

Integrated Traditional Chinese and Western Medicine for the Treatment of Hypertension

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Abstract: *This paper aims to explore the advantages of combining traditional Chinese and Western medicine in the treatment of hypertension. By discussing the epidemiology of hypertension, the understanding of hypertension by traditional Chinese and Western medicine, and the treatment methods of traditional Chinese and Western medicine, this paper extensively analyzes the advantages of combining traditional Chinese and Western medicine in improving clinical efficacy, reducing the adverse reactions of single Western medicine, and improving the quality of life of patients. This study helps to provide a more comprehensive and optimized solution for the clinical treatment of hypertension, and to improve the overall health level of patients with hypertension.*

Keywords: Hypertension, Integration of traditional Chinese medicine and Western medicine, Improve treatment efficacy, Treatment methods.

1. Introduction

Currently, the incidence and prevalence of cardiovascular diseases in China are increasing year by year with the accelerated urbanization and aging of the population. The onset of diseases is gradually tending to be younger [1]. Hypertension, as a common chronic cardiovascular disease in China, poses a serious threat to human health. Both traditional Chinese medicine and modern Western medicine have their own theories and methods for treating hypertension. In recent years, the combination of traditional Chinese medicine and Western medicine in the treatment of hypertension has shown its unique advantages in clinical practice, attracting more and more attention.

In the clinical practice in recent years, it has been gradually discovered that using Western medicine alone as the only method to treat hypertension does not achieve ideal clinical efficacy, and oral Western medicine often comes with adverse reactions. With the gradual introduction of traditional Chinese medicine and methods into the public eye, more and more clinical studies have shown that the combination of Chinese and Western medicine in treating hypertension can significantly improve the treatment effect, improve the quality of life of patients, and the prognosis [2].

2. Epidemiology of Hypertension

According to the World Health Organization (WHO) statistics, the global number of patients with hypertension is large, and the incidence rate is still increasing. In China, the prevalence of hypertension is also not decreasing, and is gradually becoming younger. The complications of hypertension, such as cardiovascular and cerebrovascular damage, kidney damage, etc., are important reasons leading to a decrease in the prognosis level of patients or even death. Therefore, effectively controlling hypertension is of vital importance for improving the health level of human beings [3].

3. The Understanding of Hypertension in Traditional Chinese Medicine and Western Medicine.

3.1 Understanding of Hypertension in Western Medicine.

3.1.1 Etiology

Western medicine believes that genetic factors are the primary factor. Clinical observations show that if there are patients with hypertension in the family, the risk of developing the disease is higher compared to other groups. In addition, unhealthy lifestyles, such as high sodium and low potassium diet, alcohol consumption, long-term smoking, insufficient physical exercise, and prolonged mental stress are also risk factors for hypertension [4]. Some diseases, such as kidney disease, endocrine diseases (such as primary aldosteronism, pheochromocytoma, etc.) can also cause secondary hypertension [5].

3.1.2 Pathophysiological Mechanisms

From a pathophysiological point of view, blood flow exerts pressure on the blood vessel wall mainly through three factors: cardiac pumping, peripheral resistance, and vascular filling [6]. When cardiac output increases, peripheral resistance increases, or vascular filling occurs, it may lead to an increase in blood pressure. In patients with hypertension, the activation of the Renin-Angiotensin-Aldosterone System (RAAS) is a common pathophysiological change. Angiotensin II can cause vasoconstriction, aldosterone can lead to water and sodium retention, thereby increasing peripheral vascular resistance and circulating blood volume, promoting vascular filling, and increasing blood pressure [7].

3.2 Understanding of Hypertension by Traditional Chinese Medicine

3.2.1 Etiology and Pathogenesis

Traditional Chinese medicine starts from the holistic concept,

believing that hypertension is related to the imbalance of Yin and Yang, Qi and Blood in the human body. Emotional imbalance is one of the important factors leading to hypertension. Long-term anxiety, anger, and depression can lead to stagnation of liver Qi, hyperactivity of liver Yang, and elevated blood pressure [8]. Improper diet is also a key factor. Overeating fatty and sweet foods, indulging in alcohol, etc., can damage the spleen and stomach, produce phlegm and dampness, block the meridians, and result in elevated blood pressure. In addition, old age and decline in health, liver and kidney Yin deficiency, and Yin deficiency leading to Yang hyperactivity can also trigger hypertension.

3.2.2 The common TCM syndrome types

The common TCM syndrome types include liver yang hyperactivity type, manifested as dizziness, headache, red face, irritability, and so on; yin deficiency yang hyperactivity type, in addition to dizziness and headache, also has symptoms of soreness and weakness of the lower back and knees, restlessness, insomnia, ringing in the ears, etc.; phlegm dampness obstruction type, patients often have dizziness, chest tightness, nausea, greasy white tongue coating, and other manifestations; blood stasis obstruction type, often accompanied by headache like needle pricks, ecchymosis spots on the tongue, and other symptoms [9].

4. Methods of Treating Hypertension in Traditional Chinese Medicine are as Follows:

4.1 Western Medicine Treatment

4.1.1 Drug therapy

According to the current treatment protocol based on Western medicine standards, there are five main types of drugs for hypertension, namely: diuretics, beta-blockers, calcium channel blockers (CCBs), angiotensin II receptor blockers (ARBs), and angiotensin-converting enzyme inhibitors (ACEIs) [10].

Diuretics reduce blood pressure by promoting diuresis through the kidneys, reducing effective circulating blood volume, such as hydrochlorothiazide. Beta-blockers can slow down heart rate, lower myocardial contractility, thereby reducing cardiac output, including metoprolol. Calcium channel blockers (CCBs) can prevent calcium ions from entering vascular smooth muscle cells, causing vasodilation, and a commonly used CCB drug is nifedipine [11]. Angiotensin II receptor blockers (ARBs) exert antihypertensive effects by blocking angiotensin II receptors, while ACE inhibitors inhibit angiotensin-converting enzyme, reducing the generation of angiotensin II. Both of them block the renin-angiotensin-aldosterone system (RAAS), with losartan and captopril being representative drugs [12].

4.1.2 Non-pharmacological treatment

It is very important to adjust your daily diet [13]. Through case study, it is found that reducing the diet with high sodium and low potassium can effectively lower blood pressure. For example, in some areas, people used to consume a high

amount of salt, and the prevalence of hypertension also rose. When patients gradually reduced their salt intake in food, their blood pressure improved to some extent. At the same time, increasing potassium intake helps to maintain electrolytes in the body. Adequate physical exercise is also an important part. Clinical studies have found that moderate aerobic exercise, such as brisk walking, jogging, or swimming for about 150 minutes per week, can enhance cardiovascular function and gradually lower blood pressure. This is because exercise can improve endothelial function and reduce vascular tension.

Losing weight is also important. Obesity is one of the risk factors for hypertension. Taking some successfully weight-loss patients as an example, their blood pressure significantly improved after losing weight through a proper diet and exercise.

In addition, quitting smoking, limiting alcohol intake, and reducing mental stress also contribute to controlling blood pressure. After quitting smoking, harmful substances in tobacco will no longer damage blood vessels, and vascular function can gradually recover [14]. Being in a state of tension and anxiety for a long time can lead to high blood pressure, so it is essential to learn relaxation techniques to control high blood pressure.

4.2 Traditional Chinese Medicine Treatment Methods

4.2.1 Herbal Medicine Treatment

In traditional Chinese medicine, different treatment prescriptions are used for different patterns. For example, for liver yang hyperactivity type hypertension, Tian Ma Gou Teng Yin is commonly used with modifications, which has the effect of calming the liver and suppressing yang. For yin deficiency and yang hyperactivity type, Qi Ju Di Huang Wan with modifications can be chosen to nourish yin and tonify the kidneys. For phlegm dampness obstruction type, Ban Xia Bai Zhu Tian Ma Tang with modifications can be used to transform phlegm and eliminate dampness [15]. For blood stasis obstructing collaterals type, Xue Fu Zhu Yu Tang with modifications can be used to promote blood circulation and dispel blood stasis.

In addition, some single Chinese herbs have been found to have antihypertensive effects, such as Uncaria, Dogbane leaf, and Prunella vulgaris.

4.2.2 Acupuncture and moxibustion

Specific acupuncture points such as Taichong, Zusanli, Quchi, and Hegu have specific therapeutic effects. Acupuncture at these points can regulate the meridians and qi and blood of the human body, play a role in calming the liver and suppressing yang, regulating the internal organs, and thus help reduce blood pressure [16].

4.2.3 Pushing and rubbing massage

Massage is also one of the auxiliary methods for traditional Chinese medicine to treat hypertension. From the perspective of traditional Chinese medicine, the smooth flow of meridians and blood in the human body is closely related to health.

Through massage, the meridian acupoints can be stimulated to regulate the circulation of Qi and blood. For example, massaging acupoints on the head, such as Fengchi acupoint, can play a role in calming the liver and anchoring yang, helping to alleviate symptoms.

In practical applications, there are various methods of massage therapy. Full body massage can overall regulate body functions, relax muscles, alleviate the body's tension, and indirectly affect blood pressure. Local massage such as massaging the neck and shoulder muscles is particularly effective for hypertensive patients with long-term desk work and tense neck muscles. This is because tension in the neck muscles may compress blood vessels, affecting blood circulation, and massage therapy can improve this condition [17].

The novel idea is that massage therapy can not only improve physical symptoms, but also relieve patients' psychological stress. The onset of hypertension is somewhat related to psychological factors. During the massage therapy process, the body's relaxation will be transmitted to the brain, reducing anxiety and tension, forming a virtuous cycle, further assisting in lowering blood pressure.

5. The Advantages of Integrated Traditional Chinese and Western Medicine in Treating Hypertension.

5.1 Improve the Antihypertensive Effect.

5.1.1 Synergy

Combining traditional Chinese medicine with Western medicine treatment methods can play a synergistic role. For example, Western medicine has significant advantages in rapidly reducing blood pressure, while Chinese medicine can adjust the body as a whole according to the specific symptoms of the patient, fundamentally improving the patient's constitution. For some patients with stubborn hypertension, when the effect of lowering blood pressure with Western medicine alone is not satisfactory, the combination of Chinese medicine treatment may achieve better results.

Studies have shown that on the basis of using ACEI or ARB drugs, adding traditional Chinese medicine prescriptions with liver soothing and yang raising effects, such as Tianma Gouteng Yin, can further reduce blood pressure and improve blood pressure control rate.

5.1.2 Personalized Therapy

Traditional Chinese medicine emphasizes adapting the treatment plan according to the three principles, and integrated Chinese and Western medicine can formulate different treatment plans based on factors such as the patient's constitution, age, and location. Western medicine can determine basic treatment drugs based on factors such as blood pressure values and complications, while Chinese medicine can add appropriate Chinese medicine or traditional Chinese medicine treatment methods based on the patient's symptoms, tongue and pulse examinations, and other diagnostic results. This personalized treatment plan helps to

improve the effectiveness of lowering blood pressure and better meet the needs of different patients.

5.2 Reduce Adverse Reactions of Western Medicine

5.2.1 Improving Metabolic Abnormalities

Some Western antihypertensive drugs may cause metabolic adverse reactions. For example, long-term use of thiazide diuretics may lead to hypokalemia, elevated blood glucose, and blood lipids. Traditional Chinese medicine can improve these metabolic abnormalities to some extent. For instance, some Chinese herbal formulas with the function of invigorating the spleen and supplementing the kidneys, when used in combination with thiazide diuretics, can reduce potassium loss, regulate blood glucose and blood lipid metabolism.

5.2.2 Alleviate other adverse reactions

Beta-blockers may cause adverse reactions such as bradycardia and fatigue. Some ingredients in traditional Chinese medicine can regulate the body's autonomic nervous function and alleviate these adverse reactions. For example, certain traditional Chinese medicines with the function of nourishing qi and blood can improve the fatigue symptoms of patients using beta-blockers, while also having a certain regulatory effect on heart rate, reducing the occurrence of bradycardia.

5.3 Improve the Quality of Life of Patients

5.3.1 Symptom relief

Hypertensive patients often experience symptoms such as dizziness, headache, palpitations, and poor sleep in addition to elevated blood pressure. Traditional Chinese medicine can regulate the specific symptoms of patients through syndrome differentiation. For example, for patients with significant dizziness and headache, herbs such as Gastrodia and Uncaria in Chinese herbal formulas can effectively alleviate the symptoms. Acupuncture, tuina, and other traditional Chinese medicine treatments can also reduce muscle tension, relieve pain, and improve the quality of life for patients.

5.3.2 Overall Adjustment

Traditional Chinese medicine emphasizes a holistic approach, and the combination of traditional Chinese and Western medicine can improve the overall health of patients [18]. While controlling blood pressure, other discomfort symptoms of patients will also be improved, such as a better mental state and increased appetite, allowing patients to better adapt to daily life and work.

5.4 Delaying Target Organ Damage

5.4.1 Protecting the heart

Western medicine plays an important role in controlling blood pressure and reducing cardiac load, while traditional Chinese medicine can protect the heart by improving myocardial blood supply, regulating myocardial metabolism, and so on. For

example, some traditional Chinese medicines that promote blood circulation and remove blood stasis can improve myocardial microcirculation, reduce the occurrence of myocardial ischemia, and thereby delay the development of heart disease.

5.4.2 Protecting the kidneys

Long-term hypertension can lead to kidney damage, resulting in proteinuria and renal dysfunction. ACEI and ARB drugs in Western medicine have a certain protective effect on the kidneys, while some Chinese herbs also have the efficacy of protecting the kidneys. Herbs such as Astragalus and Cordyceps can improve kidney blood circulation, reduce proteinuria, enhance kidney filtration function. Combining traditional Chinese medicine with Western medicine can more effectively delay the progression of kidney disease.

5.4.3 Protecting Brain Blood Vessels

Hypertension is a complication of cerebrovascular disease. Integrated traditional Chinese and Western medicine treatment can help protect cerebral blood vessels. Western medicine can control blood pressure and reduce the risk of cerebrovascular accidents, while some ingredients in traditional Chinese medicine can improve cerebral blood circulation. For example, Danshen and Chuanxiong in Chinese medicine have the functions of promoting blood circulation and removing blood stasis and dredging the channels, which are positively significant for preventing cerebrovascular diseases such as stroke.

6. Conclusion

The combination of Chinese and Western medicine in the treatment of hypertension has shown good effects in improving the efficacy of lowering blood pressure, reducing adverse reactions to Western medicine, improving patients' quality of life, and delaying target organ damage. With the continuous deepening of research on the combination of Chinese and Western medicine in the treatment of hypertension, it is expected to further optimize treatment plans, provide more safe, effective, and comprehensive treatment for hypertensive patients, improve the quality of life of hypertensive patients, reduce the incidence of cardiovascular disease and other complications, thereby reducing the threat of hypertension to human health. However, there are still some problems in the clinical application of the combination of Chinese and Western medicine in the treatment of hypertension, such as the lack of unified treatment standards, and insufficient research on the action mechanisms of Chinese medicine, which need to be continuously explored and improved in future research.

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