

**ANTI-RHEUMATIC MEDICINAL HERBS IN SIDDHA SYSTEM OF
MEDICINE - A REVIEW****Devaki R.*¹ and Santhosh Kumar R.²**

¹Post Graduate, Department of Gunapadam (Pharmacology), Government Siddha Medical College, Chennai 600 106, Tamil Nadu.

²Post Graduate, Department of Applied Geology, University of Madras, Chennai, Tamil Nadu.

Article Received on
10 March 2022,

Revised on 31 March 2022,
Accepted on 21 April 2022

DOI: 10.20959/wjpr20225-23996

Corresponding Author*Dr. Devaki R.**

Post Graduate, Department
of Gunapadam
(Pharmacology),
Government Siddha Medical
College, Chennai 600 106,
Tamil Nadu.

ABSTRACT

Global Centre for Traditional Medicine in India, was established by the World Health Organization (WHO) for maximizing the potential of traditional medicines through modern science and technology to enhance the health of the people and the World. Rheumatoid arthritis (RA) is a chronic multisystem disease of unknown cause. The most prominent manifestation of RA is inflammation of peripheral joints, usually, with a symmetrical distribution, its structured manifestation includes blood disorders and pulmonary, neurological, and cardiac abnormalities. The movements of activated pathogenic T cells from the outlying lymphoid tissues into the joint tissue (synovial tissue) which affects the joints that advance in inflammatory arthritis are mediated essentially by a chemotactic process. It causes morning stiffness of the

affected joints, fever, fatigue, tenderness of the joints, and swollen, warm, and rheumatic nodules under the skin.^[5] The therapy comprises the therapeutic regimen that aims the entero-arthropathy for rheumatic arthritis and some classified as DMARD (Disease-Modifying Anti-Rheumatic Drugs) have been used. Rheumatoid arthritis is correlated with '*Vali azhal keel vayyu*' in the Siddha system of medicine. Accordingly, it is due to the variation in *vali* and *azhal* that is caused by eating meat, fish, egg, and potatoes in disproportionate quantities. Often consuming alcohol and toddy; physical inactivity is the main cause. The symptoms include indigestion, regurgitation, constipation, fever, insomnia, and increased body weight. The Siddha system of medicine is efficient in alleviating rheumatoid arthritis and

osteoarthritis through its herbal products along with mineral, metallic, aquatic, and animal preparations.

KEYWORDS: Siddha, Rheumatoid arthritis, *Vali azhal keel vayu*, Anti-rheumatic Medicinal herbs.

INTRODUCTION

Global Centre for Traditional Medicine in India, was established by the World Health Organization (WHO) for maximizing the potential of traditional medicines through modern science and technology to enhance the health of the people and the World.^[1]

RHEUMATOID ARTHRITIS

Rheumatoid arthritis (RA) is a chronic inflammatory autoimmune disease of unknown cause. The most prominent manifestation of RA is inflammation of peripheral joints, usually, with a symmetrical distribution, its structured manifestation includes blood disorders, and pulmonary, neurological, and cardiac abnormalities.^[2] According to WHO, 0.3%- 1% of the people worldwide are affected with rheumatoid arthritis (RA)^[3] and females are threefold increase in frequency than the males.^[4] The onset of the disease is mainly in the age group third to sixth decades of life and in juvenile RA it includes adolescents of 16years of age.^[5]

ETIOPATHOGENESIS

The movements of activated pathogenic T cells from the outlying lymphoid tissues into the joint tissue (synovial tissue) which affects the joints that advance in inflammatory arthritis are mediated essentially by a movement of chemical agents.^[6] Antigen-presenting cells (APCs) including macrophages and other cells as well as activated B cells, here arthritogenic auto-antigens are out-lying in the lymphoid organs.^[7,8] The proinflammatory cytokines such as tumor necrosis factor- α (TNF- α), interleukin (IL)-1 β , and IL-6 are important mediators prescribed as the prolonged cause of the disease. Specifically, IL-1 β and TNF- α are the primary mediators of tissue destruction in RA.^[9]

SYMPTOMS AND TREATMENT

The complaints of RA individuals are gastrointestinal tract problems like dyspepsia (bloating, fullness, early satiety, epigastric pain, and burning and belching), mucosal ulceration, and either constipation or diarrhea.^[10] It causes morning stiffness of the affected joints, fever, fatigue, tenderness of the joints, and swollen, warm, and rheumatic nodules under the skin.^[5]

The therapy comprises a therapeutic regimen that aims the entero-arthropathy for rheumatic arthritis and some classified as DMARD (Disease-Modifying Anti-Rheumatic Drugs) have been used.^[11]

SIDDHA CLASSIFICATION OF THE DISEASE

Siddha system classifies according to the basic three humours *Vali*, *azhal*, and *iyam*; the altered state of these humours is the cause of the disease.^[12] The classification of the disease based on signs, symptoms, and pathology is done effectively by *Yugi Munivar*. Rheumatoid arthritis is correlated with '*Vali azhal keel vayyu*' in the Siddha system of medicine. Accordingly, it is due to the variation in *vali* and *azhal* that is caused by eating meat, fish, egg, and potatoes in disproportionate quantities. Often consuming alcohol and toddy; physical inactivity is the main cause. The symptoms include indigestion, regurgitation, constipation, fever, insomnia, and increased body weight. It produces inflammation and pain in the joints such as the wrist, ankle, and fingers. It is hard to be managed through treatment and there is remission and relapse of the disease and there is stiffness of the joints which in chronic conditions results in the immobility of joints. Siddha medicines in the treatment of *Vali azhal keel vayyu* are herbo-metallic; mineral preparations include lead, gold and pearl, and coral.^[13] At the time 5000 years, a variety of herbs is broadly used in the treatment of *Keel vayu* specified in Siddha pharmacopeia.^[14]

ANTI-RHEUMATIC MEDICINAL HERBS IN THE SIDDHA SYSTEM OF MEDICINE

Leguminaceae

1. *Adenanthera pavonia* (*Anai-kunri*)

The decoction of the leaf is used for frozen joints.^[14]

Thymelaeaceae

2. *Aquilaria agallocha* (*Agil*)

Wood and oil are used for rheumatoid arthritis and osteoarthritis. The paste of the bark is applied externally for joint pain and inflammation.^[4]

Scitamineae

3. *Alpinia galanga* (*Srit-arattai*)

The powder of the root is used to treat a kind of arthritic syndrome.

4. *Curcuma zedoaria* (Kich-chili-kizhangu)

The root portion is specified for crippling arthritis and immovable joints.^[14]

Burseraceae**5. *Boswellia serrata* (Parangi sambirani)**

An herb is considered good medicine for *vatha* diseases and neurological diseases and specified for infertility in Siddha.^[15] Boswellic acid has inhibitory action against lipooxygenase-5 and in due course, there is a reduction in leukotriene synthesis which is familiar for inflammation.^[10]

6. *Commiphora myrrha* (Vellaiapolam)

The gum is used for the treatment of arthritis, boils, hyperlipidemia, pain, inflammatory conditions, and acne.^[4]

Lauraceae**7. *Cinnamomum zylanicum* (Lavangappattai)**

The bark of the plant is used as an antidote for snake bites and asthma, cough, haemorrhoids.^[16] A clinical study conducted by (Rathi. Et al) for the polyphenol fraction of the plant bark showed an inhibitory effect on cytokines IL-2, IL-4, and decreased levels of TNF- α .^[17]

Capparaceae**8. *Capparis decidua* (Sirakkali)**

In traditional medicines, the powder of fruit and sugar is mixed and prescribed for rheumatism.

Cucurbitaceae**9. *Citrullus colocynthis* (Artu-tumatti)**

The roots of this plant are widely used in traditional medicines for treating rheumatoid arthritis, hypertension, and inflammatory diseases.^[4]

Zingiberaceae**10. *Curcuma longa* (Manjal)**

The curcumin constituent present in this plant possesses analgesic and anti-inflammatory properties in managing rheumatoid arthritis.

11. *Zingiber officinale* (Inji)

The constituents of ginger contain zingerone, cedrol, and ginger aromatic essential oils. Earlier in clinical was observed that there is pain relief, enhanced joint mobility, and reduces swellings and morning stiffness after the intake of ginger for three months. Thus these constituents possess anti-inflammatory, and analgesic, and reduce the manifestations of rheumatoid arthritis.

Caesalpiniaceae**12. *Cassia fistula* (Sara konrai)**

The poultice made from the fruit is applied externally for frozen joints.

Iridaceae**13. *Crocus sativus* (Kunkumappu)**

The crocin, a carotenoid constituent present in crocus is a potential anti-arthritis agent in rheumatoid arthritis by reducing the pro-inflammatory factors that include TNF- α , IL-1 β , and IL-6.

Ranunculaceae**14. *Nigella sativa* (Karunjchirakam)**

The oil from the nigella is studied for the management of rheumatoid arthritis, and it exhibits properties of reducing the swollen joints and the morning stiffness has been decreased to a great extent.^[18]

Euphorbiaceae**15. *Jatropha curcas* (Katt- amanakku)**

The paste of seeds is used externally for immovable joints.^[14]

CONCLUSION

Siddha system of medicine is efficient in alleviating rheumatoid arthritis and osteoarthritis^[14] through its herbal products along with mineral, metallic, aquatic, and animal preparations. Though there are many herbs, the Siddha system acquires the herbs specifically mentioned for rheumatoid arthritis according to their properties and actions. Thus in this review, the anti-rheumatic herbs used are described.

ACKNOWLEDGEMENT

The author is grateful to Santhosh Kumar, Department of Applied Geology, University of Madras, Chennai for the continuous support in preparing the manuscript.

REFERENCES

1. WHO establishes the Global Centre for Traditional Medicine in India, 25th March 2022, News release, Geneva.
2. Harsh Mohan, Text Book of Pathology, Published by Jaypee Brothers Medical Publishers(P) Ltd., Seventh Edition, Reprinted in, 2015; 843.
3. Majusha Choudhary, et al., Medicinal plants with potential anti-arthritic activity- A comprehensive review, Journal of Intercultural Ethnopharmacology, Apr-Jun 2015; 4: 2.
4. Chandrasekar R, et al., Natural herbal Treatment for Rheumatoid Arthritis- A Review, IJPSR, 2017; 8(2): 368-384.
5. Jacqueline Bullock, et al., Rheumatoid Arthritis: A Brief Overview of the treatment- Mini Review, Med. Princ. Pract, 2018; 27: 501-507.
6. Steven dudics, Et al., Natural products for the treatment of Autoimmune arthritis: their mechanisms of action, targeted delivery, and interplay with the host microbiome- Review, International Journal of Molecular Sciences, 2018; 19: 2508.
7. Veale, D J.; et al., Cellular and molecular perspectives in rheumatoid arthritis. Semin. Immunopathol, 2017; 39: 343-354.
8. Bluestone J A, Et al., The functional plasticity of T cell subsets, Nat. Rev. Immunol, 2009; 9: 811-816.
9. Brijesh Rathore, et al., Indian herbal medicines: Possible potent therapeutic agents for Rheumatoid Arthritis, J. Clin. Biochem. Nutr, July 2007; 41: 12-17.
10. Shweta Khanna, et al., Managing Rheumatoid arthritis with dietary interventions- Review, Frontiers in Nutrition, Published: 08 November 2017, doi: 10.3389/ fnut. 2017.00052.
11. Rains C P, Et al., Sulfasalazine – A Review of its pharmacological properties and therapeutic efficacy in the treatment of rheumatoid arthritis, Drugs, 1995; 50(1): 137-56.
12. Shanmugavelu M, Siddha Maruthuva Noinaadal Noimudhal Nadal, fourth edition, Published by Indian Medicine and Homeopathy, 2006; 107.
13. Kuppusamy Mudhaliar K N, Siddha Maruthuvam (Pothu), Sixth Edition, published by Directorate on Indian Medicine and Homeopathy, 2004; 628.

14. Eugene Wilson, Et al., Herbs used in Siddha medicine for arthritis- A review, Indian Journal of Traditional Knowledge, October 2007; 6(4): 678-686.
15. Somasundaram S, Maruthuva Thavaraviyal, Fourth edition 2004, published by Elangovan Printers, 1006-B, Kamaraj Nagar, Palayamkottai- 627002, 52.
16. Murugesu Mudhaliyar K.S, Gunapadam Mooligai Vaguppu, Dept. of Indian Medicine and Homeopathy, Reprinted, 2003; 113: 114.
17. Rathi B, et al., Ameliorative effects of a polyphenolic fraction of *Cinnamomum Zeylanicum* L. barks in animal models of inflammation and arthritis. Sci. Pharm., 2013; 18(2): 567-90.
18. Nima Nakisa, et al., Action Mechanisms of Antirheumatic Herbal Medicines, Intech Open, Edited by Hechmi toumi, June 28th, 2021, Published: September 7th, doi:10.5772/intechopen.99133.