
சுத்தமத் தியமீது கீழ்பெரிது சிறிதாய்த்
துவாரமிட் டுயர் வழியின்வாய்த்
தூமமே காவணமு லோட்டமொடு
கோமயந்
தோயப்பொ திந்திவணமே
சத்தமுறு முத்தான மிட்டதோ முகவழி
தனிற்பாத் திரஞ்சேர்த்துதா
சனனையங் குலவவிடு முச்சாம
மாவியொடு
தைலம் பிறந்திழியுமே.

- **(Therayar thaila varka churukam)**

(இ-ள்.) மஞ்சள், மெழுக்கு, சக்கிக்கல், வெள்ளையுப்பு, எடையின் ஆற்றுமணல், ஓமம், கப்புமஞ்சள், மணமுள்ள சடாமாஞ்சில் என்னும் சரக்குவகை (7-ல்) கிரமாலங்காரமாக ஆதியிலிருக்கிற (128) ஒரு சரக்கு (4-பலம்) உள்ள ஒரு வீசையும், அதற்பின்னிருக்கிற (2) சரக்குகள் அது அது

என்கிற ஒரு ஒரு வீசையும், அடுத்த சரக்கு அதிற்பாதி என்கிற (1/2) வீசையும் அப்பால் (2) சரக்குகள் அரைக்கால் அரைக்கால் வீசைகளும், மற்றொரு சிறு கலசத்தை தன் வாய்க்குப் பொருந்தக் கவிழ்த்து மூடி அந்தச் சந்தின்வாய் மறைய மண்ணரைத்துப்பூசி நூற் கயிற்றினால் வரிந்து கட்டி அதன்மேல் எழுசீலைமண் செய்து, இவ்விரண்டு கடத்தின் நடுமையங்களில் மேற்புறம் பெரிதாகவும் கீழ்ப்புறஞ் சிறிதாகவும்

இரண்டு துவாரங்களிட்டு, மேற்றுவாரத்தில் புகை வெளிப்படாதிருக்கும் பொருட்டு ஒரு சிறிய ஓட்டினால் அத்துவாரத்தை மறைத்து அதன்மேல் பசுவின் சாணத்தை அப்பி இக்கடத்தை வஞ்சரித்தபடியே ஒலிக்காநின்ற அடுப்பின் மிசை யேற்றிக் கீழ்முகத் துவாரத்தின் வழியில் ஒரு பாத்திரத்தை வைத்து அக்கினியைமூட்டி (3.சாமம்) நன்றாக எரிக்கில், புகையுடன் கூடத் தைலம் பிறந்திருக்கும்.

இதுவுமது

"ஓர் நிறைபொ டித்தபொடி
யோடதுதுழாவி
யார்கனலி லப்பருவ மானதில றிந்து
நேர்வதிலி றக்கிவரு நேயமிக நேயம்
பேர்சிறுக டத்திலொரு பெட்புறவ
மைத்தே."

(இ-ள்) (1 - பலம்) ஆக நிறுத்து இடித்து வஸ்திரகாயஞ் செய்து மேற்படி சரக்குகளுடன் சேர்த்துத் துழாவி எரித்து பக்குவத்தில் வடித்து ஒரு பாண்டத்தில் விட்டு,
இதுவுமது

"மதிமிகவொன் நாகவமர் வைத்தமுத நெல்லிற்
பதியவையெ டுத்ததொரு பண்புமிக வுண்டாம்
அதனையிரு போதுமமு தாகவுள ருந்திற்
சதிசெயுள மேகவினை சஞ்சலமி ராதே."

(இ-ள்.) மேற்படி எண்ணெயை ஒருமாத காலத்திற்கு மேலும் நெல்லில்வைத்து எடுத்து, அதனை காலை மாலை இரண்டு வேளையும் சிறுகரண்டி யளவு அமுதமாகக்கொள்ள மேக உபத்திர வங்கள் ஒன்றும் இராது.
இதன் மகிமை

"இழியுமிந்த வள்ளியத்தாந் தைலப் பேரை
யியம்புங்கா லர்த்தாங்க மிகவு வீக்கம்
வழியுமுதி ரங்கொடுத்த வெட்டுக் காயம்
வளியதப்பு நரித்தலையின் வாய்வு சந்நி
அழியுமட வார்குறியாண் குறித்த ளர்ச்சி
யத்திசந்தி தசைநரம்பிற் கிளைத்த வூதை
யாழியுமிதைப் பட்டிகட்டிற் கைகால் சோர்வு
முறங்குவர்க னாப்பொருளா மோதுங் காலே."

(இ-ள்.) இவ்வாறு மெழுகினால் இறங்கிய தைலத்தின் பெயரைச் சொல்லுமிடத்தில், வலியுள்ள அர்த்தாங்க வாதரோகமும், குழந்தைகளுக்குக் காணுகின்ற இசுவுகளும் வீக்கங்களும் ரத்தம் வழிந்தோடும்படி செய்கின்ற வெட்டுக் காயங்களும், நோயோடுங் கூடிய பீஜத்தின் வீக்கமும்

நரித் தலைவாதமும், சந்திபாதமும் பெண்குறித் தளர்ச்சியும், ஆண் குறித் துவளலும் கீல் எலும்பு மாமிசம் நரம்பு என்னும் இவைகளைப்பற்றி அதிகரித்த வாயுவும் நீங்கிப்போம். அன்றியும்,இதை பட்டி கட்டினால் கை கால்களில் உண்டாகிய சோர்வுகளெல்லாம் நித்திரை செய்பவர் சொப்பணத்திற்கண்ட பொருட் போல் பொய்மையாய்விடும்.

UTHIRA VATHA SURONITHAM
Definition
Uthira Vatha Suronitham is a condition which deals with the involvement of joints which comprises the symptoms of pain and swelling mainly in the small joints and also in large joints.

உதிரம், சுரோணிதம் - குருதி
வாதம் வாயு ஆகாயம்
வளி (வாதம்) தன் அளவில் மிகுந்திருக்கும் போது உடலில் வாதநோய்கள் தோன்றுகின்றன.
"யூகி வைத்திய சிந்தாமணி" நூலின் படி இதனை வளி, சுற்று, காற்று, ஊதை, கால் என்றும் கூறுவர்.
"என்னவே வாதமது எண்பதாகும்"

என்று பாட்டினாலும் அவைகளின் பெயர்களையும்,குணங்களையும் கூறும்போது எண்பத்தைந்து வகைகளைக் கூறியுள்ளார் அவற்றில் ஒன்றுஉதிரவாத சுரோணிதம்.

CLINICAL FEATURES OF UTHIRA VATHASURONITHAM
In Yugi Vaidhiya cinthamany-800
"வைகிதமாய்க் கணுக்காலு முழங்கால் தானும்
மற்கடஞ் சந்துபுற வடியும் வீங்கிச்
செய்கிதமாஞ் சிறுவிரல்கள் மிகவும் நொந்து
சிந்தைதரு மாறியே சலிப்புண் டாகும்"
பைகிதமாம் பைத்தியத்தில் வாத மிஞ்சிப்
பாரமாய் உற்பவித்து அழலுண்டாகும்
உய்கிதமாய் அசனமது தானும் வேண்டா
உதிரவாத சுரோணிதத் துணர்ச்சி யாமுமே"

பொருள்

- கணுக்கால், முழங்கால், சந்துகள் இவைகளில் வீங்கும்.(Swelling in ankle joint, knee joint, dorsum of foot and other joints)
- அழல் உண்டாகும் (increased pitham)
- சிறுவிரல்கள் மிகவும் நோயை பிறப்பிக்கும் (Pain in fingers that is interphalangeal joints)
- பசியின்மை உண்டாகும் (Loss of appetite)
- சிந்தை தடுமாறும் (Mental confusion)
- சலிப்புண்டாகும் (Easy fatiguability)

4. MODERN ASPECT
RHEUMATOID ARTHRITIS

DEFINITION
Rheumatoid arthritis is a chronic inflammatory joint disease with multisystem involvement. It is also defined as a disease of unknown cause and it may an interplay between genes, sex hormones and an infectious agent contribute to initiating an autoimmune disease mechanism that results in inflammation of joints, proliferative and destructive changes in synovial membrane, peri-articular structures, skeletal muscles and perineural sheaths.

It is also defined as a generalised disease affecting the connective tissue of the whole body with focalised involvement of Musculoskeletal system.

EPIDEMIOLOGY

- The prevalence of rheumatoid arthritis in Indian Population is about 0.75% i.e. 7 millions patients present in India. It is higher than that reported from China, Indonesia, Philippines & rural Africa. The maximum prevalence of disease was observed in the age group of 25-29 yrs. The prevalence of RA is higher in females than males, the incidence is 4-5 times higher below the age of 50, but above the age of 60-70 years the female/ male ratio is only about 2.
- Epidemiological studies shows that a possible trend of decreasing incidence of RA in USA and Western Europe. Coming to the mortality of RA affected patients the mortality is due to infection, Cardio vascular disease (particularly coronary artery disease) and respiratory ailments. Death due to lung cancer and non-Hodgkin lymphoma but no other cancers.

ETIOLOGY

- ✓ Etiology remains unknown.
- ✓ The following are put forth as possible aetiological factors:
- ✓ Genetic predisposition: RA is associated with Class-11 major histocompatibility complex allele
- ✓ HLA-DR4 and HLA-DRBI. However, genetic factors alone do not account for the disease.
- ✓ Abnormal immune response: RA may be a manifestation of an abnormal immune-mediated response to infections caused by mycoplasma, Epstein-Barr virus, cytomegalovirus and parvovirus in a genetically predisposed individual.

PATHOLOGY

- The condition is widespread, but the brunt of the attack falls on synovium.
- The constant and characteristic feature is a chronic inflammation, an inconstant but pathognomonic lesion is the rheumatoid nodules.
- The pathological changes, if unchecked, proceed in three stages.

STAGE 1: Synovitis
Initial lesion occurs in the synovium leading to vascular stasis, infiltration of the subsynovial layers with

inflammatory cells and formation of fibrinous exudate. Synovial hypertrophy occurs with thickening of capsular structures.

STAGE 2: Destruction

- ❖ Pannus formation: Hypertrophied synovium along with granulation tissue leads to formation of pannus which encroaches the articular cartilage from its periphery.
- ❖ Articular cartilage destruction: The articular cartilage gets destroyed gradually. Further the bony surfaces are involved, leading to obliteration of joint space. Joints get destroyed and deformed

STAGE 3: Deformity

The extending granular pannus gets organized into fibrous tissue, which bridges the articulating bone ends, leading to fibrous and later bony ankylosis. Ligaments are involved leading to joint subluxation or dislocation. Muscles, tendons and soft tissues around the joint also undergo inflammatory changes and get contracted or ruptured. Juxta-articular osteoporosis occurs. Not all patients progress through all three stages. Some may have mild disease and recover, while others may suffer from chronic disease with crippling deformities.

CLINICAL FEATURES

- RA is more common in women and occurs between 25 and 40 years of age. It is a chronic disease with periodic acute exacerbations and remissions.
- It most typically presents as a symmetric, peripheral, polyarticular disease with a gradual onset. However, some patients may present with acute onset with intermittent or migratory joint involvement or with mono articular disease.
- Morning stiffness is very characteristic of RA. RA usually involves the small joints of the hands and feet and later spreads to the proximal joints such as the knee, hips, elbow and shoulder. Occasionally, it may start in the knee or hip and remain as a monoarticular lesion for some time, but soon it spreads to other joints.
- On examination, the presenting joint is swollen and warm. There is joint line tenderness and the movements are painful and limited. There is effusion into the joint. The synovium can be felt as it is thickened and tender. In the knee joint, the swelling causes a fusiform appearance with pericapsular swelling. In the late stage, with progressive damage to the articular cartilage, there is an increase in flexion deformity, ultimately leading to ankylosis.

JOINTS INVOLVED IN RHEUMATOID ARTHRITIS

Commonly involved joints (in order of frequency)

- ➢ Small joints of hand, especially MCP and PIP and never DIP joints
- ➢ Foot especially meta tarso phalangeal joint
- ➢ Wrist
- ➢ Knee and elbow
- ➢ Ankle

Joints Less commonly involved

- ➢ Hip
- ➢ Temporo Mandibular joint
- ➢ Subtalar joint of foot

Rarely involved

- ➢ Upper cervical spine, i.e. inter spinous facet joints, atlanto axial joint
- ➢ Lumbar spine
- ➢ DIP joint of hand

DEFORMITIES IN RA

Joints of hand

- ▪ Ulnar drift
- ▪ Intrinsic plus deformity
- ▪ Boutonniere (buttonhole) deformity
- ▪ Swan neck deformity

Elbow

Flexion deformity

Knee

a) Early: Flexion deformity
b) Late: Triple sub luxation (flexion, posterior subluxation and external rotation)

Ankle

- ○ Equinus deformity
- ○ Joints of foot
- ○ Hallux valgus.
- ○ Hammer toe
- ○ Claw toes
- ○ Callosities

ONSET

- ❖ Insidious onset with fatigue, malaise, anorexia, weakness and vague musculoskeletal symptoms, which are perhaps caused by cytokine such as interleukin-1 and tumor necrosis factor.
- ❖ Acute onset with rapid development of polyarthritis accompanied by constitutional symptoms including fever, lymphadenopathy and splenomegaly.
- ❖ Palindromic onset where recurrent acute episodes of joint pain and stiffness occur in individual joints lasting only a few hours or days.

PROGNOSIS

- The course of the disease varies greatly.
- Some people have mild short-term symptoms, but in most the disease is progresive for life.
- Around 20%-30% will have subcutaneous nodules known as rheumatoid nodules.
- This is associated with a poor prognosis.

MANAGEMENT

Comprehensive management of this crippling condition requires the teamwork of rheumatologist, orthopaedic surgeon, physiotherapist, occupational therapist and social worker. The patient and his relatives must fully

understand the condition and be well motivated to cooperate with the treatment which usually follows a prolonged course.

The aim of the treatment is to

- Relieve pain
- Keep the inflammatory process down to a minimum
- Preserve joint mobility
- Maintain the tone of muscles
- Prevent deformities and joint stiffness
- Correct deformities

DIFFERENTIAL DIAGNOSIS

RA should be differentiated from self-limited

I. Polyarthritis,
II. Ankylosing spondylitis,
III. Psoriatic arthritis,
IV. Other inflammatory rheumatic diseases,
V. Septic arthritis,
VI. Gout
VII. Pseudo gout.

LABORATORY FINDINGS

Blood investigations reveal normo chromic, normo cytic anaemia during the active stage of the disease. The erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) remain elevated.

SPECIAL TESTS

Majority of patients with RA show evidence of the presence of an antibody, called rheumatoid factor (sero positivity), in the serum. This rheumatoid factor is the IgM fraction Of the immunoglobulin which can be detected by Rose-Waaler test and latex (agglutination) test.

Other investigations done are as follows:

- Synovial fluid examination
- Turbidity
- Reduced viscosity
- Increased proteins
- Normal or decreased glucose concentration
- Increased polymorph count
- Synovial biopsy and histological examination
- Arthroscopic examination to evaluate damage to articular cartilage and also for synovial biopsy

RADIOLOGICAL FEATURES

The X-ray of small joints of hand and other involved joints show the changes are Listed

EARLY CHANGES

A. Soft-tissue shadows resulting from swelling
B. Narrowing of joint space
C. Bony erosion
D. Juxta-articular osteopenia.

LATE CHANGES

A. Joint dislocation
B. Deformity of joints
C. Subluxation/dislocation of joints
D. Subchondral cystic areas
E. Apart from these, with there is generalized osteoporosis of the bones.

5. MATERIALS AND METHODS

STUDY PLACE

Outpatient Department,
Department of Pura Maruthuvam
Government Siddha Medical College and Hospital, Palayamkottai.

STUDY PERIOD

4 Months.

STUDY TYPE

Observational Study.

STUDY DESIGN

Case series.

SAMPLE SIZE

15 patients (OPD).

SAMPLE METHOD

Non - randomised sampling.

PURCHASE OF THE MEDICINE

The medicine was purchased from the well reputed GMP pharma.

TREATMENT

TRIAL DRUG

EXTERNALTHERAPY: -MAYANA THYLAM (PATTI KATTUTHAL)

INGREDIENTS

1. Sadamaanjil (nardostachys jatamansi)
2. Omam (trachyspermum ammi)
3. Kappumanjal (curcuma longa)
4. Manjal mezhugu (cera wax)
5. Aatrumanal (river silt)
6. sakkikal (quartz stone)
7. vellaiuppu (sodium chloride)

REFERENCE DETAILS

BOOK NAME: Therayar thailavarka churukkam
PAGE NO: 118
AUTHOR NAME: Subramaniya pandithar.ss
EDITION: Second edition1927

STANDARD OPERATIVE PROCEDURE

- The trail drug will be purchased from GMP certified pharma IMPCOPS (The Indian Medical practitioners co-operative pharmacy and stores) and given to the patients. The trial drug will not involve

a change in use and route of administration. The copy of the product insert is attached with the annexure.
- Explain the procedure to the patients.
- Affected area is washed and wiped out dry.
- Heat the mayana thylam and apply it to the affected area.
- Smear the thylam on the kaada cloth.
- Gently tie the affected area with kaada cloth and gauze.
- The patti kattuthal is done for 5 to 7 times with the interval period 1 to 2 days.

SUBJECT SELECTION

Patients reporting with symptoms of inclusion criteria will be documented by using screening proforma.

INCLUSION CRITERIA

- Age: Above 20 years & below 65yrs
- Sex: Both Male and Female
- Pain and early morning stiffness.
- Patient presenting symptoms of Joint pain, redness, fever, swelling, extreme tenderness.
- Those who are willing to participate in this study
- Patients who are willing to give radiological investigation and provide blood for lab investigation.

MODERN ASPECT

- RA factor test-positive
- Anti CCP-positive
- CRP
- ESR
- ANA TEST in few selected cases

EXCLUSION CRITERIA

- Patients who are present with a rheumatoid arthritis deformities like swan neck, hallus vagus etc.
- Other degenerating joint diseases osteoarthritis, sero negative spondylo arthritis, ankylosing spondylitis.
- Infectious joint diseases like, Tuberculosis, chronic poly arthritis in chickungunia viral infection.
- Metabolic joint diseases like gout.
- Pregnancy and lactating mother.
- Patients who are not willing to participate.

METHOD OF APPROACH

1) Visual analogue scale
2) Joint swelling measurement are taken with a standard tape
3) Radiological findings are assessed by using x ray

6. DATA COLLECTION

INFORMATION COLLECTED

Information such as patient's personal details, medical history, symptoms, duration of illness, will be directly collected from the patients.

7. CASE REPORTS

DATA ANALYSIS

Datas were coded, categorized and analysed using ms-excel and SPSS21.

ADVERSE EFFECTS AND SERIOUS EFFECT MANAGEMENT

If the trial patient develops any adverse reaction the patient will be referred to the Peripheral Pharmacovigilance Centre, GSMC, Palayamkottai and documented. For any adverse effect the investigator will give the proper management in the OPD.

QUALITY ASSURANCE

Data collected is reviewed by review board & expert's opinion are taken. The whole procedure of the research will be supervised by guide & faculty of our department.

HUMAN PARTICIPATION PROCEDURE

The study involves human participants with intervention of yoga. Patient was purely recruited based on primary data collection through VAS and menstrual symptoms questionnaire. Thereby voluntary willingness could be got through informed consent document and considered to participate in this study.

VULNERABLE POPULATIONS

No vulnerable population will be included in the study.

CONFIDENTIALITY

The personal information of patients will be kept in confidential manner.

INFORMED CONSENT

The patient will be informed about the study in their own language.

The study will be conducted only after their consent.

ETHICAL ISSUES

1. The patient will be informed about the treatment in their own language. They will be enrolled in the study after getting a written consent.
2. No other external or internal medicines will be used other than the trial drug during the trial period. There will be no infringement on the rights of the patient.
3. Treatment would be provided free of cost.
4. In conditions of treatment failure, adverse reactions patients will be given alternative treatment at the Government Siddha Medical College, Palayamkottai.

S.NO	OP NO	NAME	AGE/Sex	OCCUPATION
1	50254	KOTLIN SELVARANI	46/F	TEACHER
2	2669	MOSES	62/M	DAILY WAGES
3	58171	RAJALAKSHMI	35/F	TEACHER
4	65253	JESINTHA	60/F	HOUSEMAKER
5	69084	PEER MAITHIN	60/M	DAILY WAGES
6	69083	SELVI	58/F	HOUSE MAKER
7	3403	VELLAMMAL	34/F	DAILY WAGES
8	3404	MAHALAKSHMI	36/F	HOUSE MAKER
9	3500	MALLIGA	64/F	HOUSE MAKER
10	3562	CHELLAMAL	41/F	HOUSE MAKER
11	3609	BRAMACHI	49/F	FARMER
12	3730	GOMATHI AMMAL	58/F	HOUSE MAKER
13	77207	AMUTHA	40/F	TEACHER
14	77987	RAJESH	34/M	IT PROFESSIONAL
15	78283	KANNAMA	40/F	TEACHER

MEASUREMENT OF PAIN

S.No	OP NO	BEFORE TREATMENT	AFTER TREATMENT-SITTING						
			1ST	2ND	3RD	4TH	5TH	6TH	7TH
1	50254	5	5	4	4	4	4	3	2
2	2669	6	6	6	5	4	4	3	2
3	58171	4	4	4	3	2	2	2	1
4	65253	3	3	2	2	1	1	0	0
5	69084	5	5	5	4	4	4	3	3
6	69083	6	5	5	4	4	3	3	2
7	3403	6	5	5	4	4	3	3	3
8	3404	5	5	5	4	4	4	3	3
9	3500	7	6	6	6	5	5	4	4
10	3562	6	5	5	4	4	3	3	3
11	3609	6	5	4	4	3	3	2	2
12	3730	6	5	5	4	4	4	3	2
13	77207	7	6	6	5	5	4	3	2
14	77987	6	5	5	4	3	2	1	0
15	78283	6	5	5	4	4	3	3	2

8. RESULTS

Table No. 01: AGE DISTRIBUTION.

S.NO	AGE	NO OF PATIENTS (15)	PERCENTAGE
1	31-40Y	6	40%
2	41-50Y	3	20%
3	51-60Y	4	27%
4	61-70Y	2	13%

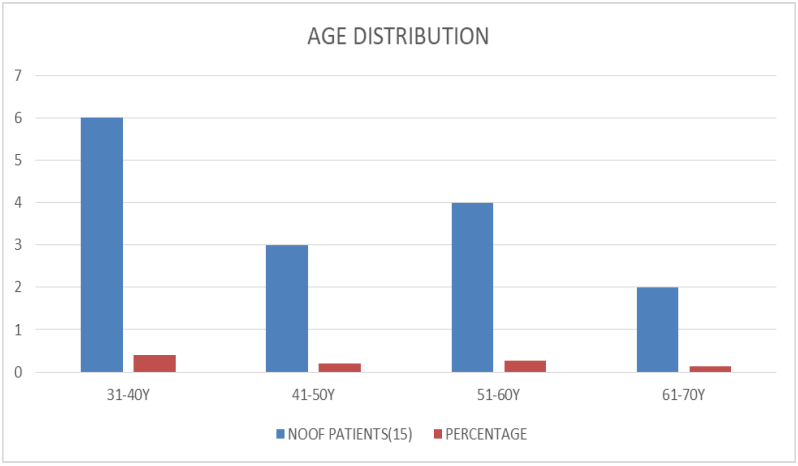


Table No. 02: Sex distribution.

S. NO.	GENDER	NO. OF CASES (15)	PERCENTAGE
1	MALE	3	20%
2	FEMALE	12	80%

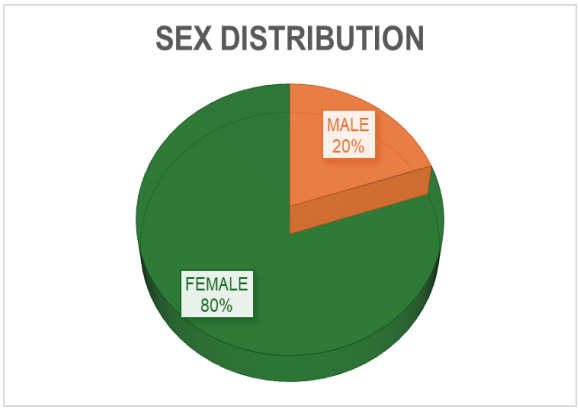


Table No. 03: Occupation Distribution.

S.NO	OCCUPATION	NO. OF CASES (15)	PERCENTAGE
1	Daily wages	3	20%
2	House maker	6	40%
3	Farmer	1	6.8%
4	Teacher	4	26.3%
5	IT professionals	1	6.9%



Table No. 04: Onset of disease.

S.NO	ONSET OF DISEASE	NO. OF CASES	PERCENTAGE
1	GRADUAL	13	87 %
2	SUDDEN	2	13%

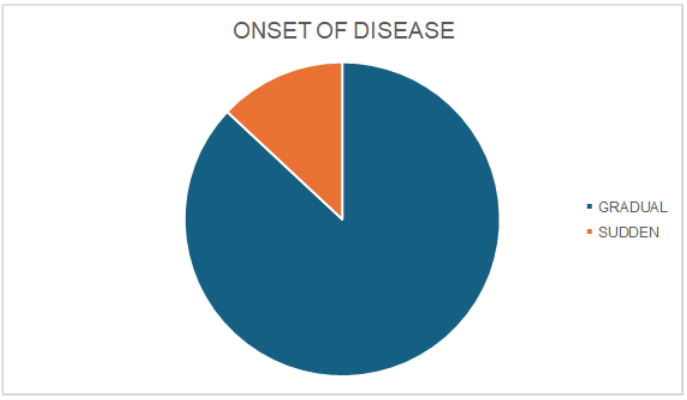


Table No. 05: Joints Involved – Frequency Table.

JOINTS INVOLVED	COUNT	PERCENTAGE
PIP	7	46.6
MCP	7	46.6
Wrist	4	26.6
Elbow	3	20
Shoulder	2	13.3
Cervical	0	0
Hip	2	13.3
Knee	10	66.6
Ankle	4	26.6
MTP	2	13.3

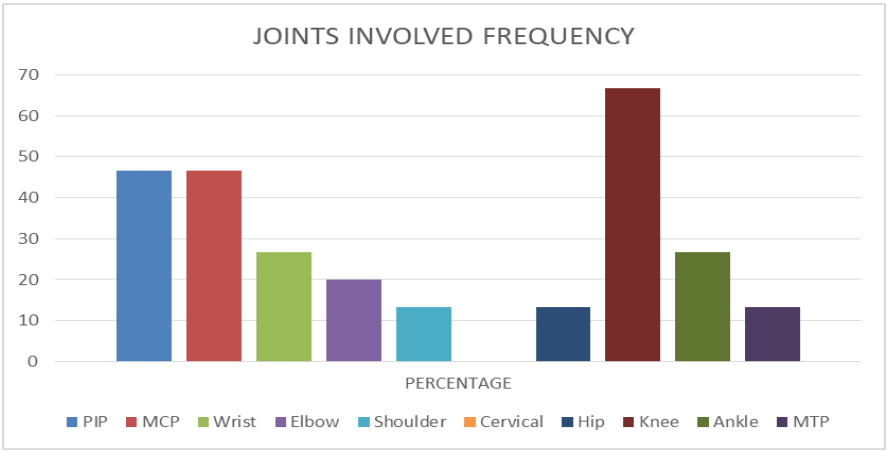


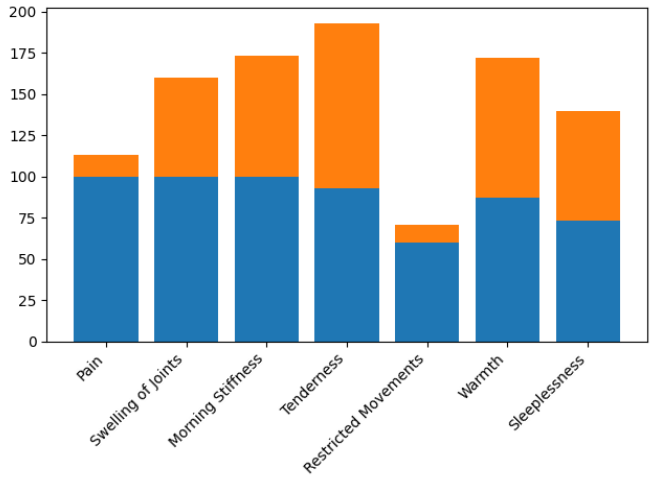
Table No. 06: Pain Assessment.

S.NO	VISUAL ANALOGUE SCALE		NO OF PATIENTS (15)								%
			BEFORE TREATMENT	AFTER TREATMENT							
				SITTING							
				1	2	3	4	5	6	7	
1	0	No pain	-	-	-	-	-	-	-	2	13%
2	1-3	Mild	1	1	2	4	4	7	12	12	80%
3	4-6	Moderate Severe	12	14	13	11	11	8	3	1	7%
4	7-9	Very severe	2	-	-	-	-	-	-	-	-
5	10	Worst pain Possible	-	-	-	-	-	-	-	-	-

Table No. 07: Clinical Symptoms (Before And After Treatment)

S.No	Clinical Features	Before (%)	Relieved (%)	Reduced (%)	No Improvement (%)
1	Pain	100	13	87	0
2	Swelling of Joints	100	60	40	0
3	Morning Stiffness	100	73	27	0
4	Tenderness	93	100	0	0
5	Restricted Movements	60	11	11	88
6	Warmth	87	85	15	0
7	Sleeplessness	73	67	33	0

PROGNOSIS OF SYMPTOMS



STATISTICAL INFERENCE

Table No. 08: Paired T Tests - Before & After Treatment For Symptoms.

PARAMETER	T value	Df	Sig 2 tailed p value	Significance
Morning stiffness	3.055	14	.009	Highly significance
Tenderness	13.000	13	.000	Highly significance
Restricted movements	000	14	1.000	no significance
warmth	3.055	14	.009	Highly significance
Sleeplessness	3.500	14	.004	Highly significance

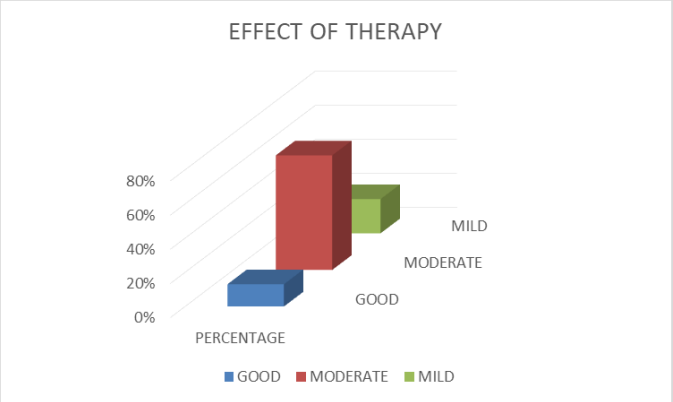
- The p value for morning stiffness is .009, implies high significance in the prognosis.
- The p value for tenderness is .000, implies high significance in the prognosis.
- The p value for restricted movements is 1.000, implies no significance in the prognosis.
- The p value for warmth is .009, implies highly significance in the prognosis.
- The p value for sleeplessness is .004, implies highly significance in the prognosis. Therefore, there is a significantly improvement in the tenderness, morning stiffness, warmth and sleeplessness in Rheumatoid arthritis with our trial drug mayana thylam.

Table No. 09: Pain Scale Before Treatment Vs After Treatment.

PARAMETER	t VALUE	Df	Sig 2 tailed p value	significance
Pain scale	20.546	14	.000	HS

Table No 10: Effect of Therapy.

S.NO	EFFECT OF THERAPY	NO OF PATIENTS	PERCENTAGE
1	GOOD	2	13%
2	MODERATE	10	67%
3	MILD	3	20%



9. DISCUSSION

The patient study was conducted to evaluate the therapeutic effect of the drug Mayana thylam had an influence in reducing clinical symptoms of Rheumatoid arthritis. The clinical study was conducted with a well-defined protocol and a paper proforma after the approval of the Institutional Ethical Committee.15 cases were related for induction to the trial. Before enrolment into the trial the informed consent was obtained from the patients. The patients were treated with trial drug mayana thylam (external) once a day, at an interval of 1 to 2 days, the same procedure was continued for 7 sitting, further follow up is advised after 10 days and then the patient prognosis is reported.

The purpose of the study was to evaluate the effectiveness of Mayana thylam for Rheumatoid arthritis. This study was conducted in 15 patients, in this there are 20% of Male and 80% of Female.

Out of 15 patients, 40% of patients are in 31-40 years, 20% of patients are in 41-50 years, 27% of cases are in 51-60 years, 13% cases are in 61-70 years. Out of 15patients, about 20% are daily wages, 40% are House maker, 6.8% are Farmer, 26.3% are teacher and 6.9% are IT professionals.

Out of 15patients, 87% have gradual onset and remaining have a sudden onset of disease. Out of 15 patients, The freuquency of joints involved are 66.6% of knee joints, 46.6% of proximal interphalangeal joint, 46.6% of metacarpo phalangeal joint, 26.6% of ankle joint,26.6% of wrist joint, 20% of elbows joint, 13.3% of MTP joints, 13.3% of shoulder joint and hip joint.

Paired t test was performed for clinical symptoms parameters before and after treatment which disseminated statistically significant results (p value <0.05) for morning stiffness (p value-.009), tenderness (p value-.000), warmth (p value-.009), sleeplessness (pvalue-.004) which implies high significance in the prognosis. In Restricted movements the p value is 1.000 (ie >0.05) which implies no significance in prognosis. The p value for pain score before and after study was .000, which implies significantly improvement in pain.

In pain score over the study, the GLM repeated measures was chosen for the pain score between and within groups. Here the p value is 000 implies there is highly significant in pain reduction between the sittings.

After treatment 13% patients had good improvement, 67% had moderate improvement, 20% have mild improvement.

10. CONCLUSION

The study results showed that 13% Good improvement, 67% Moderate improvement, 20% Mild improvement. The trial drug shows marked effect in swelling, morning stiffness, tenderness, warmth, sleeplessness. As mayana thylam pattikattuthal has been effectively reduced the pain and swelling in Rheumatoid arthritis, Thus it provides the complimentary management in improving the quality of life further RCTs can be done to evaluate its efficacy in other type of arthritis.

11. REFERENCE

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