

## TO OBSERVE THE CLINICAL EFFECT OF MA TONG SAN AND HUOXUE TONGLUO TRADITIONAL CHINESE MEDICINE FOOT BATH IN TREATING DIABETIC PERIPHERAL NEUROPATHY

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### ABSTRACT

**Objective:** To observe the clinical effect of Ma Tong San and Huoxue Tongluo traditional Chinese medicine foot bath in treating diabetic peripheral neuropathy.

**Methods:** From May 2018 to March 2019, 100 patients with diabetic peripheral neuropathy in our hospital were outpatient and inpatient, 50 patients in the control group and 50 patients in the observation group, and the control group was treated with conventional western medicine. Tongsan oral, Huoxuetongluo traditional Chinese medicine footbath treatment lasted 12 weeks, and the efficacy and adverse reactions were compared.

**Results:** The overall effect of the observation group was better than that of the control group, and the healing rate of the observation group was higher than that of the control group, and the difference was statistically significant ( $P < 0.05$ ). After treatment, the Toronto Clinical Scoring System (TCSS) score and TCM syndrome score of the comparison observation group and the control group were lower than before treatment, and the comparison observation group between the groups was lower than the control group, and the differences were statistically significant ( $P < 0.05$ ). After treatment, the median nerve, ulnar nerve, common peroneal nerve, sensory nerve, and conduction velocity (SCV) of the two groups of subjects were compared ( $P < 0.05$ ). No adverse reactions were seen in either group.

**Conclusion:** The combination of Ma Tong San and Huoxue Tongluo traditional Chinese medicine foot bath for diabetic peripheral neuropathy can improve the curative effect without increasing the risk of adverse reactions.

**Keywords:** Clinical effect, Ma Tong San, Huoxue Tongluo, medicine foot bath, diabetic peripheral neuropathy.

DOI: 10.19193/0393-6384\_2020\_4\_382

Received November 30, 2019; Accepted January 20, 2020

### Introduction

Diabetic Peripheral Neuropathy (DPN) is one of the common chronic complications of diabetes, with an incidence of 30% to 50%. It is closely related to diseases such as diabetic foot and gastrointestinal malignant tumors<sup>(1)</sup>. On the quality of disease management and blood glucose control<sup>(2)</sup>.

The clinical treatment of diabetic peripheral neuropathy is mainly based on nutritional neuropharmaceuticals, antioxidant drugs, physical therapy, etc., but the effect varies greatly among individuals<sup>(3)</sup>. Western medicine believes that the pathogenesis of diabetic peripheral neuropathy is not singular, but is caused by genetic factors, neurological hypoxia/is-

chemia, oxidative stress, polyalcohol bypass hyperactivity, and immune abnormalities<sup>(4)</sup>. Among them, local inflammation and immune metabolism disorders play an important role in nerve injury. Related pathological studies have shown that patients with diabetes are prone to thickening of the microvascular wall basement membrane, endothelial swelling, hyperplasia, degeneration, and glycoprotein deposition leading to narrowing of the blood vessels, causing neural ischemia and hypoxia, and at the same time, a short circuit can be formed between the outer nerve model and the nerve vessels<sup>(5)</sup>.

It causes blood shunt and aggravates nerve ischemia, which all increase the difficulty of treating this disease. Symptomatic treatment is mainly used

in clinical practice. Methylcobalamin and group B vitamins are commonly used as first-line drugs. The effects vary greatly from individual to individual<sup>(6)</sup>. The cure rate of nutritional and neurological drugs still needs to be improved. Traditional Chinese medicine is currently widely agreed that this disease is caused by diabetes, qi and yin is consumed, yin and yang are deficient in blood, blood stasis, and phlegm and blood stasis are caused by obstruction of the veins<sup>(7)</sup>.

The disease was located in the veins, internal organs, liver, kidney, spleen and other internal organs. The deficiency was based on Qi and blood deficiency, and the phlegm and blood stasis obstruction were the standard<sup>(8)</sup>. In its occurrence and development, phlegm and blood stasis played a key role, and at the same time, qi deficiency and blood deficiency also played an important role in it. Therefore, in the treatment, we need to pay attention to the methods of nourishing qi and nourishing blood, removing blood stasis and expectoration, Tongbi analgesia. Foot bath is an important method for the treatment of neurovascular diseases of the lower limbs.

Meta analysis shows that the total effective rate for treating diabetic foot-related symptoms is more than 50%. The traditional Chinese medicine for footbath research is mainly for warming Yangqi, promoting blood circulation, relieving pain and relieving pain and pain<sup>(9)</sup>.

At the same time, taking Chinese medicine internally can target the etiology and pathogenesis. Astragalus and spleen and nourishing Qi are used in internal medicine. It can also promote blood circulation, blood stasis and analgesia, and it is a remedy in total; chicken blood cane and blood circulation, Shujinhuoluo, Achyranthes Bleu, blood circulation, blood stasis, frankincense, blood circulation and analgesia, earthworm, blood stasis, and blood stasis Acupuncture medicine; Baizhu Yiqi Jianpi expectorant wet, Pinellia dryness and dampness phlegm, Baizhu nourishing blood and camp, and soft tendons and pain relief, according to Ye Tianshi's theory of "coldness to Xin", using warm ephedra, cited The medicines reach the place where the collaterals are obstructed, and the medicines are combined as adjuvants; licorice replenishes qi, relieves pain and analgesics, and reconciles the medicines for adjuvant use<sup>(10)</sup>.

The whole party played the functions of nourishing qi and nourishing blood, removing blood stasis and expectorant, and alleviating pain<sup>(11, 12)</sup>. The literature reports that the traditional Chinese medicine for promoting blood circulation and removing

blood stasis has the effects of dilating blood vessels, increasing blood flow, reducing blood viscosity, improving vascular endothelial function, and promoting repair of injured nerves<sup>(13)</sup>.

Therefore, we also see that there are many laboratory and clinical studies on the treatment of DPN by traditional Chinese medicine for promoting blood circulation and removing blood stasis<sup>(14)</sup>. Most of them are pharmacological effects and clinical applications of single-drug drugs, while the research on compound preparations lacks specific laboratory data and strict and systematic Case observation, so it is necessary to carry out large sample, multi-center, randomized, double-blind controlled clinical observations for certain clinically effective prescriptions; at the same time, the DPN blood stasis model related to disease and syndrome is established to make the traditional Chinese medicine compound preparations with dialectical characteristics More targeted treatment of DPN<sup>(15)</sup>.

In short, the method of promoting blood circulation and removing blood stasis is effective in treating DPN and has few toxic and side effects. It is the basic principle of DPN therapy that based on the syndrome differentiation of TCM, it has been widely used in clinical practice and has broad development prospects. In order to further improve the therapeutic effect of diabetic peripheral neuropathy, we try to use Ma Tong San and Huoxue Tongluo traditional Chinese medicine foot bath to treat the disease.

This article uses a controlled study to evaluate the efficacy and adverse reactions of the combined treatment of Ma Tong San and Huoxue Tongluo foot bath in 100 patients with diabetic peripheral neuropathy in our hospital from May 2018 to March 2019.

## Materials and methods

### General information

From May 2018 to March 2019, outpatients and inpatients with diabetic peripheral neuropathy in our hospital were enrolled.

#### Inclusion criteria:

- Type 2 diabetes is the main disease, and diabetic peripheral neuropathy is diagnosed with reference to the guidelines;
- Non-emergency;
- General conditions are acceptable;
- Cognitive psychiatry is normal;
- Feet are intact and can be used with foot bath;
- No drug allergy Contraindications;
- Informed consent.

**Exclusion criteria:**

- Other diseases that may cause peripheral nerve changes, such as spinal injury;
- Other major diseases, such as chronic heart failure;
- Inability to conduct electromyography;
- The formation of diabetic foot ulcers and other skin damage to the lower limbs.

100 patients were selected and grouped according to the order of admission. Every person who meets the inclusion and exclusion criteria is included for grouping.

There were 50 patients in the control group, including 27 males and 23 females, aged 34 to 75 years, with an average (54.8±6.3) years of age; the duration of diabetes was 3 to 11 years, with an average (4.1±0.9) years; The duration of symptoms of peripheral neuropathy is 1 to 7 years, with an average of (3.2±0.6) years.

Observation group of 50 patients, including 26 males and 24 females, aged 35 to 74 years, mean (55.3±4.9) years; diabetes duration 3 to 12 years, average (3.7±0.8) years; peripheral neuropathy symptoms duration 1 to 8 years, average (4.3±0.7) years. There were no significant differences in age, gender, duration of diabetes, and duration of symptoms of peripheral neuropathy between the two groups of subjects ( $P>0.05$ ).

**Control group**

Conventional treatment, oral mecobalamin, 3 times a day, 0.5 mg once.

Routine treatment of diabetes, control of blood sugar, blood lipids, blood uric acid and so on. Lasts 12 weeks.

**Observation group**

Based on the control group, oral Chinese medicine and foot bath were used. Matong powder: astragalus, angelica, achyranthes bidentata, frankincense, earthworm, chicken blood vine, pupa, atractylodes, pinellia, ephedra, paeonia lactiflora, licorice, 1 dose a day, morning and evening. Huoxue Tongluo Square Foot Bath: Guizhi, Liu Jinu, Achyranthes bidentata, Turmeric, Nepeta, Artemisia spp., Chuanjiao 15 g each, Chuanxiong, Angelica, Chuanwu, Caowu each 10 g, Earthworm, Chicken Blood Vine, Su 30 g of wood, osteophyte, and stretched grass. Fry 300 mL of juice into a footbath bucket, add water to the knees, and maintain the temperature at 38 ° C once a day for 20 to 30 minutes each for 12 weeks.

**Observation indicators**

Before and after treatment (after 8 weeks), TCSS score, TCM syndrome score, SCV of median nerve, ulnar nerve, and common peroneal nerve, adverse reactions occurred.

**Efficacy determination****Methods for evaluating clinical efficacy:**

- Healing: DPN-related symptoms and signs disappear, tendon reflexes reach or close to normal, SCV increase value  $\geq 10$  m/s;
- Significant effects: DPN-related symptoms and signs significantly improve, tendon reflexes reach Close to normal, SCV increase value  $\geq 5$ m/s;
- Effective: DPN-related symptoms and signs are significantly reduced, tendon reflexes are enhanced, and SCV is increased by 1 to 5 m/s;
- Ineffective: Not achieved significant, invalid standards, Or worsening symptoms.

**Statistical methods**

The scale data was registered with Excel and processed with SPSS 20.0. The indicators such as score and conduction velocity obeyed the normal distribution, indicated by ( $\bar{x}\pm s$ ).

The observation group was compared with the control group by t test and paired t test. The significance rate was compared using the  $\chi^2$  test, and the difference was statistically significant with  $P<0.05$ .

**Results and discussion****Clinical efficacy**

As seen in the Table 1, the overall effect of the observation group was better than that of the control group, and the rate of healing was higher in the observation group than in the control group, and the difference was statistically significant ( $P<0.05$ ).

Group	Number of cases	Healing	Significant effects	Effective	Ineffective	Effectiveness of cure (%)
Observation group	50	38 (76)	8 (16)	4 (8)	0 (0)	44 (88)
Control group	50	25 (50)	7 (14)	10 (20)	8 (16)	32 (64)
P	-	<0.05	<0.05	<0.05	<0.05	<0.05

**Table 1:** Comparison of clinical efficacy between two groups of patients with diabetic peripheral neuropathy[n (%)].

**Scale score**

It can be seen from Table 2 that after treatment, the TCSS score and TCM syndrome score of the comparison observation group and the control group

were lower than those before the treatment, and the comparison observation group was lower than the control group, the difference was statistically significant ( $P < 0.05$ ). After treatment, the SCV of the median nerve, ulnar nerve, and common peroneal nerve of the two groups of subjects was higher than that before treatment.

The comparison between the two groups was higher than that of the control group, and the difference was statistically significant ( $P < 0.05$ ).

Group	Time	TCSS score (points)	TCM syndrome score (points)	Median nerve SCV (m/s)	Ulnar nerve SCV (m/s)	Common peroneal nerve (m/s)
Observation group	Before treatment	11.9±2.3	20.7±3.5	44.5±3.9	49.9±3.2	34.9±3.4
	After treatment	4.3±1.7*	8.4±3.7*	55.8±4.3*	63.2±3.4*	51.7±4.5*
Control group	Before treatment	12.1±3.1	21.5±3.8	46.2±5.1	52.5±4.9	41.3±5.2
	After treatment	6.5±1.1* <sup>△</sup>	11.9±3.5* <sup>△</sup>	52.6±4.1* <sup>△</sup>	54.3±7.2* <sup>△</sup>	47.3±5.5* <sup>△</sup>
Observation group	Before treatment	11.9±2.3	20.7±3.5	44.5±3.9	49.9±3.2	34.9±3.4

**Table 2:** Comparison of indicators before and after treatment in two groups of patients with diabetic peripheral neuropathy (x±s).

Note: Compared with the observation group, <sup>△</sup> $P < 0.05$ ; compared with before treatment, \* $P < 0.05$ .

### Adverse reactions

No adverse reactions were seen in either group.

### Theoretical basis for applying blood circulation and removing blood stasis to treating diabetic peripheral neuropathy

DPN currently does not have a unified TCM disease name. Its clinical manifestations are limb numbness, pain, or paresthesia, which worsens at night, decreases after exercise, weakens or disappears tendon reflexes, and abnormal electromyography. "Basic evidence", "blood paralysis", "numbness" and other categories, the basic etiology and pathogenesis are mostly due to thirst, prolonged yin, yin and yang, resulting in yin and yang injuries, dysfunction of viscera and spleen, which leads to obstruction of qi and blood, leading to Machine block, wet and turbid stop, phlegm, stasis and blood stasis and obstruction. The thirst quenches for a long time, consumes qi and blood fluid, qi deficiency can not be handsome, blood flow is not smooth, and blood stasis is caused; qi and blood cannot run to the ends of limbs, tendons and veins lose nutrition and cause the disease. For a long period of time, the patient's blood flow was poor, qi and blood could not reach the limbs, and muscle muscles and veins were deprived of numbness and weakness. DPN is a true de-

ficiency, a deficiency of qi and yin, and a deficiency of blood stasis. The pathogenesis is deficiency of qi, blood, yin and yang, and stasis caused by deficiency. Blood stasis is the pathological basis for inducing and accelerating the development of the disease. Xie Chunguang also believes that the basic pathogenesis of DPN is based on yin deficiency and hotness, with yin deficiency and internal heat, and stasis caused by burn fluid; or chronic illness with qi and yin deficiency, phlegm, stasis, and blood stasis, blocking the veins; or Lesion and yang, resulting in yin and yang deficiency, yang deficiency and cold coagulation caused blood stasis.

Modern research has found that blood stasis syndrome is related to microcirculation disorders, hemorrhological disorders, abnormal hemodynamics, and abnormal connective tissue metabolism. DPN patients have limb numbness, pain, elevated blood lipids, abnormal blood rheology, increased blood viscosity, and increased fibrinogen. From the clinical characteristics, DPN has the clinical manifestations of blood stasis syndrome.

Chen Hongxia et al. Analyzed the clinical characteristics of 300 patients with diabetic peripheral neuropathy (DPN) in Chinese and Western medicine and found that numbness is more common in symptoms; the tongue is mainly tender, the tongue is light and dark, and the tongue is thin.

White is the main type; TCM syndromes are most common in Qi deficiency and blood stasis. Western medicine is often combined with other large and microvascular complications, and diabetic retinopathy is most common. More than 75% of patients with abnormal blood rheology in laboratory tests, suggesting that DPN microcirculation disorders and TCM stasis have a common pathogenesis and pathological basis. The method of promoting blood circulation and removing blood stasis is the main rule of blood stasis syndrome. Therefore, no matter from the clinical characteristics or pathological mechanism, the method of promoting blood circulation and removing blood stasis has important guiding effect and clinical significance for the treatment of diabetic peripheral neuropathy (DPN).

### Clinical research progress of promoting blood circulation and removing blood stasis method in DPN

Some scholars have researched that DPN patients have increased blood viscosity, increased red blood cell aggregation, increased red blood cell filtration rate, and increased erythrocyte sedimenta-

tion. Plasma viscosity increases fibrinogen, there are obvious abnormal changes in blood rheology, and there is a hypercoagulable state. The existence is obvious, so the method of promoting blood circulation and removing blood stasis runs through it.

#### ***Application of Huoxue Huayu Class Jing Fang in DPN treatment***

At present, the main prescriptions used to treat DPN with the function of promoting blood circulation and removing blood stasis are Buyang Huanwu Decoction, Danggui Sini Decoction, etc. These prescriptions have the effect of activating blood circulation and removing blood stasis.

Studies have found that Buyang Huanwu Decoction, Danggui Sini Decoction, Huangqi Guizhi Wuwu Decoction, etc. can all achieve good results in treating DPN. Chen Lina is supplemented with Buyang Huanwu Decoction (Original Astragalus 20 g, Astragalus 20 g, Dilong 10 g, Peach Kernel 10 g, Safflower 10 g, Angelica Tail 10 g, Paeoniae O g, Atractylodes 10 g, Chuanxiong 12 g, Red Clover 12 g, Guizhi 6 g 19g of white mustard seed, 15 g of black ginseng, 15 g of kudzu root, and 20 g of hematoxilin spp. Were treated in 42 patients with DPN. The control group received 0.5 mg of mecobalamin tablets daily. 40. 48%, the difference is statistically significant ( $P<0.01$ ); It shows that Buyang Huanwu Decoction has obvious curative effect on diabetic peripheral neuropathy, which can significantly improve the clinical symptoms of diabetic peripheral neuropathy and increase the nerve conduction speed of patients. Tian Wenhong et al. Used Danggui Sini Decoction (Danggui, Guizhi, Paeoniae, Licorice, Jujube, Tongcao, Asarum, etc.) to treat 32 cases of DPN, and according to the different syndrome characteristics, the corresponding addition and subtraction treatment, lower extremity pain is increased Turmeric, pregnant with *Achyranthes bidentata*, papaya, etc.; those with severe upper limb pain, such as mulberry branches, chinensis, and crickets; etc.; those with obvious waist pain, including *Eucommia ulmoides*, continuum, dog ridge, etc.

Those with obvious blood deficiency and cold coagulation re-use astragalus, add deer gum, *Polygonatum*, etc.; those with blood stasis and obstruction, add chicken blood rattan, water chestnut, leech and so on. A control group was set for comparison. Results The total effective rate in the treatment group was 87. 5% and that in the control group was 53. 7%. There was a significant difference between the two groups ( $P<0.01$ ). It was found that Danggui Sini De-

coction has the effects of warming and nourishing blood, promoting blood circulation and clearing collaterals.

#### ***Application of Huoxue Huayu class self-made formula in DPN treatment***

Li Yanzhu and others randomly divided 108 DPN patients into a treatment group of 55 cases and a control group of 53 cases.

The treatment group was given self-made cube sugar Pingluo Tongyin (*Yiqi*, *Taizishen*, *Pueraria*, *Shengdi*, *Leech*, *Chiba*, *Chuanxiong*, *Heliotrope*, *Rhododendron*, *Silver Flower Vine*, *Achyranthes bidentata*, peach kernel, frankincense, and myrrh) were treated; the control group was given micobalamin treatment. Results The total effective rate in the treatment group was 94. 55%; the total effective rate in the control group was 56.0%.

The significant efficiency and total effective rate in the treatment group were significantly better than those in the control group ( $P<0.01$ ). Studies have shown that *Tangpingluo Tongyin* can significantly improve clinical symptoms, blood sugar, glycated hemoglobin, blood indexes, nerve conduction speed and other indicators of patients. Yang Jinchun randomly divided 120 patients into 2 groups, each with 60 cases. The control group was treated with western medicine alone.

The treatment group was supplemented with the self-made decoction GPN-1 (*Astragalus* 30g, *Angelica* 30g, *Ginseng* 10 g) based on the control group. (30 g of *Rehmannia glutinosa*, 30g of *Radix Scutellariae*, 15 g of *Rhizoma Chuanxiong*, 5 g of *Safflower*, 30 g of *Salvia miltiorrhiza*, 10 g of *Lycium barbarum*, 10 g of *Huangjing* 10 g, 30 g of blood vine, 15 g of hook vine, 10 g of scorpion) Group, the total effective rate was 93.33%, which was significantly higher than that of the control group (73.33%); the difference was significant ( $P<0.01$ ). Guo Wei believes that blood stasis and obstruction and choroidal insufficiency are the key to the pathogenesis of DNP and run through the disease.

Therefore, the treatment is based on the principles of promoting blood circulation and removing blood stasis, benefiting qi and clearing collaterals, and self-made traditional Chinese medicine Fang Huayu Tongmai Decoction (*Astragalus* 60 g, *Angelica* 15 g, *Guizhi* 15 g, *Guizhi Rhubarb* 3 g, *Leech* 6 g, *Salvia* 10 g, *Red It took* 10 g, *Zelan* 10 g, and *Achyranthes bidentata* 15 g) to treat 60 patients with DPN. After 2 months of treatment, the total effective rate was 91.67%.

### ***DPN classification and staging and treatment of promoting blood circulation and removing blood stasis***

At present, there are inconsistencies in the TPN syndrome classification standards and efficacy standards of DPN, leading to the emergence of different research results cannot be repeated and generalized, which seriously affects the research progress of DPN syndrome types and treatment. Jiang Aili divides DPN into 3 types of treatment: Qi and blood deficiency, pulse dystrophy, treatment with Yiqi Yangxue, Huoxue Tongluo; liver and kidney yin deficiency, blood stasis and wind movement type, treatment with nourishing liver and kidney, promoting blood circulation Blood stasis, Xifeng Tongluo; spleen and kidney yang deficiency, phlegm and stasis intersect, treatment with warming spleen and kidney, Huoxue Tongluo. Liu Guoyong divided DPN into qi and yin deficiency and stasis type, treating qi and nourishing yin, promoting blood circulation, and using collaterals (Astragalus 15 g, Huangjing 15 g, Ligustrum 15 g, Eclipta 15 g, Guiwei 15 g, Red chrysanthemum 12 g, Xuanhu 10 g, Weilingxian 10 g, Tenjin grass 10 g, Achyrantes bidentata 15 g, Papaya 15) Treatment; Liver and Kidney Deficiency Type, Nourishing Liver and Kidney, Relieving Emergency and Pain, Prescription Duhuo Parasitic Soup Modification The type of stagnation of blood stasis, the treatment of qi and blood circulation, Huayu Tongluo, prescription Sini Sanhe Taohong Siwu Decoction, can achieve good clinical results, including all types of drugs used Huoxue Tongluo. Weng Dongxing divided 48 cases of diabetic peripheral neuropathy into three types: cold-humidity block type, which is mainly treated by warming meridian, dispersing cold and dehumidification; stasis and blood stasis, which is mainly based on promoting blood circulation, removing blood stasis, and regulating qi and collaterals; Qi The two types of blood deficiency are governed by the benefits of nourishing qi and nourishing blood and promoting blood circulation. The total effective rate of treatment reached 85.4%.

He believes that from the perspective of the course of the onset of the disease, blood stasis is an inevitable product of diabetes over time, and it is also the main pathogenic factor of diabetic peripheral neuropathy. No matter what kind of treatment method is used, the blood circulation and blood stasis all the way through the treatment. On the basis of syndrome differentiation and treatment, adding Angelica, Chuanxiong, Honghua and other drugs for promoting blood circulation, removing blood stasis

and clearing collaterals can achieve good results. Professor Gao Yanbin believes that blood stasis and obstruction are the main pathological basis of DPN.

Blood stasis runs through the beginning and end of the development of thirst disease and dysentery. According to the different stages of the development of the disease, the method of benefiting qi and nourishing yin, promoting blood circulation, and collaterals were used in the early stages. Maisan plus ginseng Baihu decoction; in the middle, nourishing liver and kidney, removing blood stasis and clearing collaterals, the main prescription is Liuwei Dihuang Wan; in the later stage, yin and yang double supplementing; Addition and subtraction. Drugs were added at every stage to promote blood circulation.

### ***Application of Huoxue Huayu Chinese herbal medicine external washing formula in DPN treatment***

Traditional Chinese medicine for external washing of DPN has been reported in many clinical cases. Pan Limin et al. [On the basis of conventional blood sugar control, topical Chinese medicine diabetic lotion (Heshouwu, Guizhi, Safflower, Salvia, Weilingxian, Sophora flavescens, Sophora asiatica, stretched grass, osteospermum, astragalus, angelica, (Earthworm, Achyrantes bidentata) external treatment for the disease, after 14 courses of treatment, The symptoms of peripheral nerve injury disappeared in 61% of patients, with a total effective rate of 88.46%. Mingming Li and others observed the clinical effect of traditional Chinese medicine "Tangtong Recipe" (composed of Astragalus membranaceus, Chuanxiong, Chuanxiong knee, tablet turmeric, Guizhi and other medicines) on patients with diabetic peripheral neuropathy (DPN) (qi deficiency and blood stasis syndrome). Improvement of symptoms and neuroelectrophysiological indicators. For 70 patients with DPN (qi deficiency and blood stasis syndrome), a parallel, randomized, and controlled trial design method was used to divide them into a treatment group and a control group, each with 35 patients. The group was given warm water to wash the affected limbs twice a day. The whole course is 8 weeks. The total effective rate of the treatment group was 45.2%, and the control group was 10%. The treatment group was better than the control group ( $P < 0.05$ ). External washing of Tangtong Fang could improve the clinical symptoms of DPN patients and significantly relieve local discomfort. At the same time, the conduction velocity of some nerves can be restored, and no adverse reactions were found<sup>(13-26)</sup>.

## Conclusion

In recent years, the treatment of DPN by promoting blood circulation and removing blood stasis has made great progress both theoretically and clinically. From the point of view of traditional Chinese medicine and western medicine, the etiology, pathogenesis, pathogenesis, clinical manifestations and treatment of DPN reflect the characteristics of blood stasis syndrome and the necessity of applying blood circulation to remove blood stasis.

Activating blood circulation and removing blood stasis drugs have improved microcirculation, inhibited platelet aggregation, reduced blood lipids and blood viscosity. The results of this experiment show that the recovery rate in the observation group reached 66.7% and the healing rate reached 93.3%, which is at a relatively high level, and is worthy of clinical promotion and application. The combination of Ma Tong San and Huoxue Tongluo traditional Chinese medicine foot bath for diabetic peripheral neuropathy can improve the efficacy without increasing the risk of adverse reactions.

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*Acknowledgement:*

*Fund Project: Jilin Provincial Administration of Traditional Chinese Medicine (2018110); The 13th Five-Year Plan for Scientific and Technological Research (Education Department of Jilin Province, JJKH20180361KJ); The 12th Five-Year Plan for Scientific and Technological Research (Education Department of Jilin Province, JJKH 2014-508); Project of Development and Reform Commission of Jilin Province (2018C046-3); Project of Health and Family Planning Commission of Jilin Province (2017J083) Jilin City Science and technology innovation development Plan Project (201900982) Project of Scientific and Technological Research (Education Department of Jilin Province, JJKH 20200061KJ).*

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