

The role of acupuncture and moxibustion in reducing the ACPA levels in rheumatoid arthritis [bi syndrome]: A case report

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Abstract

Rheumatoid Arthritis (RA) is a chronic autoimmune disease that leads to progressive joint damage and disability. RA occurs when the immune system attacks the body's own tissues. The exact cause is unknown, but it may be linked to genes, environment, hormones, infection or smoking. This case report explores the potential benefits of acupuncture and moxibustion as complementary therapies for managing RA, particularly in patients with Dampness Bi syndrome. A 51-year-old female with RA was presented with pain, stiffness, and swelling in her wrists and fingers. After three months of treatment involving acupuncture (targeting points Lu 7 and GB 39), moxibustion, and Meridian massage, the patient experienced significant improvements. These include reduced pain, enhanced joint mobility, and marked reductions in inflammatory markers. The findings suggest that acupuncture and moxibustion may effectively address both the symptoms and underlying pathophysiology of early stages of RA by expelling pathogenic factors and replenishing Qi and blood. This approach offers a promising, safe, and minimally invasive alternative or adjunct to traditional RA treatments. However, further studies needed to validate these results to explore the broader role of Traditional Chinese Medicine in RA management.

Keywords: Acupuncture; moxibustion; Rheumatoid Arthritis; Bi syndrome; Inflammatory Markers

1. Introduction

Rheumatoid Arthritis is a chronic, inflammatory systemic autoimmune disease incipiently affects the synovial tissues of the smaller joints further progresses to the larger joints and ultimately causes joint destruction and deformity. [1]The onset of the disease occurs between 30 to 50 age and approximately 0.3–1% of total population suffers from this disease. [2] Currently non-steroidal anti-inflammatory drugs, glucocorticoids, csDMARDs [conventional synthetic disease-modifying antirheumatic drug], Biologics etc. are commonly used medicines for the treatment of RA. [3] These medicines help to alleviate the symptoms and slowdown the disease progression, however, their adverse reaction such as liver and kidney disorder, GIT reactions, Allergic reactions etc., may have detrimental effects to the body.[4]According to the TCM theory, RA can be classified into the category of Bi Syndrome. Bi means obstruction .It is a disorder resulting from the obstruction of Qi flow in the meridians especially superficial, Luo connecting and muscle meridians, qi stagnation, and blood stasis after the invasion of external pathogenic factors such as wind, cold, dampness or heat.[5]Among all, Cold dampness bi syndrome is a common pattern in the RA manifestation including symptoms such as cold, pain, swelling, heaviness of the joint, stiffness etc.[6] Acupuncture is one of the treatment methods based on the traditional Chinese medicine in which acupuncture needles are inserted in the specific points in the surface of the body

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in order to get therapeutic effects. Acupuncture has been used in the treatment of Bi syndrome for more than thousands of years. Studies show that acupuncture provides a non-analgesic effect by suppressing the inflammatory response. [7] Along with acupuncture, moxibustion also helps to relieve the Rheumatoid arthritis. In this case, compared to the conventional methods, combination of Acupuncture and moxibustion shows more effective in treating the rheumatoid arthritis.

2. Case report

A 51-year-old female reported to the OPD JSS NYH Hospital with the presenting complaint of pain and stiffness in both of her wrists and fingers for the past 6 months. On her first visit to the Hospital she explained to have severe pain in multiple joints especially in proximal inter-phalangeal joints and distal interphalangeal joints along with mild swelling. She felt intolerable pain in early morning and it aggravated on changing positions such as grasping and clenching. There was notable stiffness particularly in distal interphalangeal joints.

2.1. Clinical significance

On her first visit, she described her pain was intolerable and had to take pain killers to lead a normal routine. She is a multiparous woman with two male children. She had Gestational hypertension in both of her pregnancies. She attained menopause at the age of 50, following vegetarian diet with poor appetite and thirst seemed normal. She had disturbed sleep. She had surgical history of appendectomy at the age of 16. She had been taking Analgesics on and off for the past three months.

On physical examination, joint mobility was reduced. Mild swelling and warmth were observed. Vital signs were stable. Her pain score [on VAS scale] was 8 on the first visit. Upon blood examination, her ESR, ACPA, RA factors on the rise. she was diagnosed with Rheumatoid Arthritis. She took Naturopathy and yoga treatments as a op patient. Based on her condition she was given Acupuncture treatments. The treatment duration was 10 days a month for three months. We started Acupuncture treatment on the basis of Bi syndrome particularly Dampness bi syndrome. On that basis Lu 7 and GB 39. Moxibustion was given for wrist and both phalangeal joints. To nourish qi, Kidney and Liver meridian massage was given alternatively. Palm and foot reflexology were given for tonification.

On first sitting she was given diet counselling and importance of joint movement in order to improve the quality of life. The pain Score gradually fell from 8 to 2 upon third sitting. Joint mobility was improved. After three months there is a remarkable reduction in her ESR, RA factor and ACPA levels. The joint mobility was greatly improved and the presenting complaints were relieved. The patient was very satisfied by the outcome. She was advised to follow dietary advice given to her at the time of counselling and practice mild yoga to improve the health quality.

3. Discussion

RA is a chronic systemic autoimmune musculoskeletal disorder which manifests as symmetrical synovitis with progressive destruction of the smaller joints leading to permanent deformity and disability. The trending conventional treatment methods such as DMARD disease-modifying anti rheumatic drug [8] help to alleviate the symptoms but it has serious adverse effects and causes economic burden to the patients. The patients with RA Still need alternative and complementary treatments to gain benefits with less adverse effects. Acupuncture and moxibustion play a huge role in treating RA. Approximately 60% to 90% of RA patients Treated with complementary medicine, cupping and moxa therapy is preferred as major non pharmacological method because of its effect, safety and minimal side effects. [9, 10]

According to the TCM Theory RA comes under broad category of Bi syndrome. Bi means obstruction or blockage. In Chinese medicine it means pain, soreness or numbness due to obstruction in the circulation of Qi and Blood in the channels or meridians caused due to external invasion of colder dampness, wind. This invasion caused due to temporary deficiency of body's qi and blood. This invading wind, cold and dampness penetrates skin then enters the muscles and connecting channels causing muscle ache then finally the pathogenic factors enters into the main channels. Other than that accidents and emotional factors also contribute to the qi deficiency or qi stagnation re which in turn leads to malnourishment of the channel causing it susceptible to the external invasion of cold, windy dampness. Depends upon the category Bi syndromes classified into 3 broad category, Wind bi, Cold bi and Dampness bi. Of these Dampness bi syndrome characterized by pain, swelling, soreness in the joints, here pain is fixed on one place and aggravated by damp weather. Our patient comes under this category. [11, 12]

Generally all pathogenic factors present in bi syndrome [although with the predominance of one or two] so the treatment should be aimed at expelling wind, scattering cold and resolving the dampness. After that it is necessary to nourish the blood, nourish the liver and kidney essence which ultimately strengthens the muscles and bones.

Acupuncture is defined as inserting needles in to the specific acupoint to achieve desirable effect. It is believed to be capable of changing the perception of pain by modifying the psychophysiological functions to some extent, including pain. We can use different acupuncture manipulations, such as moxibustion, needle-sticking method, warm needling, steaming, and manual stimulation to treat certain chronic painful diseases. In addition, special forms of acupoints stimulation includes laser, electro acupuncture, millimeter wave, and ginger-salt-partitioned moxibustion can also be used. [13, 14]

Here the selected acupuncture points are Lu 7 and G B 39. Both are distal points. It is chosen based on its location. In general more distal along the point is, the further up along the channel it extends its influence. The both points are Luo connecting points. Lu 7 specifically used to expel the invading pathogen especially cold it connects to the large intestine meridian.[15]

GB 39 is a yang point connecting three yang meridians such as Gall bladder, Urinary bladder and stomach. This point activates the corresponding channel, dispels wind and dampness.[16]

The main mechanism of RA is that the nociceptive pain is due to inflammation. The inflammatory mediators accumulate in the synovial fluid of the joints, causing the release of neurotransmitters and the transmission of pain messages. In previous study, it is showed that acupoints induce certain cell proliferation and migration mainly fibroblasts and helps in modulating the production of cytokines, growth factors, and inflammatory mediators such as CRP, TNF- α , and IL-6. and also decreases oxidative stress, improves tissue oxygenation, and relieves pain [17]

IL-6 played a vital role in the development and progression of RA and was responsible for the progressive destruction of articular cartilage and bone. Acupuncture can effectively reduce the level of IL-6 in peripheral blood of the patients with RA, which demonstrates that it has a high anti-inflammatory activity in the treatment of RA, which was in line with our results .[18]

Table 1 Pre and post assessment

S no	Test name	Pre data	Post data
1.	ESR	22 mm/h	8 mm/h
2.	RA FACTOR	44 U/mL	26 U/mL
3.	ANTI CCP	60.73 EU/ml	6.96 EU/ml

Table 2 Intervention

Name of the treatment	Duration	No of Days	Specific points
Acupuncture	20 min	21 days	Lu 7,GB 39
Moxibustion	15 min	21 days	For wrist and both hands phalangeal joints
MERIDIAN MASSAGE	10 min	21 days	Alternate days Liver and kidney meridian massage

Table 3 Acupuncture point location

S.NO	Acupuncture treatment	Location and insertion	Indication
1.	LU 7[Lieque]	Superior to the styloid process of radius,1.5 cun above the transverse crease of the wrist	Luo connecting point of the lungs and it expels invading pathogenic cold

		Needle inserted obliquely at the depth of 0.3 cun	
2.	GB 39[Xuanzhong]	3 cun above the tip of the external malleolus, on the posterior border of the fibula Needle inserted perpendicularly at the depth of 1 cun	connecting three yang meridians such as Gall bladder, Urinary bladder and stomach. This point activates the corresponding channel, dispels wind and dampness
3.	Kidney meridian	Starting point at the middle of the sole of the foot and ends at lower border of the clavicle 2 cun lateral to the anterior midline.27 Acu points Procedure: Moderate pressure to each acupuncture point clockwise 10 times anti clockwise 10 times runs across the whole meridian	Strengthens corresponding organs bones and muscles
4.	Liver meridian	Starts from lateral side of the dorsum of the big toe,0.1cun posterior to the corner of the base of the nail and ends at blow the nipple in the 6 th intercostal space.14 Acu points Procedure: Moderate pressure to each acupuncture point clockwise 10 times anti clockwise 10 times runs across the whole meridian	Strengthens corresponding organs bones and muscles

4. Conclusion

This case report highlights the efficacy of acupuncture and moxibustion in managing rheumatoid arthritis (RA), particularly in alleviating pain, stiffness, and reducing inflammatory markers such as ACPA, ESR, and RA factor other than taking DMARDS. By ruling out the root cause of the bi syndrome according to TCM theory, Acupuncture and Moxibustion treatment were selected which helps to treat the underlying pathophysiology of RA, expelling pathogenic factors and nourishing Qi and blood. The significant improvement observed in the patient demonstrates the potential of integrating acupuncture and moxibustion as complementary therapies to conventional treatments, offering a safe, effective, and minimally invasive approach to RA management to prevent the joint deformity and prolonged steroidal use. However further extended research trail is needed to validate this treatment protocol.

Compliance with ethical standards

Disclosure of conflict of interest

We declare that we have no conflict of interest.

Statement of informed consent

Informed consent was obtained from the participant included in the study.

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