JOURNAL OF MULTIDISCIPLINARY SCIENCES AND INNOVATIONS
VOLUME 05, ISSUE 01
MOPNTHLY JOURNALS
ISSN NUMBER: 2751-4390
IMPACT FACTOR: 9,08

EFFECTIVENESS OF FOLK MEDICINE METHODS IN RHEUMATOID ARTHRITIS

Mirzamuhamedova Bonu Asadulla kizi
Tashkent State Medical University, Master's student in Therapy (Folk Medicine)
mirzamuhamedovabonu@gmail.com ORCID ID:0009-0005-3688-5693
Abdullayev Ulugbek Sayfulloyevich
Tashkent State Medical University
Assistant at the Department of Propedeutics of Internal Diseases No. 1, PhD
rome_1987@inbox.ru ORCID ID: 0000-0001-5074-2107
Sharipov Ulugbek Abdurakhmanovich
Department of Medical rehabilitation, sports medicine traditional medicine, and physical culture, Tashkent state medical university, Tashkent, Uzbekistan
https:// orcid.org/0009-0008-7514-0995

ABSTRACT

In modern medicine, the use of physical therapy tools and acupuncture plays an important supplementary role in symptom management. Phytotherapy and natural extracts help reduce pain and swelling through their anti-inflammatory and antioxidant effects. Acupuncture, in turn, is distinguished by its ability to decrease pain and improve joint function through neuro-humoral mechanisms. Modern physical exercises (physiotherapy, exercises to maintain joint mobility, low-intensity aerobic loads) increase functional activity, reduce stiffness, and prevent muscle weakness. The combination of these three approaches can provide positive outcomes in reducing pain, improving the range of motion, and enhancing the quality of life in patients with rheumatoid arthritis.

Conclusion: The combined use of folk medicine methods, acupuncture, and modern physical therapy tools provides additional positive effects in reducing pain, improving joint mobility, and enhancing the functional activity of patients.

Keywords

rheumatoid arthritis, folk medicine, acupuncture, physical therapy, complex therapy.

At present, scientific research in the field of medicine aimed at an in-depth study of the chemical composition, biological activity, and therapeutic potential of medicinal plants is expanding. In particular, the anti-inflammatory effects of plants such as Curcuma longa (turmeric), Zingiber officinale (ginger), Tripterygium wilfordii (lei gong teng), and Salvia miltiorrhiza (danshen) in rheumatoid arthritis are widely discussed in the scientific literature. It has been established that these plants have a positive impact on the course of the disease by regulating excessive immune system activity, reducing joint inflammation, alleviating pain syndrome, and exerting antioxidant effects. [1] Phytotherapy is one of the rapidly developing fields today, and numerous medicinal plants contain biochemical compounds that are beneficial to the human body. The results of conducted clinical studies indicate that the use of herbal preparations as part of complex therapy can reduce disease activity, improve joint function, and enhance patients' quality of daily life. [2] Interest in traditional medicine methods is increasing worldwide. Although research related to 'alternative therapy' in medicine is expanding, a complete clinical evaluation of some plants and methods has not yet allowed for definitive conclusions. Therefore, further in-depth investigation of their safety, efficacy, and application protocols is considered essential. [3]

Clinical studies conducted on the use of acupuncture in patients with rheumatoid arthritis have shown that this method yields positive results in reducing pain and improving functional

outcomes. In particular, it has been noted that acupuncture not only alleviates pain perception but also, to a certain extent, reduces joint swelling and inflammatory processes. This effect is explained by the influence of acupuncture on the body through various physiological mechanisms. According to different studies, acupuncture stimulation may lead to altered perception of pain impulses at the level of the central nervous system, reduction of muscle spasms, improvement of blood circulation and tissue nutrition, and decreased secretion of inflammatory mediators such as cytokines IL-6 and TNF-α.

From this perspective, acupuncture is regarded as an effective complementary alternative therapy that supplements conventional treatment methods used in rheumatoid arthritis. Although there are no unified standards regarding the selection of acupuncture points, depth of needle insertion, duration, or frequency of treatment, several studies emphasize favorable outcomes with modifications such as electroacupuncture, auricular acupuncture, and moxibustion. Moreover, the combined use of these methods with conventional therapy may accelerate the regression of disease symptoms. [4] At present, there is insufficient published evidence to support the claim that stimulation of a single acupuncture point is sufficient for the treatment of rheumatoid arthritis (RA). An acupuncturist with 14 years of experience, E. Tukmachi, achieved successful outcomes in the treatment of osteoarthritis and RA by using at least four acupuncture points. As RA is a systemic inflammatory disease, the use of combinations of acupuncture points has proven to be more effective. These include local points for the affected joint, distal points for addressing primary pathogenic factors, and back points for additional contributing factors. [5]

Rheumatoid arthritis has long been associated with significant disability, morbidity, and premature mortality; however, over the past 25 years, substantial improvements in clinical outcomes have been achieved. Earlier treatment approaches were primarily able to slow joint damage and disability progression, largely due to the serious adverse effects of glucocorticoids. In contrast, modern therapeutic strategies focus on early disease control, achieving remission, and preventing structural joint damage before it occurs. This review provides a comprehensive analysis of established and emerging pharmacological approaches used in the management of rheumatoid arthritis, as well as future directions and existing challenges." [6] Although most clinical studies have not conducted direct head-to-head comparisons between different bDMARD (biologic disease-modifying antirheumatic drugs) and tsDMARD (targeted synthetic disease-modifying antirheumatic drugs) treatment strategies, available network meta-analyses have not identified significant differences in their effectiveness. [7]

Rheumatoid arthritis (RA) is a chronic inflammatory autoimmune disease that leads to joint damage, increased pain, and limitations in functional capacity. Although pharmacotherapy continues to play a central role in treatment, physiotherapeutic interventions are increasingly recognized for their complementary value in alleviating symptoms and improving patients' quality of life.

This systematic review and meta-analysis aimed to evaluate the effects of various physiotherapeutic interventions on pain reduction, improvement of functional outcomes, and quality of life in patients living with RA. In accordance with PRISMA methodological guidelines, a comprehensive search of the PubMed, Scopus, and Web of Science databases was conducted for the period 2010–2025 to identify randomized controlled trials (RCTs) evaluating the effectiveness of physiotherapy in RA. Methodological quality was assessed using the Cochrane Risk of Bias 2.0 tool. Pain-related outcomes were pooled in a meta-analysis using a random-effects model.

In total, 17 RCTs involving 1,362 participants were included. Interventions comprised aerobic exercise, resistance training, hydrotherapy, manual therapy, electrotherapy, and multimodal approaches. Meta-analysis of five RCTs (n = 307) demonstrated a statistically

significant reduction in pain with physiotherapy (SMD = –0.347; 95% CI: –0.571 to –0.124; p = 0.002; I^2 = 0%). Narrative synthesis further indicated that combining physical exercise with lifestyle interventions may result in substantial improvements in functional and cardiorespiratory outcomes." [8] At present, there is no known cure for rheumatoid arthritis (RA); therefore, treatment is primarily focused on managing symptoms such as pain, stiffness, and impaired mobility. Treatment modalities include pharmacological interventions, physiotherapy procedures, and balneotherapy. Balneotherapy involves bathing in natural mineral or thermal waters (e.g., mineral baths, sulfur baths, saline seawater baths), the use of therapeutic mud, or a combination of both. Despite its widespread use, there is very limited scientific evidence regarding the effectiveness or efficacy of balneotherapy. This review assessing the effects of balneotherapy in patients with RA was first published in 2003 and updated in 2008." [9]

This study aimed to identify and synthesize the most recent evidence on the effectiveness of acupuncture in reducing pain, improving physical function, and enhancing health-related quality of life (HRQoL) in patients with rheumatoid arthritis (RA). To achieve this objective, a comprehensive search was conducted across 12 Western and Chinese databases, covering studies available up to the end of 2016. As a result of the search, randomized controlled trials (RCTs) published in English, Portuguese, German, and Chinese that investigated needle acupuncture in patients with RA were selected.

The primary outcomes assessed were pain, physical function, and HRQoL. Secondary outcomes included morning stiffness, functional disability, the number of tender and swollen joints, and serum concentrations of inflammatory markers. Methodological quality was independently assessed by three reviewers using the Joanna Briggs Institute's standardized critical appraisal tool for meta-analysis." [10] Acupuncture is a distinctive therapeutic method based on traditional Chinese medicine, in which needles are inserted into specific external sites of the body, known as acupuncture points, to relieve pain or to treat various conditions. According to traditional Chinese medicine theory, rheumatoid arthritis (RA) is diagnosed as *'Bi syndrome'*, which arises from the invasion of wind, cold, dampness, or heat pathogens into the body's meridians. This process subsequently affects the joints, bones, and muscles, manifesting as joint pain, swelling, stiffness, and even deformity. According to traditional Chinese medical theory, acupuncture has been used for thousands of years to treat *Bi syndrome*; however, its precise mechanism of action has not yet been fully elucidated. Contemporary studies suggest that acupuncture exerts analgesic effects primarily by limiting inflammatory responses, improving blood circulation, and reducing muscle tone.[11]

With advances in technology, modern acupuncture encompasses not only traditional needle acupuncture but also electroacupuncture, intensive acupuncture, laser acupuncture, and other contemporary techniques. Although a relatively small number of systematic reviews and meta-analyses support the use of acupuncture for symptomatic treatment in patients with rheumatoid arthritis (RA), the existing evidence has raised methodological concerns and produced inconclusive findings regarding its effectiveness in RA management. Moreover, many of these studies focused on systematic reviews of randomized controlled trials (RCTs) without meta-analysis, and the most recent comprehensive systematic review evaluating acupuncture efficacy in RA was published approximately five years ago. Therefore, this meta-analysis aims to synthesize the most up-to-date global evidence derived from RCTs and to evaluate the effectiveness of acupuncture in reducing pain and improving quality of life among patients with rheumatoid arthritis. [12] Rheumatoid arthritis (RA) is an autoimmune musculoskeletal disorder, primarily manifesting as a destructive polyarthritis characterized by asymmetric, persistent synovitis (joint inflammation), rheumatic pain, and joint damage. [13] Without active treatment, RA can lead to joint destruction, impaired physical function, and even severe disability. [14]

Currently, there is no definitive cure for RA, and treatment strategies include both pharmacological and non-pharmacological approaches. Symptom-relieving pharmacological agents may cause serious adverse effects such as myelosuppression, liver and kidney failure, gastrointestinal bleeding, and infections. Additionally, these therapies impose a significant financial burden on patients, which may limit adherence to treatment. Therefore, patients with RA have a need for complementary and alternative therapies that provide additional benefit with fewer side effects. Studies indicate that approximately 60% to 90% of patients with arthritis utilize complementary and alternative medicine, including acupuncture[15]

In China, acupuncture is widely used as a non-pharmacological therapy due to its safety, reliability, and ease of use. According to traditional Chinese medicine theory, patients with rheumatoid arthritis (RA) are considered to present with conditions classified as 'Bi syndrome,' which results from the obstruction of the body's meridians by wind, cold, and dampness. This manifests in characteristic symptoms such as joint and bone pain. [16]

"Acupuncture has been shown to be effective in alleviating 'blood' (xue) stagnation in patients with arthritis, including osteoarthritis. Acupuncture is defined as the stimulation of specific points on the body, known as acupuncture points, by inserting and manipulating needles to achieve the desired therapeutic effect. This method is believed to alter or block pain perception and to modulate psychophysiological functions to some extent, including pain and mental control, in order to treat diseases or physical dysfunctions. Some authors have reported successful clinical outcomes using various acupuncture manipulations for chronic painful conditions, including moxibustion, needle embedding, warm-needle therapy, herbal steaming, and reinforcing-reducing or twisting-reinforcing needle techniques. [17] There are various methods for stimulating acupuncture points, including laser acupuncture, electroacupuncture, millimeter-wave stimulation, and moxibustion using ginger salt. [18]

Acupuncture appears to be a promising therapeutic approach compared to conventional pharmacological treatments for rheumatoid arthritis (RA). Our meta-analysis indicates that the specific acupuncture points selected vary significantly across studies, with the most commonly used points being ST36 (63.6%) and LI11 (45.5%). While many studies report that acupuncture can reduce pain, some, including research by Tam et al., did not demonstrate statistically significant effects. Nonetheless, the meta-analysis suggests that acupuncture may improve outcomes in RA patients across measures such as the Health Assessment Questionnaire (HAQ), Rheumatoid Arthritis Quality of Life (RAQoL), Physician Global Assessment (PhGA), the number of tender joints, and inflammatory markers.

In traditional Chinese medicine, treatment is individualized based on patient-specific symptoms, so acupuncture protocols are often not standardized and are adjusted according to TCM syndromes corresponding to various biological processes. For example, Zukow et al. selected 20 acupuncture points and adjusted subsequent treatment according to patient symptoms, demonstrating that acupuncture reduced pain more effectively than sham acupuncture. In contrast, other studies, such as those by David et al., used only a single point (LI3), which did not result in noticeable pain relief, suggesting that LI3 alone may be insufficient to influence RA. Therefore, the meta-analysis highlights heterogeneity across studies, which may be related to factors such as point selection, stimulation technique, treatment duration, and combination with other therapies.

Chronic nociceptive pain in RA patients is primarily mediated by inflammation. Inflammatory mediators often accumulate in joint synovial fluid and activate nerve terminals, leading to neurotransmitter release and the transmission of pain signals. Previous studies indicate that acupuncture may promote proliferation and migration of fibroblasts and other cells,

modulate cytokines, growth factors, and inflammatory mediators such as CRP, TNF-α, and IL-6. Furthermore, acupuncture reduces oxidative stress, improves tissue oxygenation, and contributes to pain relief. [19] It is known that interleukin-6 (IL-6) plays a critical role in the onset and progression of RA, particularly contributing to synovial damage in joints and progressive bone loss. [20] Acupuncture can significantly reduce interleukin-6 (IL-6) levels in the peripheral blood of patients with rheumatoid arthritis (RA), confirming its anti-inflammatory efficacy in RA treatment and aligning with the results of our study. [21] Furthermore, research indicates that acupuncture reduces pain by activating serotonin, noradrenaline, and opioid systems, and by promoting endorphin release, which enhances patients' sense of well-being and relief. [22]

In addition, studies suggest that acupuncture not only serves as a therapeutic tool to stimulate the body but also significantly improves patients' overall health and well-being through harmonization of mind and spirit, positively influencing disease outcomes, prognosis, and rehabilitation. [23]

Conclusion

Rheumatoid arthritis (RA) is a chronic inflammatory autoimmune disease primarily characterized by persistent joint damage, pain, functional limitations, and reduced quality of life. Currently, there is no definitive cure for RA; existing treatment approaches include both pharmacological and non-pharmacological methods. Although pharmacotherapy is effective, it may cause serious adverse effects such as myelosuppression, liver and kidney failure, gastrointestinal bleeding, and infections, which can limit patient adherence and impose economic burdens. Therefore, patients often require additional, safe, and complementary treatment options.

Among non-pharmacological approaches, acupuncture, traditional medicine, and physical therapy play a significant role. Acupuncture reduces pain, controls inflammation, and improves quality of life by stimulating specific points on the body. Studies indicate that acupuncture alleviates pain by lowering inflammatory mediators such as IL-6, promoting endorphin release, and reducing oxidative stress. Although selected acupuncture points vary across studies, the most commonly used points are ST36 and LI11.

Traditional medicine methods, such as moxibustion, warm-needle therapy, herbal steaming, and other conventional manipulations, support the body's natural recovery processes, enhance immune function, and reduce inflammatory responses. In addition, physical therapy and physiotherapeutic interventions—including aerobic and resistance exercises, manual therapy, and multimodal approaches—have been shown to effectively reduce pain, improve joint function, and support cardiorespiratory fitness.

The combination of these approaches provides a safe and effective complementary treatment strategy for patients with RA. It is important that acupuncture, traditional medicine, and physical therapy are tailored to individual patient symptoms and traditional Chinese medicine syndromes. As a result, this integrative approach helps reduce pain, control inflammation, and improve quality of life, significantly enhancing patients' overall health and well-being.

REFERENCES

1.2025 Muallif(lar). Elsevier GmbH tomonidan nashr etilgan. PubMed. https://pubmed.ncbi.nlm.nih.gov/41005054/
2.2025 yil 25 noyabr;148:157285. doi:10.1016/j.phymed.2025.157285. Epub 2025, 19-sentabr. https://pubmed.ncbi.nlm.nih.gov/41005054/

3.Soeken KL, Miller SA, Ernst E. Acupuncture for rheumatoid arthritis. Rheumatology (Oxford). 2003 May;42(5):652–659. doi:10.1093/rheumatology/keg183
4.David J, Townsend S, Satanatan R, Kriss S, Dore CJ. Acupuncture in rheumatoid arthritis: a randomized controlled trial. Rheumatology (Oxford). 1999 Sep;38(9):864–866. doi:10.1093/rheumatology/38.9.864
5.Tukmachi E. Rheumatology. 2000 Oct;39(10):1153–1154. doi:10.1093/rheumatology/39.10.1153
6.Braun L, Pratt AG, Hyrich KL. BMJ. 2024 Jan 17;384. doi:10.1136/bmj-2022-070856
7.Singh JA, Hussain A, Tanjong Ghogomu E, et al. Biologic or tofacitinib monotherapy for RA with DMARD failure: Cochrane systematic review and network meta-analysis. Cochrane Database Syst Rev. 2016;11:CD012437. doi:10.1002/14651858.CD012437
Barnabe C, Tomlinson G, Marshall D, et al. Methotrexate monotherapy vs combination therapy for RA: Cochrane systematic review and network meta-analysis. BMJ. 2016;353:i1777. doi:10.1136/bmj.i1777
Singh JA, Hussain A, Tanjong Ghogomu E. Biologics or tofacitinib in RA patients failing biologics: systematic review and network meta-analysis. Cochrane Database Syst Rev. 2017;3:CD012591. doi:10.1002/14651858.CD012591
Lauper K, Iudici M, Mongin D, et al. TNF inhibitors, abatacept, IL-6 inhibitors, and JAK inhibitors in RA: registry-based observational study. Ann Rheum Dis. 2022;81:1358–1366. doi:10.1136/annrheumdis-2022-222586
8.Sundus H, Alam Khan Z, Rashid H, Agarwal A, Ahmadkhan S. 2025 Jul 31. https://doi.org/10.1002/msc.70173
9.Verhagen AP, Bierma-Zeinstra SM, et al. Acupuncture for osteoarthritis of the knee. Cochrane Database Syst Rev. 2003;(4):CD000518. doi:10.1002/14651858.CD000518
10.Nogueira B, Greten HJ, Kabrita A, Alves M. Evidence-based integrative medicine. 2018 Dec 19;25:704–709.
11.Zijlstra FJ, van den Berg-de Lange I, Huygen FJPM, Klein J. Anti-inflammatory actions of acupuncture. Mediators Inflamm. 2003;12(2):59–69. doi:10.1080/0962935031000114943
12.Myasoedova E, Davis J, Matteson EL, Crowson CS. Epidemiology of rheumatoid arthritis: results from 1985–2014. Ann Rheum Dis. 2020;79(4):440–444. doi:10.1136/annrheumdis-2019-216694
13.Chjan A, Li YC. Joint pain mechanisms in RA: from cytokines to central sensitization. Curr Osteoporos Rep. 2018;16(5):603–610. doi:10.1007/s11914-018-0473-5
14.Seca S, et al. Effectiveness of acupuncture on pain, physical function, and HRQoL in RA patients: a systematic review. Chin Med. 2019;25(9):704–709. doi:10.1007/s11655-018-2914-x
15.Seca S, Kirch S, Cabrita AS, Greten HJ. Acupuncture for hand pain, functional impairment, and HRQoL in RA: multicenter, double-blind study protocol. Integr Med Res. 2016;14(3):219–227. doi:10.1016/s2095-4964(16)60254-6