



# Clinical Observation on Warm Acupuncture Therapy for Rheumatoid Arthritis

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## Abstract

Rheumatoid Arthritis (RA) is a chronic, inflammatory disease, frequently associated with joint destruction. The aim of this clinical observation was to contribute to warm needle acupuncture treatment of rheumatoid arthritis. We studied the before and after warm needle acupuncture and herbal medicine treatment of rheumatoid arthritis patient's Rheumatoid Factor (RF), Erythrocyte Sedimentation Rate (ESR), and C-reactive Protein (CRP), the plasma samples were investigated at Pathlab Laboratory (M) Sdn. Bhd (37363-K) in Taman Perling branch, Johor, Malaysia. Our result showed that, after warm needle acupuncture and herbal medicine treatment, rheumatoid arthritis patient's RF, ESR, and CRP are reduced, but warm needle acupuncture seen to have decreased in significantly comparison with the before. Authors suggested that warm needle acupuncture could help rheumatoid arthritis patients, but basic mechanisms and long-term observations will be needed.

**Keywords:** Rheumatoid Arthritis (RA); Warm needle therapy; Sedimentation Rate (ESR)

## Introduction

Rheumatoid Arthritis (RA) is a chronic, inflammatory disease, which primarily affects synovial joints. The extended inflamed synovial erodes the articular cartilage and bone thus causing joint deformity, leading to progressive physical disability [1]. The exact aetiology of rheumatoid arthritis is unknown. Numerous studies have suggested that rheumatoid arthritis has a complex pathogenesis in which genes, environment, accident, and immunity act together in the development of the disease. The disease is more frequent among women than men and the prevalence as well as incidence increases with age [2].

In industrialized countries, the prevalence of rheumatoid arthritis has been estimated to be between 0.5% and 1%. The occurrence of rheumatoid arthritis is believed to vary among different populations, and the majority of studies have been carried out in Northern Europe and North America. The variation in prevalence could be explained by environmental and genetic factors, but also by diverse disease classifications, the denominator used for prevalence, variability in the age of onset, study design, sample size and sampling method [3].

Warm needle acupuncture is an indirect way to combination of acupuncture with moxibustion by stimulating acupoints with a burning moxa stick is attached at the tail of the needle that has been inserted into an acupoint, and the moxa stick is burned to provide heat via the needle [4,5]. The use of warm needle acupuncture was first documented in Shang Han Za Bing Lun, a classical Chinese medical book of Zhong-jing Zhang (Eastern Han dynasty, 25-220 C.E) [6]. Warm needle acupuncture treatment is transmitted to the acupoint by radiation, moreover, by direction conduction through the shaft of the acu needle, thereby stimulating deep tissue within the acupoint and warming the acupoint on the surface [7], practitioners to be mention of safe for risk of burning in patients skin.

## Methods and Materials

### Participants

The study was prospectively carried out at Southern TCM Centre, Southern University College, Johor, Malaysia, from October 2016 to March 2017. Fifty adults (38 women and 12 men) aged 36-65 years provided their informed consent in writing and were entered into

this clinical study, (SUC\_FCM\_2016\_R2). They were diagnosed rheumatoid arthritis in Rheumatologists at government and private hospitals in Malaysia, also no sign of cardiovascular disease or other symptoms. Participants who were smokers were excluded from the study, Di Giuseppe et al. [8] research found that, smoking is linked to an elevated risk of rheumatoid arthritis, it also demonstrated that smoking daily could more than double a women's risk of developing rheumatoid arthritis, and suggested smoking stairs up faulty immune functioning if patients already have certain genetic factors that make patients more likely to develop rheumatoid arthritis. The participants were randomly assigned to warm needle acupuncture group and herbal medicine group.

### Procedure

**Warm needle acupuncture group:** We are selected warm needle acupuncture group's acupoints are Zusanli (ST36; tonifies Qi and Yang, nourished the Blood and Yin), Shenque (CV8; in direct moxibustion, not acupuncture; warms and stabilizes the Yang and the intestines); if finger joint pain or stiffness choose Houxi (SI3; eliminates Wind and Heat from the Taiyang, clears Heat and benefits the orifices), Sanjian (LI3; clear Heat and expels Wind, alleviates pain), Hegu (LI4; Regulates the Defensive Qi and sweating, alleviates pain), and Ashi points; if wrist pain choose Waiguan (TB5; Expels Wind, alleviates pain), Yangxi (LI5; supports the wrist joint, clear Fire and expels Wind), Yangchi (TB4; clear Heat, relaxes the tendons) and Ashi points; if elbow pain choose Chize (LU5; clear Heat in the upper arms, alleviates pain), Shaohai (HE3; clears Heat), Quchi (LI11; clear Heat expels Wind, drains dampness, alleviates itching), Shousanli (LI10; regulates the Qi and Blood, alleviates pain), and Ashi points; if ankle pain choose Shenmai

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(BL62; subdues Wind, Expels external Wind, alleviates pain), Zhaohai (KD6; alleviates pain), Taixi (KD3; clears deficiency Heat, strengthens tendons, alleviates pain), Jiexi (ST41; clears Heat, alleviates pain), and Ashi points; if knee pain choose Xiyan (Ex-LE5; reduce swellings and alleviate pain), Yanglingquan (GB34; benefits the tendons and joints, alleviates pain), Xuehai (SP10; benefits the tendons and knee) and Ashi Points. The acupuncture needles (Sterile disposable stainless acupuncture needle, size: 0.3 × 4.5 mm, Jia Jian Medical Instrument Co., Ltd., Reg. No.: syxgsw 2015120422) were inserted into the muscle layer. After arrival of the needling sensation of De Qi, processes the warm needle acupuncture, the needles were kept in place for 30 minutes. The warm needle acupuncture treatment was given two times per week during 6 months.

**Herbal medicine group:** We are used Juan Bi Tang (Sun Ten Pharmaceutical Co., Ltd. Taiwan. Reg No.:055668. Herbs include are Qiang Huo, Du Huo, Qin Jiao, Sang Zhi, Hai Feng Teng, Dang Gui, Chuan Xiong, Ru Xiang, Mu Xiang, Gui Zhi, Rou Gui, Zhi Gan Cao). Participants were taken 6 g b.i.d. during 6 months. Juan Bi Tang's formula actions are removes Wind-dampness, eliminates painful obstruction, circulates Qi and blood and reduces pain.

### Outcomes

Before and after herbal medicine and warm needle acupuncture therapy, the patient's RF, ESR, and CRP were measured. The plasma samples were investigated at Pathlab Laboratory (m) Sdn. Bhd (37363-K) in Taman Perling branch, Johor, Malaysia.

### Results

Table 1 presents the mean RF levels at before and after during the treatment. After six months of warm needle acupuncture and herbal medicine treatment, the RF positive level is seen to have decreased in comparison with the before. Table 2 presents the mean ESR and CRP levels at before and after during the treatment. After six months of warm needle acupuncture and herbal medicine treatment, the ESR and CRP level is seen to have decreased in comparison with the before, but warm needle acupuncture treatment seen to have decreased in significantly comparison with the before.

### Discussion and Conclusion

A common feature of autoimmune disease is the presence of autoantibodies and inflammation, including autoreactive T Lymphocytes, mononuclear phagocytes, and B cells. It has long been known that B cells produce autoantibodies and, thereby, contribute to the pathogenesis of many autoimmune diseases. Autoimmune disease can be classified as organ-specific or non-organ specific depending on

whether the autoimmune response is directed against particular tissues or against antigens as in chronic inflammatory autoimmune diseases such as systemic lupus erythematosus and rheumatoid arthritis, both are characterized by the presence of autoantibodies that play a major role in their etiopathogenesis. Systemic lupus erythematosus is characterized by circulating antibodies and immune complex deposition that can trigger an inflammatory damage in organs. Rheumatoid arthritis is progressive inflammatory disease in which T cells, B cells, and pro-inflammatory cytokines play a key role in the pathophysiology [9].

Patients already diagnosed rheumatoid arthritis, the usual trails of nonsteroidal anti-inflammatory drugs (NSAIDS) and/or prednisone; patients are generally offered hydroxychloroquine or methotrexate. If those fail, newer Disease-modifying Antirheumatic Drugs (DMARDS) are considered. We consider the problems raised by Non-steroidal Anti-inflammatory Drugs (NSAIDS) treatment in the elderly [10]. The NSAIDS have three risks: cardiovascular, gastro-intestinal, and renal. The increase in cardiovascular risk in the absence of a past cardiovascular history due to an NSAID has been clearly established for both selective and non-selective NSAIDS from a meta-analysis of placebo-controlled, randomized trails and from observational studies [11].

In Traditional Chinese Medicine, painful joints are referred to as *Bi* syndrome. Because Traditional Chinese Medicine really has no concept of genetic inheritance, *Bi* syndrome is generally regarded as being the result of an invasion of pathogenic influences coming from outside the patient [12]. Warm needle acupuncture often used to treat painful conditions such as arthritis, especially rheumatoid arthritis [13]; as well as musculoskeletal pain conditions [14]. Warm needle acupuncture treatment is transmitted to the acupoint by radiation, moreover, by direction conduction through the shaft of the needle, thereby stimulating deep tissue within the acupoint and warming the acupoint on the surface [15].

This clinical observation of the methodology of warm needle acupuncture treatment clinical research, our preliminary suggests that warm needle acupuncture in terms of changes in the RF, ESR and CRP levels. RF are a variety of antibodies that are present in 70-90% people with rheumatoid arthritis, however, can be found in people without rheumatoid arthritis or with other autoimmune disorders. In general, when no RF is present in someone with rheumatoid arthritis, the course of the disease is less severe. ESR reflects the degree of inflammation in the body, in healthy people, the ESR is low and it increasing with inflammation, it is a general indication of the amount of inflammation in the body. CRP levels are an even better indication than ESR of the amount of inflammation present. In people with rheumatoid arthritis, if the CRP is high, it means there is significant inflammation or injury in the body, reducing these levels is not meant to be improved with rheumatoid arthritis all the time. Both CRP and ESR levels are used to monitor disease activity and to monitor how well patients are responding to treatment [16]. Acupuncture carries several potential advantages, such as low cost, few complications, and the possibility of personalized treatment. Acupuncture is also a safe intervention in the hands of competent practitioners. Yamashita et al. [17] prospectively evaluated 55,291 acupuncture treatments administered by acupuncturists with medical training and documented only 64 adverse events (0.12%) [18]. All of those adverse events were minor, with the most common being bruising, dizziness, perspiration, discomfort, and dermatitis; warm needle acupuncture is safe and may be effective as an adjunct in reducing the number of RA patients. One of the limitations in this study, further clinical observation may consider

	n	Before	After
Warm Needle Acupuncture	25	25 (100%)	12(48%)
Herbal Medicine	25	25 (100%)	8(32%)

A higher score indicates a better outcome

Table 1: Comparison of pre- and post-treatment RF positive (%).

	n	Warm Needle Acupuncture		Herbal Medicine	
		Before	After	Before	After
ESR	25	55.80 ± 17.25	28.60 ± 11.20*	54.90 ± 18.59	37.12 ± 21.60
CRP	25	24.71 ± 36.91	15.60 ± 12.60*	23.80 ± 21.56	21.30 ± 17.59

Values represent means ± Standard error of the mean  
A lower score indicates a better outcome  
\*P<0.05

Table 2: Comparison of pre- and post-treatment ESR and CRP levels.

anti-inflammatory effects and including pain score and tender joint count as the main outcome assessment, also to be made to facilitate the design of a large-scale trial, long-term observation, which in turn will help to clarify the existing evidence base on warm needle acupuncture for rheumatoid arthritis.

## Disclosure Statement

The authors declare no conflicts of interest and no financial interests related to the material of this manuscript.

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