

Case Report

Can New Diagnostic Criteria of Rheumatoid Arthritis Really Do An Early Diagnosis? -A Case Report of Early Diagnosis and Treatment of Rheumatoid Arthritis with Traditional Medicine

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Abstract

Rheumatoid arthritis (RA) is a chronic systemic disease in which immunologically mediated inflammation of synovia-lined joints can result in marked disruption of joint structure and function. In Traditional Chinese Medicine (TCM), it belongs to "Be Syndrom", the outcome of the struggle between body resistance and pathogenic factors. RA is a highly disabling disease of which untreated patients show about 50% disability in two years. One cause of the high morbidity of RA is the long latency from the onset of symptoms to the definitive diagnosis of RA and the initiation of appropriate treatment. The difficult to make diagnoses of early RA since the early manifestations were atypical and the lack of specific diagnostic methods. This case is about the effectiveness of TCM treatment of patients with early RA which is reflected in both the diagnosis part and the treatment process. The patient in this case, Male, 56 years old, had been diagnosed of RA by TCM almost ten years earlier than that his symptoms could reach the Western diagnostic requirements. The important role of preventive thought -"preventive treatment of diseases"- in TCM in the early diagnosis and treatment of RA needs to be emphasized. It can be a practical way to treat RA with early TCM diagnose and treatment that impact disease activity and ultimately have been shown to slow or arrest structural joint damage, and then turn up to Western medicine treatment if the patient's symptoms reach the Western diagnostic requirements.

INTRODUCTION

Rheumatoid arthritis (RA) is a chronic systemic disease in which immunologically mediated inflammation of synovia-lined joints can result in marked disruption of joint structure and function. With advances in our understanding of the pathogenesis of RA over the past two decades, emphasis has shifted to intervention early enough in the disease course to prevent the joint destruction that follows inflammation. Accordingly, in 2010 the ACR and the European League against Rheumatism (EULAR)

put forward revised classification criteria emphasizing RA characteristics that emerge early in the disease course, including ACPAs, a biomarker that predicted aggressive disease. These were in contrast with the 1987 ARA criteria, which distinguished established RA patients from those with other forms of arthritis, and identified patients with later disease. The categories of the 2010 ACR/EULAR criteria were grouped into four classifications, with point scores for each: joint symptoms; serology (including RF and/or ACPA); symptom duration, whether <6 weeks or >6 weeks; and acute-phase reactants (CRP and/or ESR) [1].

But for the early RA with no typical symptoms, such as the patient in the following case, it still only has a quite limited diagnostic value. Treatment for RA has changed profoundly over the past 25 years, evolving from a strategy of providing symptomatic relief, to implementation of therapeutic regimens that impact disease activity and ultimately have been shown to slow or arrest structural joint damage. Drug therapy for RA has evolved from salicylates, to NSAIDs, CSs, DMARDs, MTX, and finally to biologic response modifiers [2].

CASE REPORT

Patient, Male, 56 years old, in March 2005, was discovered to have an incomplete right ventricular conduction block after visiting the hospital, who complained of chest tightness after a strenuous work. The patient's treatment following admission was seen some improvements, and then he was discharged. After leaving the hospital, he had shoulder and back pains, with a body temperature at 36.7. All the examination reports did not show anything abnormal. Previous medical history showed that the patient had neutropenia, and he felt repeated pains on both knees after strenuous work, general body weakness, and feeling of over-burden. Others: Frequent stools, pale tongue, white and moistness coating, deep pulse. When he came in at 2005-6-10, he was diagnosed with Bi syndrome of liver and kidney deficiency with wind damp blockage in the channels. Principles of Treatment: Nourishing kidney and regulating liver to invigorate tendon, resolving dampness to dredging collaterals. Prescriptions: Pubescent Angelica Root, Chinese taxillus herb, Large Gentain Root, Ledebouriella Root, Chinese Angelica Root, Cooked Rehmannia Root, Eucommia Bark, Astragalus, Pollen Typhas, Hyacinth Bean, Chinese Quince Fruit (Each medicine is 10 grams and 7 prescription). Perform them regularly and change treatments accordingly, the following formulae were the same.

Disease condition showed significant improvement after treatment for five months. However, in November 10, 2005, the change in weather characterised by the drop in temperature during the fall caused the patient to feel increased pain on both knees, he suffered transient tinnitus hearing loss occasionally. Others: appetite, sleep, urine and stool did not show anything abnormal, red tongue, white coating, and fine pulse. Diagnose: The syndrome of deficiency of liver and kidney with phlegm-blood stasis obstructing the channel and damp syndrome due to spleen deficiency. Accordingly, strengthen the drugs with the functions of invigorating spleen to remove dampness, removing blood stasis and dredging collaterals. Prescription: Astragalus 30G; Codonopsis Root, Cornus Fruit, Medlar, Ledebouriella Root, Cyathula Root, Achyranthis Bidentatae, Mulberry Twig, Cassia Twig, Adlay, and Cooked Rehmannia Root 10G; Gambir Vine Stems and Thorns, Large Gentain Root, and Sinomenium acutum 20G; Frankincense, Myrrh, and Licorice Root 6G, (7 prescription). He continued receiving these medications and treatments for a period of 16 months during which his conditions were stable and necessary adjustments were made based on his symptoms. Because he went abroad for work reasons, the patient stopped receiving treatments and medications for a period of one year.

As soon as he got back, he came in for a check-up with complains of stiffness of the right middle finger which he could not flex and was worse in the mornings after sleep, with pains

on both heels and increased sweatings on both palms and soles of his feet, cold sweating after work or exercise, dryness of the pharynx even at rest, fine pulse, others are normal. Diagnose: Cold damp syndrome with insufficiency of liver and kidney. Principles of treatment are nourishing-kidney, regulating-liver, invigorating-tendon and warming-Meridian. Prescription: Cooked Rehmannia Root, Cornus Fruit, fructus psoraleae, semen cuscutae, Chinese Angelica Root, and Szechuan Lovage Root 10G; White Peony Root and cuttle-bone 15G; Asarum sieboldi Mig, lignum millettiae, and cinnamon 30G; Cassia Twig 5G (7 prescription); Cinnamom-Poria Bolus, Eight at a time, three times a day. After treatment, there were significant improvements in his symptoms, but he still felt dull pain on both of his heels, and slightly abnormal sensation on the right middle finger, he maintained a normal appetite and sleeping condition, pulse was fine and wiry. The condition had occasional relapses during the two years treatment of nourishing liver and kidney, Tong bi, and relaxing tendons as well as collaterals. He visited our hospital on February 27, 2010 when he had mild systemic joint pain, slight sweating, normal sleep and appetite, fine pulse. Diagnose: The syndrome of deficiency of liver and kidney and damp syndrome due to spleen deficiency. Prescription: Fried Codonopsis pilosula and Astragalus 30G; Sinomenium acutum 20G; Rehmannia Root, Cooked Rehmannia Root, Asparagus Tuber, Ophiopogon Tuber, Golden Eye Grass Rhizome, Large Gentian Root, Cyathula Root, Achyranthis Bidentatae, Cornus Fruit, Radix Dipsaci, and Morinda Root 10G; Honey-fried Frankincense and Honey-fried Myrrh 4G (14 prescription); zhou che da zao wan Chinese herb..

The patient's condition continued to show slight improvements with some episodic recurrence of symptoms with significant pain on his left wrist. The result of Magnetic resonance imaging (MRI) on December 4, 2010 revealed synovial arthritis between ulnar and carpal joint capsule of the left wrist. Then the patient was diagnosis with early RA according to the ACR/EULAR 2010 rheumatoid arthritis classification criteria. Western medicines were given and it had an exact effect. RA showed no further progress until the follow-up in May 2013 and the blood biochemical, and immune analysis still showed no abnormalities in March 2005 onward.

DISCUSSION

RA is a highly disabling disease of which untreated patients show about 50% disability in two years, and three years of morbidity is 70% [3]. One cause of the high morbidity of RA is the long latency from the onset of symptoms to the definitive diagnosis of RA and the initiation of appropriate treatment. Several composite and increasingly sophisticated measures of disease activity have been objectively evaluated over the last two decades [4]. But it was still difficult to make diagnoses of early RA since the early manifestations were atypical and the lack of specific diagnostic methods. Therefore, the important role of preventive thought -"preventive treatment of diseases"- in traditional Chinese medicine (TCM) in the early diagnosis and treatment of RA needs to be emphasized. The theory involves two aspects: preventive treatment before the occurrence of diseases and preventing deterioration after the occurrence of diseases. It refers to taking various measures to prevent diseases from occurring, which must start with both strengthening the

resistance inside the body and preventing pathogens from invading the human body. Research shows that, the fastest progression of RA occurs in the onset of the first stage in the first year, there is a short therapeutic window in this period, during which the RA inflammatory changes are reversible [5], one year incidence of patients' articular bone destruction is about 70%-90%. Hence, early diagnosis and beginning of actively using disease modifying anti-rheumatic drugs (DMARDs) before X-ray bone erosion destruction arises can succeed in improving the prognosis of patients with RA and quality of their lives. However, early RA patients without any symptoms can be measured by medical appliances but can't be diagnostics according to the current diagnostic system; however, traditional medicine can make initiate treatment based on early clinical symptoms and thus delays the progression of RA. In other words, it requires at least more than five years from the onset of symptoms to diagnosis to meet the minimum requirements of Western medicine diagnose system for these RA patients similar to this case. Without appropriate treatment of TCM on early stage, the progress of RA in this patient should be a lot faster.

The effectiveness of TCM treatment of early patients with RA is also reflected in the treatment process in this case. The philosophy of modern medicine is a confrontation strategy to fight against diseases on the basis of understanding of the pathogen and symptoms. However, most cases in real life are caused by multi-factors via different ways and they are interacting with the niche in the body resulting in multiple effects. In Chinese medicine, RA belongs to "Be Syndrom", the outcome of the struggle between body resistance and pathogenic factors. Therefore, in the treatment of RA certain factors and conditions should be considered, which are time (seasonal, climatic conditions), place (geographical location, environment), and personal characteristics (living customs, age, sex, body constitution). And also, the same disease, but with different sexes, different physiological characteristics, and different body constitutions should be treated accordingly. The incidence of RA is due to the cold damp outside and the blood deficiency, as well as liver and kidney deficiency within as the general incidence of Bi Syndrom. But its etiology and pathogenesis are different. Exogenous pathogenic factors are neither inevitable predisposing factors, nor the essence of pathological changes, mostly just the onset or worsening incentives of the disease. It is congenital deficiency and kidney essence deficiency that were the leading causes of RA's morbidity. Traditional medicine takes effects by its combined ingredients (FuFang) via multi-ways, which is an integrative way of connecting the potential pathogen and exterior symptom-complex; it is an adaptive intervention on the basis of dynamic progress of diseases and patients' response to therapy [6]. Therefore, in the early treatment of RA traditional medicine focuses on the surrounding environment as well as internal factors such as physical concerns to seize the major

etiology and treatment with syndrome differentiation. The most severe exogenous pathogenic factor of RA is dampness, so in this case the principles of treatment are combining eliminating dampness, such as the treatment of inflammatory cytokines, by supplementing Qi and nourishing blood to support the healthy energy.

In summary, early TCM diagnosis and treatment of RA with personal and adaptive intervention based on the dynamic clinical progress and patients' responses play a significant role in delaying the progression of the disease. Combination regimens including all the factors talking above may be an early effective approach to treatment of RA. It can be a practical way to treat RA with early TCM diagnose and treatment that impact disease activity and ultimately have been shown to slow or arrest structural joint damage, and then turn up to Western medicine treatment if the patient's symptoms reach the Western diagnostic requirements.

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Contributions

The conception and design of the study were accomplished by Muxin Wei; acquisition of data, analysis and interpretation of data and drafting the article mainly by Yanjun Kong; revising it critically for important intellectual content by Qiande Zhang and Muxin Wei; final approval of the version to be submitted were depended on all the authors.

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