

# *Observation on the Effectiveness and Prognosis of Traditional Chinese Medicine Syndrome Differentiation Treatment for Bi Syndrome*

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**Abstract:** To analyze the effectiveness and prognosis observation of traditional Chinese medicine dialectical treatment plans for treating arthralgia. A retrospective analysis was conducted on the clinical data of 96 patients with arthralgia admitted to our hospital from July 2022 to March 2023. They were divided into a control group and an observation group based on their treatment methods. The control group used a unified treatment method, while the observation group used a dialectical treatment plan for treatment. The treatment effects of the two groups were compared. The total effective rate of clinical treatment in 91.3% of the observation group was higher than 70.0% of the reference group,  $P < 0.05$ . The disappearance time of symptoms and total clinical treatment time of Bi syndrome in the current observation group are (17.6 ± 3.1d, 23.5 ± 3.2d), and the reference group is (22.6 ± 3.4d, 29). The difference between the groups was statistically significant ( $P < 0.05$ ). The treatment of Bi syndrome can actively adopt traditional Chinese medicine syndrome differentiation and treatment plans, which is beneficial for improving patients' clinical symptoms and enhancing treatment effectiveness, and has high clinical application value.

## 1. Introduction

Bi syndrome is a common and frequently occurring disease in clinical practice, mainly caused by external pathogens such as dampness, heat, wind, and cold invading the body, causing obstruction of qi and blood, and obstruction of meridians. Clinical manifestations include muscle and joint soreness, numbness, difficulty in flexion and extension, and joint swelling and burning. The etiology of Bi syndrome is complex and clinical treatment is difficult. At present, traditional Chinese medicine has achieved varying degrees of effectiveness in the clinical treatment of Bi syndrome based on syndrome differentiation. The author of this article combines the clinical data of 96 patients with arthralgia who were treated in our hospital from July 2022 to March 2023 to observe the clinical efficacy and prognosis of traditional Chinese medicine syndrome differentiation and treatment scheme for arthralgia. The current report is as follows.

## 2. Materials and Methods

### 2.1 General information

96 patients with Bi syndrome were from patients who came to our hospital for treatment from July 2022 to March 2023. According to the treatment method, the observation group consisted of 46 patients: 20 males and 26 females, with an average age of  $(52.3 \pm 3.2)$  years and an average course of disease of  $(2.5 \pm 0.5)$  years. 50 cases in the control group: 30 males and 20 females, with an average age of  $53.1 \pm 8.26$  years old, with an average course of disease of  $(2.3 \pm 0.6)$  years. There was no statistical difference between the control group and the observation group in the comparison of the above three basic data,  $P > 0.05$ . The following research can be continued.

### 2.2 Treatment methods

Control group (Zhengqing Fengtongning sustained-release tablets): Patients in this group were orally administered Zhengqing Fengtongning sustained-release tablets (manufacturer: Hunan Zhengqing Pharmaceutical Group Co., Ltd.: approval number: Guoyao Zhunzi Z20010174), twice a day, 60mg/dose. The observation group received a traditional Chinese medicine dialectical treatment plan:

#### 2.2.1 Treatment methods for Xingbi

The excessive wind and qi in the human body can lead to arthralgia, with clinical manifestations of frequent joint pain, inability to bend and extend normally, unstable movement, often lower limb pain, sometimes turning to the upper limb, occasional pain in the shoulder and back, occasional muscle soreness, and insignificant changes in tongue coating. The cause of arthralgia is excessive wind energy, which should be treated by dispelling wind, dispersing cold, and clearing collaterals to relieve pain. Patients with arthralgia often experience strong joint pain, inability to bend and extend normally, and worsening on cloudy days. According to the specific situation of the patient, traditional Chinese medicine methods are used for treatment. The specific prescriptions are: 12g Chuanxiong, 15g White Peony, 60g Huangqi, 20g Jixuedu, 15g Shinanteng, 30g Shengdi, 20g Angelica, 15g Haifengteng, 15g Luoguateng, decoction in warm water and take it three times a day, one dose every two days, with a dosage of 100ml each time. After a course of treatment, the patient clearly felt a reduction in joint pain, and the joints could slowly bend and extend. The symptoms of arthralgia were alleviated, and continued treatment gradually recovered.

#### 2.2.2 Treatment methods for painful arthralgia

The specific clinical manifestations of patients with arthralgia are: strong pain in joints, muscles, and bones, aggravated on cloudy days, slightly better on sunny days, sometimes slight changes in the pain area, occasional discomfort such as numbness and heaviness, pale tongue coating, and tight pulse. Pain Bi is related to excessive cold pathogenic factors, and the treatment focus should be on dispelling wind and dispersing cold, promoting meridians and activating collaterals. Patients with arthralgia have severe joint pain, even deformed, and the pain area remains fixed, etc. The treatment method used is: 3g of Sichuan black, 12g of ephedra, 20g of red peony, 12g of papaya, 12g of cassia twig, 20g of jujube, 6g of licorice, 15g of earthworm, 15g of angelica, and 15g of lingxian, decoct and take 100ml of the medicinal herbs three times a day, one dose per day. One month later, the patient's joint pain significantly decreased, and other symptoms also improved.

### 2.2.3 Treatment Methods for Dampness Bi

The specific manifestations of dampness are: extensive pain and heaviness in the muscles, muscles, limbs, and joints of the muscles, the patient feels heavy, the limbs occasionally numb and swollen, the pulse is heavy, and the tongue coating is white and thick. Damp Bi is caused by excessive dampness in the patient's body, and the focus of treatment is to eliminate dampness, supplemented by nourishing the spleen and qi. Patients who are deeply trapped by dampness are treated with the following therapies: 30g *Lonicera japonica* vine, 20g *Atractylodes macrocephala*, 15g Fangji, 15g Huangbai, 15g Sangzhi, 15g Qinwei, 30g Shengdi, 20g Bijie, 15g Chuan Niu Xi, 20g Silkworm sand, 30g Yiren, decoction in warm water, 100ml each time, three times a day, one dose every two days. After continuous use for a month, the symptoms of limb soreness and numbness are significantly reduced.

### 2.2.4 Treatment Methods for Heat Bi

The specific manifestations of heat arthralgia symptoms are: multiple redness, swelling, and pain in the joints and limbs, some local pain and fever, some whole body pain and accompanying fever. Most heat arthralgia patients are more adaptable to cold weather, and the pain is aggravated on hot days. Many patients with heat arthralgia may also experience symptoms such as yellowish urine, constipation, and thirst, which are caused by the excessive heat evil in the patient's body. When treating patients with heat obstruction, it is necessary to first dispel the heat and then clear the meridians to promote obstruction. For patients with heat arthralgia, the following methods should be used for treatment: 20g *Atractylodes macrocephala*, 20g Grass extract, 10g Tiannanxing, 30g Yiren, 30g *Codonopsis pilosula*, 12g Huahong, 12g Zhebei, 30g Huangqi, 6g licorice, 15g papaya, 15g Yujin, 15g Lingxian, 12g Qianghuo, 3 centipedes, 12g ginger, decoction in warm water, 100ml each time, one dose every two days, three times a day.

### 2.2.5 Treatment methods for arthralgia

The clinical symptoms of arthralgia often manifest as joint swelling, soreness, heaviness, difficulty in movement, fixed pain points, and numbness of the skin. The moss is white and greasy, and the veins are gentle. The method of dehumidification is suitable for treatment. Prescription and medication: *Angelica sinensis* 15g, Safflower 10g, *Atractylodes macrocephala* 15g, Chuanxiong 10g, Peach kernel 10g, Mulberry branch 30g, Fangfeng 6g.

### 2.2.6 Treatment methods for stubborn Bi

The clinical symptoms of obstinate arthralgia are often manifested as recurrent joint pain, prolonged illness, and failure to heal for several years or even decades, with severe patients experiencing joint deformation. The patient is suffering from prolonged illness, with frequent limb soreness, back pain, joint deformities, inability to take care of themselves, a dull complexion, and weak pulse. The focus of treatment is on tonifying the kidneys. Prescription and medication: 30g of *Astragalus membranaceus*, 12g of *Salvia miltiorrhiza*, 15g of *Angelica sinensis*, 16g of *Cinnamomum cassia*, 6g of processed aconite, 15g of goji berry, 15g of raw ground, 15g of cooked ground, 15g of cornus flesh, 10g of *Alisma orientalis*, 10g of *Poria cocos*, 6g of pangolin, and 6g of earthworm. Various herbs benefit qi and blood, dispel phlegm and promote blood circulation, remove dampness and unblock collaterals, and nourish the liver and kidney.

### 3. Observation indicators

Compare the clinical symptom disappearance time, total treatment time, and clinical efficacy of treating 96 patients with Bi syndrome. Clinical efficacy analysis is mainly based on the "Diagnostic Efficacy Standards for Traditional Chinese Medicine Diseases" as a reference basis. There are three types of efficacy evaluation methods: cured, effective, and ineffective. Among them, cure refers to the complete disappearance of clinical symptoms such as pain, numbness, and swelling in the affected area after the use of drugs, or the restoration of normal limb joint activity, and the normalization of various physical and chemical tests in the laboratory. Effective evaluation refers to the reduction of clinical symptoms such as pain, numbness, and swelling, as well as a certain recovery of self-care ability. Ineffectiveness refers to the absence or even worsening of clinical symptoms, joint function, and various laboratory physical and chemical tests. Total effective rate=(cured+effective)/total number of cases.

### 4. Statistical analysis

The data was processed using statistical software SPSS19.0, with mean  $\pm$  standard deviation representing the measurement data and t-test used; Percentage (%) represents counting data, using chi square test;  $P < 0.05$  has statistical significance.

## 5. Results

### 5.1 Treatment effect

After different treatments, comparing the efficacy of the two groups, it was found that the number of cured, effective, and ineffective cases in the control group was 15, 20, and 15, respectively. The number of effective cases was 35 (70.0%); In the observation group, the number of cured, effective, and ineffective cases was 22, 20, and 4, respectively, and the number of effective cases was 42 (91.3%). The clinical treatment total effective rate of 91.3% in the obvious observation group was higher than that of 70% in the reference group 0%,  $P < 0.05$ . Please refer to Table 1 for details.

Table 1: Comparison of treatment effects between two groups of patients

group	cure	effective	invalid	Total effective rate (%)
Observers group( $n=46$ )	22(47.8%)	20(43.5%)	4(8.7%)	91.3%
Control group( $n=50$ )	15(30%)	20(40.0%)	15(30.0%)	70.0%

### 5.2 Clinical Symptoms

Table 2: Comparison of clinical symptom disappearance and total treatment time between two groups of patients

group	Time for complete disappearance of arthralgia syndrome(d)	Total treatment time(d)
Observers group( $n=46$ )	17.6 $\pm$ 3.1	23.5 $\pm$ 3.2
Control group( $n=50$ )	22.6 $\pm$ 3.4	29.8 $\pm$ 3.5

The disappearance time of symptoms of arthralgia in the observation group and the total clinical

treatment time were ( $17.6 \pm 3.1$  d,  $23.5 \pm 3.2$  d) The control group was ( $22.6 \pm 3.4$  d,  $29.8 \pm 3.5$  d), with statistically significant differences between groups,  $P < 0.05$ . Please refer to Table 2 for details.

## 6. Discussion

Bi syndrome is one of the common clinical symptoms in modern Chinese medicine. Bi refers to the idea of blocking and obstructing the body. When the human body suffers from deficiency of vital energy and external evil invades, or when the evil energy exceeds the body's defense ability, it is invaded by wind, cold, and dampness, which is the beginning of the formation of Bi syndrome<sup>[1]</sup>. Bi syndrome is one of the common clinical symptoms in modern Chinese medicine. It is a general term for diseases such as severe soreness, pain, numbness, swelling, and even joint redness, swelling, heat pain, and poor flexion and extension in the skin, limb joints, muscles, muscles, and bones. Equivalent to osteoarthritis such as rheumatoid arthritis, rheumatoid arthritis, ankylosing spondylitis, and bone hyperplasia in Western medicine. It is mostly related to connective tissue and autoimmune diseases, with a chronic and recurrent course. The etiology of this type of disease is unknown and can cause a high disability and mortality rate. It has a certain response to the treatment of glucocorticoids and immunosuppressive drugs, and Western medicine lacks specific treatment. Traditional Chinese medicine has conducted long-term research and accumulated rich experience in the diagnosis and treatment of this disease<sup>[2]</sup>.

### 6.1 Modern classification of Bi syndrome

The modern classification of Bi syndrome can also be divided into two categories: limb Bi and visceral Bi, which are very detailed and can effectively guide clinical practice. In addition to retaining the names and concepts of "San Bi" and "Wu Ti Bi" in the "Nei Jing", many new concepts have emerged. If multiple tissue lesions are involved, such as dizziness and gout, they have not been mentioned in the "Neijing".

Tingbi, a modern disease name, mainly manifests as morning stiffness of the joints, symmetrical multiple swelling and pain of the small joints, impaired movement, and even stiffness and deformation. It is because the evil of wind, cold, and dampness lingers in the muscles, bones, and joints, causing obstruction of qi and blood. Over time, it can also damage the liver and kidney yin blood<sup>[3]</sup>.

Gout disease, named after Danxi, refers to a type of Bi syndrome caused by improper diet, insufficient spleen and kidney, obstruction of external pathogenic factors, and accumulation of phlegm around the joints. Its main manifestations include redness, swelling, severe pain, and repeated deformities in small joints such as the thumb and intestines. It is also known as a type of Bi syndrome where the affected area is fixed. It is now known as stubborn Bi (including neck Bi, shoulder Bi, waist Bi, knee Bi, heel Bi, etc.), partial Bi, spinal Bi, pillow and other diseases. None of them are mentioned in the Neijing. Obstructive arthritis is mainly characterized by recurrent pain in the fixed joints of the muscles and bones, and is a summary of the common characteristics of various chronic persistent joint diseases. It can be divided into neck pain, shoulder pain, waist pain, knee pain, and heel pain according to the different affected areas. Biao Bi is a blockage of meridians and qi, characterized by low back pain radiating to the posterolateral side of one lower limb, numbness, and pain<sup>[4]</sup>.

Spinal arthralgia is caused by kidney deficiency in the first place, with cold pathogenic factors deep in the bone marrow, causing stagnation of qi and blood, and loss of warmth in the spine. It can cause pain in the lumbar spine, limited wrist movement, and in severe cases, the main manifestations include spinal curvature and deformation, muscle stiffness and heaviness<sup>[5]</sup>. Falling pillows are caused by improper sleeping posture or feeling wind and cold in the water, mainly manifested by pain, soreness, and poor mobility in the lateral neck after sleep.

Of course, these diseases all have local occlusive lesions in the limbs, so they are classified as

limb obstruction. The manifestations of limb paralysis are various, with the general location of the disease in the limbs and joints, but the specific location of the disease varies, and each specific part has distinctive clinical manifestations that are different from other parts. Nowadays, the main types of arthralgia are limb joint arthralgia, and visceral arthralgia is rarely discussed. The widely used concepts in modern visceral arthralgia are chest arthralgia and heart arthralgia. Chest pain (also known as heartache in modern times) refers to a disease characterized by chest tightness and recurrent chest pain caused by obstruction of qi and blood in the chest, without obvious manifestations of limb pain. Heart obstruction mainly refers to the heart disease caused by internal transmission of limb obstruction, which leads to blockage of the heart pulse. By comparison, the category of central obstruction in the *Neijing* may already include both modern chest obstruction and heart obstruction.

## **6.2 Syndrome differentiation and treatment of Bi syndrome**

### **6.2.1 Differentiation of Deficiency and Excess in the Treatment of Bi Syndrome**

Xu and Shi are the two guidelines for distinguishing the rise and fall of pathogenic factors in traditional Chinese medicine. The book *"Su Wen"* states that "when evil energy is abundant, it becomes solid, and when essence is seized, it becomes weak." It is also known as "when the pulse is abundant, the skin is hot, the abdominal distension is blocked before and after, and the glancing is stuffy." This is called the Five Deficiencies. The manifestations of deficiency syndrome in traditional Chinese medicine diagnosis include: weak body, poor diet, low voice, short breath, weakness, mental fatigue, emaciation, decreased vision, clean tongue without moss, plump and tender tongue, weak pulse, etc. The empirical manifestations are: strong physique, refusal to press the abdomen, difficulty urinating, dry stools, mental excitement, high voice, thick qi, aversion to cold without sweat, thick tongue coating, and strong pulse. The *"Yi Zong Jin Jian"* was the earliest to propose the recognition of deficiency and excess to classify various types of Bi: "Bi deficiency refers to the various types of Bi in people with Qi and blood deficiency; Bi excess refers to the various types of Bi in people with Qi and blood deficiency. Deficiency Bi includes Qi and blood deficiency, Yin deficiency, and Yang deficiency<sup>[6]</sup>. In clinical practice, it is often characterized by deficiency and excess, or a combination of deficiency and excess. Deficiency Bi includes wind cold, dampness, and heat stubborn Bi. Due to the flexibility of traditional Chinese medicine in syndrome differentiation and classification, it can only be regarded as a relatively fixed form and cannot be constrained. Jia Tian'an from Henan Province observed and analyzed hundreds of cases, and found that people with Qi deficiency often suffer from Bi. The treatment plan is to replenish Qi and strengthen the spleen, with the addition of dehumidification and cold dissipation, promoting blood circulation and unblocking collaterals, and the prescription is modified with *Buzhong Yiqi Tang*; People with yang deficiency often suffer from pain and arthralgia. The treatment involves warming yang and dispersing cold, accompanied by dispelling wind and dampness, unblocking collaterals to relieve pain, and using yang and decoction to increase damage; People with blood deficiency and yin deficiency often suffer from arthralgia, and those with blood deficiency are treated with nourishing qi and blood, unblocking collaterals to relieve pain, accompanied by dispelling wind and dampness, and using *Huangmi Guizhi Wuwu Tang* for entry and exit; For those with yin deficiency, it is recommended to nourish yin and nourish blood, eliminate wind and clear collaterals, and then use *Liu Wei Di Huang Tang* for advancement and retreat. It indicates that clinical medication has flexibility due to differences in physical constitution.

### **6.2.2 Removing numbness requires regulating qi and blood**

Numbness refers to the loss of skin sensation and unconsciousness of pain and itching. As early as in the *"Neijing"* and *"Jinbian Yaolue"*, it was referred to as "inhumanity". The book *"Su Wen Pathogenesis Qi Yi Bao Ming Ji"* began to have the name numbness. Zhu Danxi said, "Ma is called

numbness, and it can be divided into two categories based on inhumanity." There are several cases of numbness in Bi syndrome: firstly, it is caused by wind and cold entering the meridians. Symptoms: Muscle numbness accompanied by pain, worsening in cloudy and rainy days accompanied by evil wind and cold, cold limbs, pale tongue, white and moist fur, and floating pulse. Secondly, it is caused by qi stagnation and blood stasis. In addition to local numbness, it often has a dull appearance, purple lips, purple tongue, and astringent veins. The third is phlegm dampness obstructing the meridians: symptoms include plump or coughing, excessive phlegm, thin and slightly greasy tongue coating, and smooth or moist veins. The fourth is numbness caused by the loss of qi and blood: symptoms include pale complexion, shortness of breath, palpitations, dizziness, forgetfulness, pale red tongue, and weak pulse. From the above, it can be seen that the occurrence of numbness is always related to the stagnation of qi and blood. Gai Qi is the blood commander, and blood is the mother of Qi. Qi deficiency leads to blood deficiency, Qi stagnation leads to blood stagnation, and Qi circulation leads to blood circulation. In terms of treatment, the principle of regulating qi and blood is to treat numbness in accordance with the "Essential Reading of the Medical School: Bi" section, which states that "generally, ginseng can be used to tonify the spleen and qi, cover the soil and strengthen it to overcome dampness, and the qi and feet have no stubborn numbness. Therefore, regulating qi and blood is actually the fundamental method for treating numbness. In addition, attention should also be paid to the temporary numbness and the deficiency and excess of evil and righteousness. In the dispelling wind formula, ginseng and qi should be mixed to replenish qi, and peony should be returned to nourish blood. It should not be specifically dissipated<sup>[7]</sup>.

### 6.2.3 Formula usage

In terms of treatment, it is necessary to conduct a detailed examination and analysis of the biases of the three evils invading the human body, and make correct conclusions in order to formulate appropriate and effective treatment formulas. Attention should be paid to the strength of the patient's physical condition and whether there are any other comorbidities. It is necessary to first sweep away the comorbidities and examine the new duration, location, and physical condition of the disease. In clinical practice, rheumatism is more common in patients with rheumatism. The main method is to replenish qi, dispel wind and dampness, remove cold and activate collaterals, and unblock obstruction and relieve pain. There are many formulas that can be used in clinical practice, such as Qianghuo Shengshi Tang, Duhuo Parasitic Tang, Juanbi Tang, Ermiao San, Papaya Pill, Huoluo Dan, etc., which are effective formulas for treating Bi syndrome. However, there are differences in wind, cold, and dampness. In clinical practice, symptomatic adjustments can be made, such as adding Baizhu Huangqi when qi deficiency occurs. Huangqi can replenish qi and promote blood circulation, and Baizhu has the function of tonifying qi, strengthening spleen, and removing dampness; For those who suffer from prolonged illness, deep blood stasis, severe pain, etc., turmeric, red peony, safflower, chicken blood membrane, etc. can be added to clear the meridians, dissipate blood stasis, and promote blood circulation. If dampness and heat accumulate for a long time, Yinchen, Huangbai, etc. can be added. Heat Bi is caused by accumulation of dampness to dissipate heat. Yin nourishing and fluid promoting drugs should be prohibited, and it is best to explode dampness to clear heat or promote dampness to clear heat. "Labor leads to energy depletion". Excessive fatigue is also one of the causes of Bi syndrome, which is known as spleen deficiency and dampness, and can worsen the condition of Bi syndrome. Therefore, when treating and using medication, patients should be advised to avoid excessive fatigue, eat regularly, have proper sexual intercourse, and avoid experiencing wind cold and dampness again to prevent sweat from flowing into the wind and water<sup>[8]</sup>.

Bi syndrome is a progressive chronic disease characterized by the coexistence of wind, cold, dampness, and blood stasis deficiency. It is a common and frequent disease with complex and variable conditions, some of which cannot be cured over time, resulting in lifelong physical activity

inconvenience and even fatigue. When treating, it is necessary to consider both the symptoms and the symptoms, that is, while dispelling pathogenic factors, it is also necessary to support the healthy qi. Only when the two are closely coordinated can the qi and blood flow be unobstructed, pain be eliminated, and the goal of cure be achieved. If analgesic drugs are taken for a long time, it will lead to the deficiency of the healthy qi, exacerbation of stagnation of blood stasis, and delay the treatment of Bi syndrome<sup>[9]</sup>. The syndrome types of rheumatic arthritis syndrome are complex, the course of the disease is long, and the condition is variable<sup>[10]</sup>. The effectiveness of a single therapy is slow. Clinical medication must be reasonably matched, and multiple therapies should be adopted to improve the efficacy, in order to promote the early recovery of the syndrome.

## 7. Conclusion

Bi syndrome is a common disease that is closely related to the patient's physical condition, environment, and diet. The body cannot function properly due to evil factors such as wind, cold, dampness, and heat. Blocked meridians can easily lead to Bi syndrome, which can lead to complications over time, and in severe cases, it can affect other internal organs. Traditional Chinese medicine fully considers the individual differences of patients in the treatment of arthralgia, taking orally and applying externally, relaxing tendons and promoting blood circulation, dispelling wind and eliminating arthralgia. At the same time, it is necessary to differentiate and treat according to the actual situation, flexibly use medication and formulate prescriptions, so that patients can recover to a healthy body as soon as possible.

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