Research Article

ISSN 2582-0109

International Journal of Translational Research in Indian Medicine
www.ijtrim.com
Volume 1, Issue 2 – 2019

A CROSS-SECTIONAL STUDY ON THE PRESCRIPTION PRACTICE FOR TREATMENT OF UTHIRAVATHA SURONITHAM (RHEUMATOID ARTHRITIS) AMONG SIDDHA PHYSICIANS

R. Naveen kumar[*1], E. Vivekanandhan [2], N.Anbu [3]

[*1] *P.G Scholar, Department of Maruthuvam, Government Siddha Medical College, Arumbakkam, Chennai 600 106, Tamil Nadu, India.*

[2] *Head, Department of Maruthuvam, Government Siddha Medical College, Arumbakkam, Chennai 600 106, Tamil Nadu, India.*

ABSTRACT

Rheumatoid arthritis (RA) commonly known by its name uthiravatha suronitham in siddha terminology is a chronic progressive systemic autoimmune disease affecting 1% of the population and generating disability and increased risk for cardiovascular disease, lymphoma, and death. The pathophysiology of RA remains mostly unexplained, but inflammatory mediators such as tumor necrosis factor (TNF)-α, interleukin (IL)-6, and cyclooxygenase (COX)-2 are known to play a pivotal role in the inflammation of synovial membranes and the bone destruction observed in RA. major class of anti-rheumatic drugs is the disease-modifying anti-rheumatic drugs (DMARDs). Each DMARD has its own unique toxicities and required crucial monitoring. Herbal medicine provides a foundation for various traditional medicine systems worldwide. Today, these herbs contribute approximately 25% of currently used crude drugs and another 25% is derived from chemically altered natural products. Siddha system has marked best in recent times because of known side effects caused by conventional allopathic medicines. The awareness and promotion of practicing Indian medicines have increased consistently in recent years. The main aim of the present observational study is to make systematic analysis on existence of prescription practice among siddha physician in treating uthiravatha suronitham (Rheumatoid arthritis). Results of the study clearly depicts that the most preferred medicines are amukkara chooranam and rasagandhi mezhugu by the siddha physicians. Among recommendation towards external therapy oil application remains the predominant factor on which pinda thylam holds the higher level of priority. In conclusion the outcome of the present study provided some evidence based data's that siddha medicines are pioneering in treating RA since several centuries and also the documentary evidence on current prescription pattern among the siddha physician which may be beneficial for the physician and researcher in the similar field in opting the drugs of choice while treating rheumatoid arthritis.

KEY WORDS: ***Siddha, Uthiravatha suronitham, Rheumatoid arthritis, Anti-rheumatic drugs, Prescription practice, Siddha physicians.***

Corresponding Author: R. Naveen kumar
Department of Maruthuvam, Government Siddha Medical College, Arumbakkam, Chennai 600 106, Tamil Nadu, India.
Email: naveen.dr94@gmail.com

1. Introduction

RA is a chronic, autoimmune and systemic inflammatory disease which targets synovial joints [1]. Its prevalence is estimated at 2.5–3% in the adults above 50 years of age. Despite significant gains in knowledge of the immunopathology, the exact etiology of RA remains uncertain [2]. Practice guidelines typically recommend starting with conventional DMARD treatment before addition or substitution of biologic DMARD medications. Importantly, the use of DMARDs in combination rather than monotherapy is more effective in achieving improved clinical outcomes as well as slowing radiographic progression [3]. Conventional DMARDs can be combined with each other and/or with biologic DMARDs. Each DMARD has its own unique toxicities and required monitoring

The approved drugs commonly used to treat arthritis, such as NSAIDs, have adverse effects, and alternative treatments have been investigated. NSAIDs increase the risk of gastrointestinal bleeding, vascular adverse events, and allergic responses [4]. Symptomatic slow-acting drugs for osteoarthritis such as glucosamine sulfate, glucosamine hydrochloride, chondroitin sulfate, hyaluronic acid, avocado soybean unsaponifiables, and diacerein are common alternative medicines for treating osteoarthritis symptoms [5]. In systematic reviews, glucosamine and diacerein were found to reduce pain but did not alleviate joint space narrowing [6].

Herbal therapies occupy a large section of alternative therapy. India, along with its wealth, is rich in wide variety of medicinal plants, a large number of popular remedies many of which are in common use even today. More than 2000 plants of medicinal value are mentioned in Indian ancient systems of medicine [7]. Inflammation is a biological protective response to traumatic stimuli, pathogens and damaged cells [8]. During inflammation, regular physiological and immunological processes coordinate by soluble signaling molecules of the immune system. Subsequently, the corresponding cells are transferred to inflamed sites to resolve the atypical state and finally cause the healing process [9].

Proinflammatory enzymes such as cyclooxygenase-2 (COX-2) and inducible nitric oxide synthase (iNOS) that cause pain and inflammation, provide a measure to assess the effect of drugs for the treatment of arthritis [10]. Siddha system of medicine has innumerable category of medicines that can treat the progression on inflammation and also prevent the pathology of disease worsening. Most of the time siddha medicine acts as string anti-oxidant and provide reliable cure. The main aim of the present observational study is to make systematic analysis on existence of prescription practice among siddha physician in treating uthiravatha suronitham (Rheumatoid arthritis).

2.Materials and Methods

2.1. Study design

Cross sectional observation study comprises of 20 siddha physician subjected to prescription practice for treatment of uthiravatha suronitham (Rheumatoid arthritis) at Arignar Anna Government Hospital of Indian medicine, Chennai, Tamil Nadu, India. Study conducted with the prior approval from the concerned authority. Physicians were also explained about the objective of the study and purpose of the questionnaires. Data were dealt with the high level of anonymity and confidentiality.

2.2. Questioner Pattern

The questionnaire was divided accordingly to cover the entire purpose of the study such as pretreatment procedures, drugs of choice, external therapy, add on therapy, treatment duration and details on adverse drug reactions if any.

3.Results

3.1. Existence of pretreatment procedure

It was observed from the study that 7 physicians (85%) were giving pretreatment procedure in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 1.

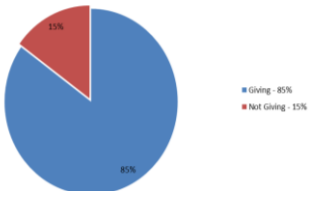

Figure 1: Existence of pretreatment procedure-Purgation

3.1.1. Percentage preference on pretreatment – Purgation

It was observed from the study that 8 Physicians (40%) were giving Agasthiyar kulambu, 2 Physicians (10%)

giving Merugulli oil, 3 Physicians (15%) giving Murukanvidhai mathirai, 2 Physicians (10%) giving Vellai ennai, 5 Physicians (25%) were not giving a purgation in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 2.

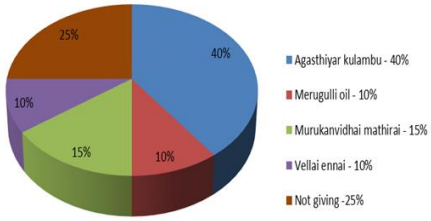

Figure 2: Percentage preference on pretreatment

3.2. Selection on drugs of choice for RA treatment

3.2.1. Therapeutic preference towards Mezhugu based preparations

According to study 11 Physicians (55%) were giving Rasagandhi mezhugu, 4 Physicians (20%) were giving Idivallathi mezhugu, 1 Physician (5%) were giving Sanmuga mezhugu, 2 Physicians (10%) were giving Nandhi mezhugu, 6 Physicians (30%) were not giving mezhugu in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 3.

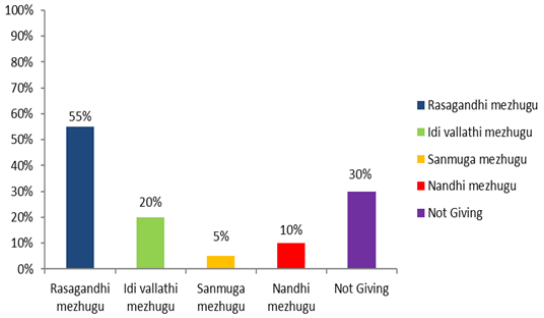

Figure 3: Therapeutic preference towards Mezhugu based preparations

3.2.2. Therapeutic preference towards Chooranam based preparations

According to study 14 Physicians (70%) were giving Amukkara chooranam, 1 Physician (5%) were giving Elathy chooranam, 1 Physician (5%) were giving Parangipattai chooranam, 2 Physicians (10%) were giving Thirikadugu chooranam, 1 Physician (5%) were giving Keelvayu chooranam, 4 Physicians (20%) were not given chooranam in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 4.

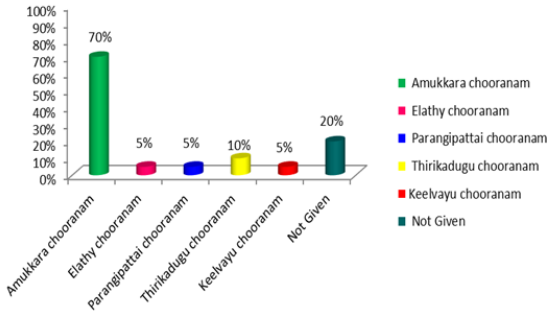

Figure 4: Therapeutic preference towards Chooranam based preparations

3.2.3.Therapeutic preference towards Chendooram based preparations

According to study 2 Physicians (10%) were giving Linga chendooram, 2 Physicians (10%) were giving Gowri chinthamani chendooram, 1 Physician (5%) were giving Pancha padana chendooram, 3 Physicians (5%) were giving Chandamarutha chendooram, 1 Physician (5%) were giving Poorna chandrothayam, 4 Physicians (20%) were giving Arumuga chendooram, 1 Physician (5%) were giving Sivanaramirtham, 1 Physician (5%) were giving Annabedhi chendooram, 1 Physician (5%) were giving Ayathanga chendooram, 1 Physician (5%) were giving Ayakandha chendooram, 2 Physicians (10%) were giving Kalamega narayana chendooram, 5 Physicians (25%) were not given chendooram in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 5

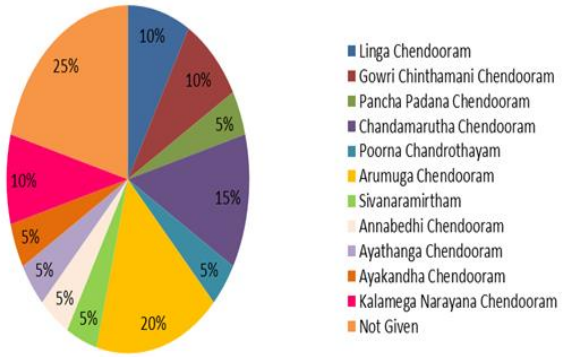

Figure 5: Therapeutic preference towards Chendooram based preparations

3.2.4. Therapeutic preference towards Parpam based preparations

According to study 2 Physicians (10%) were giving Pavala parpam, 2 Physicians (10%) were giving Silasathu parpam, 3 Physicians (15%) were giving

Sangu parpam, 1 Physician (5%) were giving Muthuchippi parpam, 2 Physicians (10%) were giving Kukkil parpam, 11 Physicians (55%) were not given parpam in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 6.

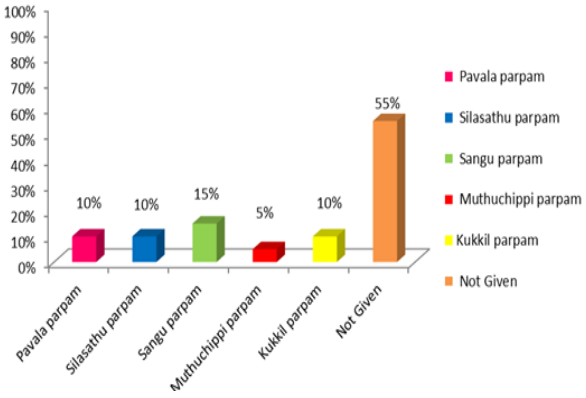

Figure 6: Therapeutic preference towards Parpam based preparations

3.2.5. Therapeutic preference towards Legiyam based preparations

According to study 3 Physicians (15%) were giving Maha vallathi legiyam, 1 Physician (5%) were giving Serankottai legiyam, 1 Physician (5%) were giving Shanmuga legiyam, 1 Physician (5%) were giving Thetrankottai legiyam, 14 Physicians (70%) were not given legiyam in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 7.

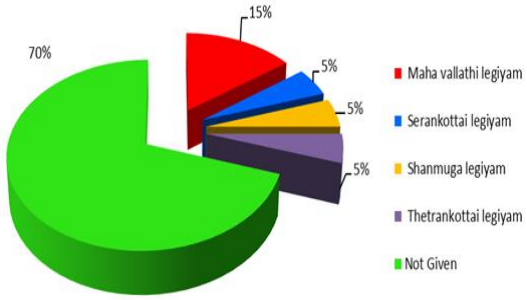

Figure 7: Therapeutic preference towards Legiyam based preparations

3.2.6. Therapeutic preference towards Kudineer based preparations

It was observed from the study that 4 Physicians (20%) were giving Seenthil chukku kudineer, 2 Physicians (10%) were giving Seenthil paal kasayam, 1 Physician (5%) were giving Neermulli kudineer, 3 Physicians (15%) were giving Nilavembu kudineer, 1 Physician (5%) were giving Dasamoola kudineer, 9 Physicians (45%) were not given kudineer in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 8.

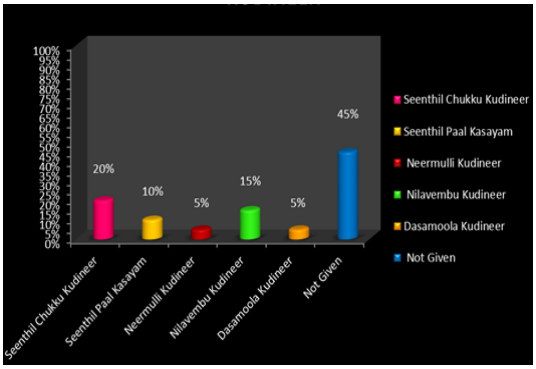

Figure 8: Therapeutic preference towards Kudineer based preparations

3.2.7. Therapeutic preference towards Mathirai based preparations

According to study 1 Physician (5%) were giving Maha vasantha kusumagara mathirai, 2 Physicians (10%) were giving Karuppu Vishnu Sakkara mathirai, 1 Physician (5%) were giving Vajeerakandi mathirai, 1 Physician (5%) were giving Kalarchi mathirai, 15 Physicians (75%) were not given mathirai in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 9.

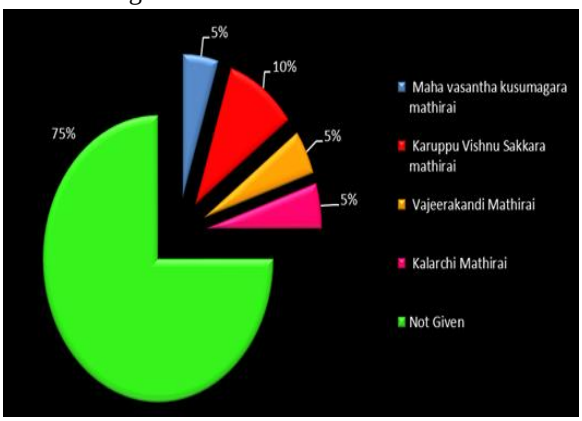

Figure 9: Therapeutic preference towards Mathirai based preparations

3.2.8. Therapeutic preference towards Nei based preparations

According to study 4 Physicians (20%) were giving Serankottai nei, 1 Physician (5%) were giving Chitramoola nei, 15 Physicians (75%) were not given Nei in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 10.

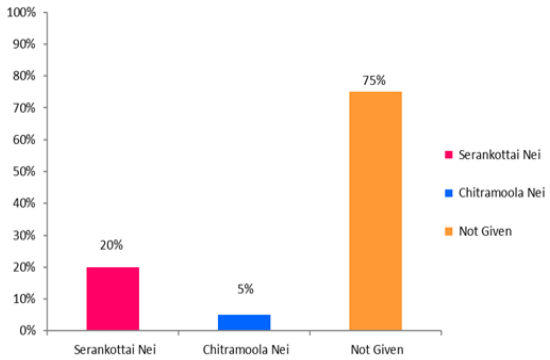

Figure 10: Therapeutic preference towards Nei based preparations

3.3. Influence on External therapy

According to study 16 physicians (80%) are applying oil externally, 8 physicians (40%) were giving Ottradam, 4 physicians (20%) were giving pattru, 4 physicians (20%) were giving Pattikattal, 3 physicians (15%) were giving Varmam therapy in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 11.

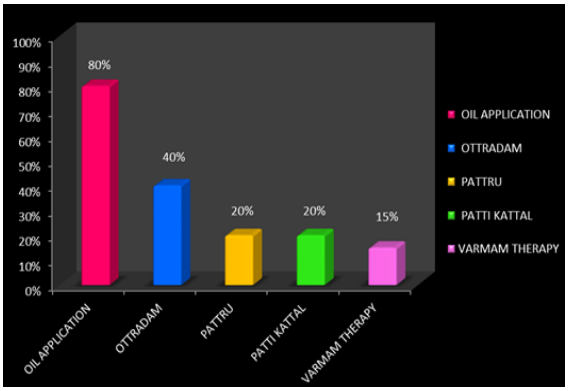

Figure 11: Influence on External therapy

3.3.1. Percentage exploration on oil application on external therapy

It was observed that 10 Physicians (50%) were using Pinda thylam externally, 2 Physicians (10%) were using Vatha kesari thylam, 2 Physicians (10%) were using Karpoorathi thylam, 3 Physicians (15%) were using Sadamanjil thylam, 1 Physician (5%) were using Vidamutti thylam, 1 Physician (5%) were using Ulunthu thylam, 1 Physician (5%) were using Nochi thylam, 4 Physicians (20%) were not using any Thylam in treatment of Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 12.

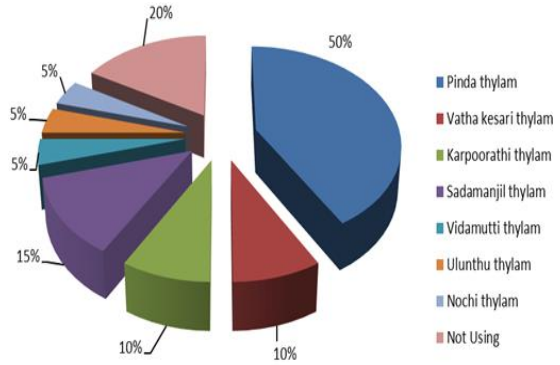

Figure 12: Percentage exploration on oil application on external therapy

3.3.2. Percentage exploration on ottradam on external therapy

Result analysis shows that 6 Physicians (30%) were using Vadha narayanan leaf, Nochi leaf, Thazhuthalai leaf Ottradam externally, 1 Physician (5%) were using Arkathy thylam, 1 Physician (5%) were using Lemon with Gingelly oil Ottradam, 12 Physicians (60%) were not using any Ottradam in treatment of Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 13.

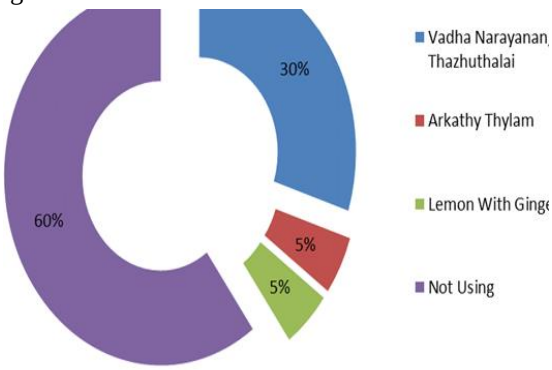

Figure 13: Percentage exploration on ottradam on external therapy

3.3.2. Percentage exploration on pattru on external therapy

According to study 2 Physicians (10%) were using Moosambara pattru, 2 Physicians (10%) were using Kalarchi pattru, 1 Physician (5%) were using Chukku pattru, 16 Physicians (80%) were not using Pattru in treatment of Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 14.

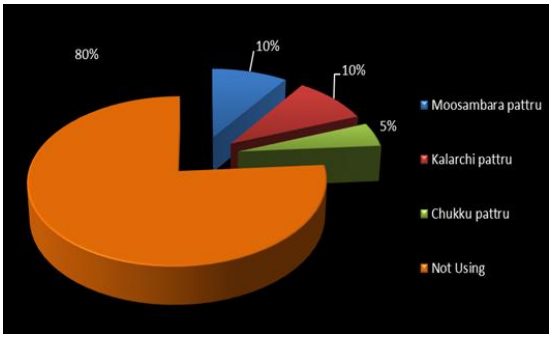

Figure 14: Percentage exploration on pattru on external therapy

3.4. Application on Add on Therapy

It was observed that from the study 4 Physicians (20%) were using Add on therapy, means using other AYUSH system of medicines, 16 Physicians (80%) were not using Add on therapy in treatment of Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 15.

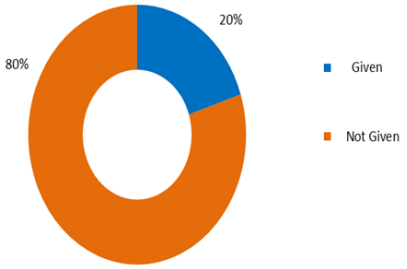

Figure 15: Application on Add on Therapy

3.5. Average duration of treatment period

It was observed that 1 Physician (5%) were given 30 Days of treatment, 5 Physicians (25%) were giving 40 Days treatment, 5 Physicians (25%) were giving 48 Days treatment, 1 Physician (5%) were give 6 Weeks treatment, 1 Physician (5%) were give 2 Months treatment, 6 Physicians (30%) were given 3 Months treatment, 1 Physician (5%) were give 3 – 6 Months treatment in Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 16.

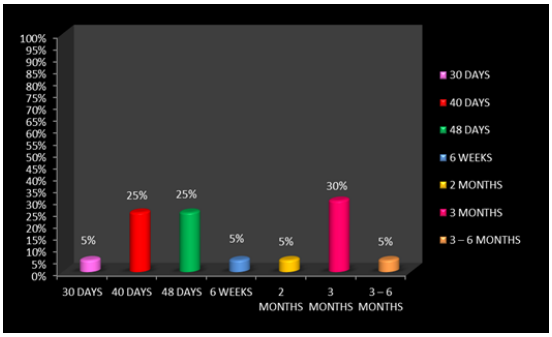

Figure 16: Average duration of treatment period

3.6. Details on Adverse reaction monitoring during treatment

According to study 4 Physicians (20%) were observed Adverse reaction, 16 Physicians (80%) were not observed Adverse reaction in treatment of Uthiravatha suronitham (Rheumatoid arthritis). As shown in Figure 17.

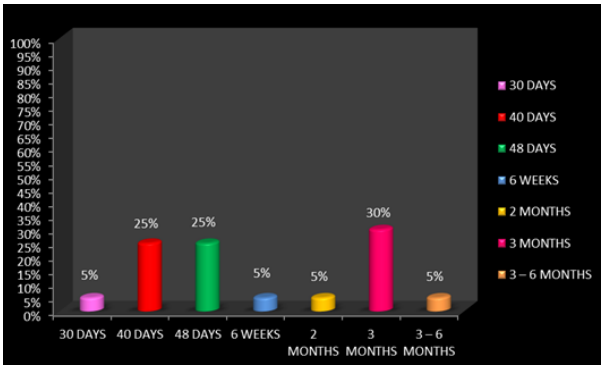

Figure 17: Average duration of treatment period

4.Discussion

Rheumatoid arthritis (RA) is a chronic autoimmune disease that causes progressive articular damage, functional loss, and comorbidity. It is characterized by synovial inflammation and hyperplasia, which leads to progressive cartilage and bone destruction [11]. Inflammation of the synovium occurs in both the early and late phases of arthritis and is associated with alterations in the adjacent cartilage. This inflammatory synovitis is qualitatively highly similar to that seen in RA. Catabolic and proinflammatory mediators, for example cytokines, nitric oxide (NO), prostaglandin E2 (PGE2), and neuropeptides are produced by the inflamed synovium and alter the balance of cartilage matrix degradation and repair. These events lead to excess production of the proteolytic enzymes responsible for cartilage breakdown [12]. There are multiple drugs currently being utilized to treat RA patients. The most widely used class of drugs is the non-steroidal anti-inflammatory drugs (NSAIDs). There are several different drugs under this category, including Ibuprofen, Aspirin, and Naproxone. A majority of them target and suppress prostaglandins (PGs) through inhibition of the cyclooxygenase (COX) enzymes. Patients taking NSAIDs may experience a wide variety of symptoms including renal, hepatic, and cardiovascular toxicity [13].

Siddha is one of the oldest systems of healthcare system adopted by ancient traditional healers like

siddhars. Siddha system has marked best in recent times because of known side effects caused by conventional allopathic medicines. The awareness and promotion of practicing Indian medicines have increased consistently in recent years. Still now there is no proper documentary or literature evidence available for most of the novel formulations in siddha system of medicine. External therapy alleviates most of the RA complications it was evident from the present study that 16 physicians (80%) are applying oil externally, 8 physicians (40%) were giving Ottradam, 4 physicians (20%) were giving pattru, 4 physicians (20%) were giving Pattikattal, 3 physicians (15%) were giving Varmam therapy in Uthiravatha suronitham (Rheumatoid arthritis). It was further observed that 10 Physicians (50%) were using Pinda thylam externally

The main purpose of herbal and complementary medicines is to supplement some of the benefits from existing pharmaceutical treatment modalities [14]. The objective is to reduce the frequency of consumption and dosages of conventional drugs, for example NSAIDs. The objective is not to replace NSAIDs altogether because they not only provide pain relief, but also have valuable anti-inflammatory activity. However, elderly patients with OA routinely use prescribed and alternative products at the same time. There is potential for adverse drug interactions and patients should be made aware of the risks associated with taking multiple products [15]. In the present study it was observed that physicians (20%) were observed adverse reaction, 16 Physicians (80%) were not observed adverse reaction with siddha preparations in treatment of Uthiravatha suronitham (Rheumatoid arthritis). It was observed from the present study that increased therapeutic preference towards Chooranam, Chendooram and Mezhugu in treating RA among siddha physicians. According to study 11 Physicians (55%) were giving Rasagandhi mezhugu, 14 Physicians (70%) were giving Amukkara chooranam and 4 Physicians (20%) were giving Arumuga chendooram

5.Conclusion

Rheumatoid arthritis (RA) is a multifactorial disease that involves both genetic predisposition and environmental components. Herbal therapies with anti-inflammatory properties and minimum side effects are needed for the treatment of arthritis, including rheumatoid arthritis and osteoarthritis, especially after the withdrawal of many Food and Drug Administration-approved anti-inflammatory drugs. From the observation of the present study it was concluded that siddha medicine offers greater relief in patients with RA and mostly the bioactive components in siddha formulations acts by multiple mechanism such as immunomodulation, anti-inflammatory and anti-oxidant pathways. Hence it was concluded that current prescription pattern among the siddha physician which may be beneficial for the physician and researcher in the similar field in opting the drugs of choice while treating rheumatoid arthritis.

Acknowledgement

I wish to acknowledge my thanks to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, Tamil Nadu, India and The Noble research solutions, Chennai, Tamil Nadu, India for their support.

6. References

1. Arend W. The innate immune system in rheumatoid arthritis. Arthritis Rheum. 2001;44:2224–2234.
2. David M., Weinblatt M. Rheumatoid arthritis. Lancet. 2001;358:903–911.
3. Ma MHY, Kingsley GH, Scott DL. A systematic comparison of combination DMARD therapy and tumour necrosis inhibitor therapy with methotrexate in patients with early rheumatoid arthritis. Rheumatology. 2010;49:91.
4. Mukherjee D, Nissen SE, Topol EJ: Risk of cardiovascular events associated with selective COX-2 inhibitors. JAMA 2001;286:954–959
5. Fidelix TS, Macedo CR, Maxwell LJ, Fernandes Moca Trevisani V: Diacerein for osteoarthritis. Cochrane Database Syst Rev 2014;2:Cd005117.
6. Towheed TE, Maxwell L, Anastassiades TP, et al. : Glucosamine therapy for treating osteoarthritis. Cochrane Database Syst Rev 2005:Cd002946.
7. Calder P. Immunomodulatory and anti-inflammatory effects of n-3 polyunsaturated fatty acids. Proc. Nutr. Soc. 1996;55:737–774.
8. Kim JH, Ryu KH, Jung KW, Han CK, Kwak WJ, Cho YB. Effects of SKI306X on arachidonate metabolism and other inflammatory mediators. Biol Pharm Bull. 2005;28(9):1615–20.

9. Sondergaard BC, Henriksen K, Wulf H, Oestergaard S, Schurigt U, Brauer R, Danielsen I, Christiansen C, Qvist P, Karsdal MA. Relative contribution of matrix metalloprotease and cysteine protease activities to cytokine-stimulated articular cartilage degradation. Osteoarthritis Cartilage. 2006;14(8):738–48.
10. Moncada S, Palmer RM, Higgs EA. Nitric oxide: physiology, pathophysiology, and pharmacology. Pharmacol Rev. 1991;43(2):109–42.
11. Chou E.H.S., Panayi G.S. Cytokine pathways and joint inflammation in rheumatoid arthritis. N. Engl. J. Med. 2001;344:907–916.
12. Sellam J, Berenbaum F. The role of synovitis in pathophysiology and clinical symptoms of osteoarthritis. Nat Rev Rheumatol. 2010;6(11):625–35.
13. Crofford L.J. Use of NSAIDs in treating patients with arthritis. Arthritis Res. Ther. 2013;15(Suppl. 3):2.
14. Whitehouse MW, Butters DE. Combination anti-inflammatory therapy: synergism in rats of NSAIDs/corticosteroids with some herbal/animal products. Inflammopharmacology. 2003;11(4):453–64.
15. Lawson B, Putnam W, Nicol K, Archibald G, Mackillop J, Conter H, et al. Managing osteoarthritis. Medication use among seniors in the community. Can Fam Physician. 2004;50:1664–70.

How to cite this Article

R. Naveen kumar, E. Vivekanandhan , N.Anbu. A cross-sectional study on the prescription practice for treatment of uthiravatha suronitham (rheumatoid arthritis) among siddha physicians .Int J Trans Res Ind Med .2019; 1(2): 33- 40.