

Research progress on traditional Chinese medicine treatment of wasting-and-thirst complicated with chest stuffiness

Zhuo Ma, Jingfeng Yang

Shaanxi University of Traditional Chinese Medicine, Xianyang, Shaanxi, 712046, China

Abstract: *With the improvement of people's living standards, the number of patients with wasting-and-thirst is increasing year by year. Among the many complications caused by wasting-and-thirst, chest stuffiness is the most common, which is also one of the important causes of death. By referring to the literature on the treatment of wasting-and-thirst complicated with chest stuffiness in recent years, the thinking of treatment for wasting-and-thirst complicated with chest stuffiness was reviewed, including treating from zangfu organs and treating from deficiency, phlegm, blood stasis and poison. In the treatment of Zangfu organs, the treatment of spleen and stomach, the treatment of liver and kidney, and the treatment of heart and lung are described in detail. The treatment of wasting-and-thirst complicated with chest stuffiness is summarized, including single Chinese medicine treatment, compound Chinese medicine treatment and Chinese patent medicine treatment, so as to provide reference for clinical treatment of wasting-and-thirst complicated with chest stuffiness.*

Keywords: *wasting-and-thirst; Chest stuffiness; TCM treatment; Research progress*

1. Introduction

With the change of modern people's lifestyle, the incidence of diabetes complicated with coronary heart disease is increasing. Diabetes is called diabetes in traditional Chinese medicine, and coronary heart disease is a part of chest stuffiness in traditional Chinese medicine. Therefore, TCM classifies diabetes complicated with coronary heart disease as wasting-and-thirst and chest stuffiness. The understanding of diabetes was recorded as early as the pre-Qin period. Huangdi Neijing (Yellow Emperor's Inner Classic) has a more comprehensive discussion on wasting-and thirst. In the chapter Five Changes of Miraculous Pivot, it says, "When all the five zang organs are weak, good diseases will disappear and be an illusion." [1] Zhang Zhongjing set up a special chapter on "wasting-and-thirst" in his Jin-Guiyao (Synopsis of the Golden Prescriptions), expounding the pathogenesis, treatment and prescription of the disease in detail, which provided a theoretical basis for the treatment of wasting-and-thirst for later doctors. However, after the Ming and Qing Dynasties, the classification of "three xiao" was gradually fixed as "upper, middle and lower" based on the related viscera, lung, stomach and kidney, which has continued to this day. Chest stulosis was also recognized very early in traditional Chinese medicine (TCM). In Huangdi Neijing (Yellow Emperor's Internal Classic), it was discussed that "when evil is in the heart, the disease will cause heartache" and "those with heart disease will suffer from chest pain". [1] Zhang Zhongjing put forward in the Jin-Guiyao, "No one can lie down due to chest obstructions, but the heart hurts deeply." [2] And set up a "chest obstruction" disease, proposed for the first time the basic pathogenesis of "yang-wei-yin string", that is, Yang qi weakness of zangfu organs, qi stagnation, phlegm condensation, water drinking and other Yin and pathogenic factors, eventually leading to deficiency of positive and excessive of pathogenic factors, resulting in chest obstruction. For wasting-and-thirst and chest stuffiness, although they belong to different types and systems of diseases, their etiology and pathogenesis are closely related, which can be independent diseases or transform into each other. Although there was no special section on chest arthralgia for wasting-and-thirst, Zhang Zhongjing wrote in his treatise on Cold Pathogenic Miscellaneous Diseases: "Wasting-and-thirst, the qi hits the heart, and the heart is painful and hot." [3] Zhu Danxi also said in Danxi Xin Fa: "The hot air is rising, the heart is weak, and the heart is loose... The disease belongs to the upper Jiao." [4] All show that wasting-and-thirst can be complicated with chest stuffiness, and the treatment ideas and treatment of wasting-and-thirst complicated with chest stuffiness are discussed below.

2. Treatment ideas of wasting-and-thirst complicated with chest stuffiness

2.1 Treat from Zangfu

2.1.1 The treatment is based on the spleen and stomach

The spleen and stomach are the origin of acquired life, the source of qi and blood biochemistry, and the transportation and transformation of qi and blood in human body need to rely on the spleen and stomach. It is said in the *Treatise on Meridians of Plain Questions*, "When you drink into the stomach, you swim over the essence, the spleen is transferred to the spleen, the temper dissipates the essence, the lung is transferred to the lung, the waterway is channeled, the bladder is transferred to the bladder, the water and essence are channeled, and the five meridians are parallel." [1] The diet enters the stomach, the spleen rises and falls, and the fine substances are distributed throughout the body through the transport and chemical action of the spleen. In the *Book of Miraculous Pivot*, it is said, "A brittle spleen makes good diseases disappear." [1] It can be seen that diabetes and spleen dysfunction have an inseparable relationship. If spleen qi deficiency, transport weakness, body fluid can not be transferred to the mouth, so thirsty drink; If the spleen and stomach qi rises and falls often, the spleen does not rise, the stomach does not drop turbidity, long-term depression and fire, stomach Yin deficiency, millet good hunger, so see more food; Spleen main limbs, spleen deficiency muscle lost in Ruyang, so see emaciation, and eventually form wasting-and-thirst. Long-term spleen and stomach damage, the deficiency of middle qi leads to the deficiency of heart and qi, the lack of qi and blood, the lack of heart support, the inability to promote blood circulation, and the astringency of the vein tract. Qi deficiency for a long time can also lead to deficiency of heart and Yang, Yang deficiency and water, stagnation of Yin and cold, causing stagnation of heart and Yang, blockage of heart and pulse, and formation of chest obstruction. At the same time, the spleen is disabled, spleen deficiency produces phlegm, and the phlegm is turbidly squatted, resulting in the loss of chest Yang and obstruction of qi. Qi stagnation, phlegm stagnation, water stagnation and other pathological products aggravate blood stasis, thus the formation of wasting-and-thirst chest obstruction. It can be seen that the pathogenesis of wasting-and-thirst combined with chest stuffiness is the deficiency of the root and the excess of the root. Therefore, the basis of the treatment such as promoting qi, promoting blood circulation and eliminating phlegm is strengthening the spleen. Li Gaogao in the Jin-Yuan period used Shenling-Baizhu powder, and Zhang Xichun in modern times used Yuye decoction to treat wasting-and-thirst by regulating the spleen and stomach. Luo Tianjiong [5] and others used Liuqunzi decoction for the treatment of wasting-and-thirst combined with chest arthralgia for spleen deficiency syndrome. Bao Peirong [6] et al. The total effective rate of the treatment group was as high as 93.3% in the treatment of diabetes mellitus complicated with coronary heart disease, spleen and kidney deficiency syndrome, phlegm and stasis type.

2.1.2 On the treatment of liver and kidney

The first article of the *Golden Chamber Yaolue*: "Wasting-and-thirst urination adverse gonorrhea vein syndrome and Treatment" says: "Jueyin is a disease, wasting-and-thirst qi flusits the heart, the heart aches and heats, hunger but does not want to eat, eating is to vomit ascaris, and refuses to stop." [2] It can be seen that wasting-and-thirst is one of the main symptoms of Jueyin disease. The five zang organs of Jueyin belong to the liver, the liver hides the blood, is located in the lower jiao of the human body, belongs to the wood, and the main hair is raised. It is the Yang in the Yin, and the Yang in the body is used, so it has the characteristics of rigidity and hyperactivity. The kidney is the origin of innateness, the essence of the kidney, and the origin of Yin and Yang of the five zang organs. The liver is the main channel, the kidney is the main channel, and the two channels are the main channel. In the five elements, the liver and kidney belong to the mother-child relationship, which breeds each other. The liver and kidney both belong to the lower jiao, and there is a saying such as "the homology of essence and blood" and "the homology of ethyl and decyl". Therefore, the liver and kidney can affect each other in pathology, and the disease of the child and the mother, the deficiency of liver and Yin can lead to the deficiency of kidney and Yin. Mother's disease and child, kidney Yin deficiency water does not contain wood, can also lead to liver Yin deficiency. Zhu Danxi wrote in the book of *Gezhi Yu Lun* Xiang Huo Lun, "Yin of the liver and kidney indicates Xiang Huo." [7] If liver and kidney Yin deficiency, kidney loss in gasification, body fluid transport disorder, kidney solid uptake function is abnormal, can not regulate the bladder opening and closing, water directly to the bladder, so there is thirst and see more urination. Yin deficiency of liver and kidney, burn stomach, so see Xiaogu diet; Yin deficiency of liver and kidney, water does not help fire, so the heart fire is moving, burning body fluid, disturbance of mind, heart loss, poor blood vessels, the formation of chest stuffiness, so palpitations, shortness of breath, spontaneous sweating, chest tightness and pain. At the same time, Yin deficiency

for a long time, Yin damage and Yang, Yang qi deficiency, so the chest Yang is not active, qi is not smooth, blood stasis, aggravate chest obstruction. Therefore, the formation of wasting-and-thirst chest syndrome is closely related to Yin deficiency of liver and kidney. The pathogenesis of this disease is similar to that of "Yin deficiency as the root, dry heat as the standard". Therefore, the treatment is mostly used to nourishing the liver and kidney essence blood, and at the same time to promote blood circulation and channel treatment. For example, Professor Zhang Mingxue^[8] believes that wasting-and-thirst complicated with chest stuffiness is mainly Yin deficiency of liver and kidney. Shenqi Gualou Xiebai Banxia decoction combined with consistent decoction is used to treat coronary heart disease complicated with diabetes mellitus, which is Yin deficiency of liver and kidney, and the clinical effect is remarkable. Wang Yi^[9] proposed that for coronary heart disease with Yin deficiency of liver and kidney combined with diabetes mellitus, the clinical effect of Kuanxianzhu decoction combined with western medicine was significantly better than that of western medicine alone. Liu Xiaoxia^[10] et al. It is believed that the combination of ginsengqi melon and shallot Baibanxia decoction combined with conventional western medicine in the treatment of diabetes mellitus complicated with coronary heart disease with liver and kidney yin deficiency can effectively regulate the level of lipid metabolism and alleviate vascular endothelial injury.

2.1.3 Treatment from the heart and lung in Qi-Jue Lun of Plain Questions

"The heart moves cold to the lungs, and the lungs dissipate... The heart transfers heat to the lungs, and the diaphragm dissipates." ^[1] The pathogenesis of wasting-and-thirst is closely related to the heart and lung. The heart belongs to fire, the lung belongs to gold, and the five elements are related to each other. The physiological function of the lung is the main division of respiration, the source of water, and the regulation of the waterway, which depends on the warmth of the heart fire. If the heart qi is weak and the heart fire is insufficient, the heart moves cold to the lung, and the lung gets cold, the fever occurs, and the lung's propaganda and suppression is abnormal, so the lung is scorched and thirsty. The heart is the official of the monarch and the master of the five zangfu organs. In the Miraculous Pivot, it is said that "sorrow moves the heart, and when the heart moves, the five zangfu organs all shake." ^[1] When there is excessive emotional factor stimulation, the heart is the first to be affected, and over time, the heat is dissipated, the heart is fueled, the heart is shifted to the lung, the lung heat is injured, the body fluid is lost, and becomes wasting-like. "Huangdi Suwen Xuanming Fang Lun · Zao men" said: "Dry, the root of gold lung, dry gold is heated to become dry astringent also... Dry heat and depression even become wasting-and-thirst, drink more and urinate." ^[1] If the heart qi is insufficient for a long time, the heart pulse is not nourished, the Yin blood is depleted, and the blood is stagnant, it will be chest stuffiness. At the same time, the heart heat decocting and burning the body fluid, and the heart cold congesting the blood vessels can aggravate the blood stasis, and finally form the wasting-and-thirst chest obstruction. Heart and lung both belong to the upper jiao, heart is the main blood, lung is the main qi, qi is the handsome blood, blood is the mother of qi, qi and blood can be transformed into each other, disease in the heart and lung two viscera cause and effect each other. For example, Wang Qiwei^[11] et al. believe that wasting-and-thirst should be treated from the heart, and that most wasting-and-thirst patients are not treated because of heart disease. Li Ji^[12] et al. also advocated that heart fire burns lung Yin, which can cause wasting-and-thirst. Zhou Xiaojuan^[13] et al. believed that lung injury and dysfunction of lung and 100 arteries always occur in wasting-and-thirst, which causes wasting-and-thirst and a series of syndromes.

2.2 Treat from deficiency, phlegm, stasis and poison

For the pathogenesis of diabetes, traditional Chinese medicine advocates that "Yin deficiency is the root, dry heat is the standard". Zhu Danxi once put forward: "Yang is always surplus, Yin is always insufficient." ^[7] When Yin is deficient, Yang is abundant, and Yang is hot. Yin deficiency and dryness and heat affect each other in diabetes, Yin deficiency can aggravate dryness and heat, and dryness and heat aggravate Yin deficiency. "All diseases are caused by phlegm". Phlegm is not only the pathological product, but also the pathogenic factor. "Plain Questions: General Evaluation of Deficiency and Reality" says: "Elimination and hatred... Fat people, then sorghum disease." ^[1] It can be seen that the phlegm dampness constitution is easy to cause wasting-and-thirst. As he wrote in the Book of Miraculous Pivot, "The harmonies of body fluids and secretions change and turn red into blood." ^[1] The harmony of body fluid and blood circulation is smooth. If Yin and body are insufficient, the function of blood rustling and nourishment is reduced, resulting in deficiency of Yin and blood, and heat injury of blood vessels. At the same time, phlegm and coagulation also affected the blood flow, turning into blood stasis, stopping phlegm and blood stasis, obstructing the heart, becoming chest obstruction. Chao Yuan-fang wrote in Zhu bing Yuan hou Lun (on the Sources and Manifestations of

All Diseases) that "wasting-and-thirst is serious, and the heart is painful." [14] Whether it is wasting-and-thirst or chest stuffiness, qi deficiency and Yin deficiency for a long time, Yin damage and Yang, can cause deficiency of both Yin and Yang, inability to promote blood circulation, poor blood circulation, obstructed obstructed obstructing, forming stasis, old blood does not go, new blood does not grow, vicious circle. At the same time, qi stagnation, phlegm coagulation, blood stasis and so on can produce poison, poison in the heart, aggravating chest stuffiness. Therefore, deficiency, phlegm, stasis and poison gradually aggravated and influenced each other.

Cheng Choufu [15] believes that the formation process of atherosclerosis in coronary heart disease is equivalent to the formation process of "phlegm" in traditional Chinese medicine. Therefore, resolving phlegm should be carried through the whole treatment process. Wu Ziqiang [16] et al. studied the correlation between inflammatory factors, lipid levels and type 2 diabetes mellitus complicated with coronary heart disease, and found that TC, LDL-C, TG and other indicators can be used as sensitive indicators for early diagnosis and provide a basis for clinical treatment. Liu Zhilong [17] et al. studied the common clinical manifestations of type 2 diabetes mellitus combined with coronary heart disease through statistical methods, the top three are qi deficiency and phlegm stasis syndrome, qi deficiency and blood stasis syndrome, Yang deficiency and blood stasis type, among which qi deficiency and phlegm stasis accounted for more than 50%, and stasis syndrome ran through the whole course of the disease. Professor Yang Jingfeng [18] believes that qi deficiency is the key pathogenesis of type 2 diabetes mellitus, resulting in blood stasis and blockage of blood vessels. Based on many years of clinical treatment experience, he added and subtracted the combination of Didang and Huangqi Guizhu Wuwu decoction in Zhang Zhongjing's Treatise on Cold pathogenic Diseases, Didang Qigui decoction has a significant clinical effect on diabetes mellitus with qi deficiency and blood stasis. Experimental studies have shown that [19] DudangQigui decoction can improve insulin resistance and protect the structure of islet β cells. It is more suitable for the clinical treatment of type 2 diabetes mellitus complicated with coronary heart disease.

3. Treatment of quenching thirst and chest impediment

Single Chinese medicine treatment of astragalus membranaceus, sweet taste, mild temperature, spleen, lung two meridians, has beneficial qi and solid surface, blood circulation and blood stasis, diuresis and swelling, collecting sweat and solid removal and other effects, can fill the body qi, can be used in the treatment of wasting-and-thirst, chest stulosis, blood, edema, constipation, swelling and other diseases. Yin Cuimei et al. [20] used Astragalus injection plus prorelin injection to treat diabetic coronary heart disease angina pectoris, and found that blood glucose level and angina frequency were significantly improved. Hawthorn, taste sour sweet, mild temperature, spleen, stomach, liver meridian, with spleen digestion, qi and blood stasis effect, can be used for meat stagnation, blood stasis and other diseases. Modern studies have shown [21] that hawthorn can effectively slow down the heart rhythm of the human body, strengthen the contractility of the myocardium, and improve the oxygen consumption of the myocardium, so as to reduce peripheral resistance to a certain extent. Salvia miltiorrhiza, taste bitter, slightly cold, returning to the heart, liver two meridians, with blood circulation, removing blood stasis, clearing the heart, removing blood stasis and pain, used for accumulation, chest stulosis, insomnia, swelling and other diseases. Studies have shown [22] that Salvia miltiorrhiza can protect the cardiovascular system, and Salvia miltiorrhiza is commonly used in clinical practice to promote blood circulation and remove blood stasis.

According to the different syndrome types, different treatment methods are selected in the compound treatment. It belongs to the deficiency of both qi and Yin, and the method of nourishing-qi and nourishing-yin is adopted. Geng Feng [23] used compound Danshen drop pills combined with Shengmai powder in the treatment of diabetes mellitus complicated with coronary heart disease angina pectoris with deficiency of both qi and Yin, and found that the dynamic electrocardiogram, homocysteine and blood glucose levels of the patients were significantly improved. It is qi deficiency and blood stasis syndrome, and is treated by supplementing qi, activating blood circulation and dredging collaterals. Sun Yulin [24] studied the addition and reduction of Huangqi No. 1 recipe (Huangqi 30g, Radix ophioidium 15g, Gardenia jasminoides 12g, cinnamomum spp. 12g, Radix paeoniae alba 12g, Radix gegen 30g, Ligusticum Chuangxiong 15g, leech 6g, licorice 9g, Panax notoginseng 3g, Schisandrin 9g, Yuanhu 30g, Rhizoma coptidis 12g, and Scutellaria 12g). The treatment of diabetes mellitus with coronary heart disease belongs to the type of qi deficiency, blood stasis and heat poisoning. After treatment, the patients with angina pectoris were significantly relieved, TC, LDL-C, hs-CRP, HbA1c were improved. It is a syndrome of qi stagnation and blood stasis, and is treated by regulating qi, activating blood and dredging collaterality. Li Zhenqin [25] used Jieyu Shugan decoction

(10 g of Chaihu, 10 g of Tangerine peel, 10 g of Xiangfu, 10 g of Fructus aurantii, 10 g of Radix paeoniae alba, 6 g of licorice, 10 g of Ligusticum Chuanxiong, 10 g of Trichosanthis peel, 10 g of Xiebai, 10 g of Foshan hand, and 15 g of Tujin). After treatment, ECG, FPG, 2HpG, GSP, serum HCY and other indicators were significantly improved. It is a syndrome of mutual accumulation of phlegm and blood stasis, which is mainly used to resolve phlegm, regulate qi and promote blood circulation. Wang Weiping^[26] studied Huatan Tongmai decoction (peach kernel 10g, safflower 10g, Atractylodes atractylodes 15g, anemarrhizae anemarrhizae 15g, Phellodendri phellodendri 10g, processed licorice 6g, Pinellia tripterygium 15g, Tangerine peel 15g, Angelica sinensis 15g, Chuanxiong 15g, ripened land 15g, Paeony 10g, Poria 15g). The treatment of diabetes mellitus complicated with coronary heart disease is the coexistence of phlegm and blood stasis. The clinical symptoms of the patients were significantly improved, and the levels of GLU, HbA1c, Hs-CRP and LDL-C were reduced.

Treatment of Chinese patent medicine for the treatment of wasting-and-thirst complicated with chest obstruction, Chinese patent medicine includes Tongxinluo capsule, Yangxinshi tablet, Qishenyiqi dropping pill, etc. Zhang Ting et al.^[27] studied the clinical efficacy of Tongxinluo capsule in patients with coronary heart disease combined with diabetes. After treatment, the levels of TG, TC, LDL-C, UA and HbA1c in the observation group were lower than those in the control group, indicating that Tongxinluo capsule could significantly improve various indicators of patients. Yu Xuelian et al.^[28] studied the efficacy of Yangxinshi tablet in the treatment of elderly coronary heart disease complicated with type 2 diabetes mellitus. After 12 weeks of treatment, the number of angina attacks, metabolic equivalent, and 6-minute walking distance of patients were improved, indicating that Yangxinshi tablet could improve the exercise tolerance of patients.

4. Conclusion

The later stages of wasting-and-thirst are diverse, including chest stuffiness, insomnia, abscess, stroke, blindness, edema, etc. However, most of the middle-aged and elderly people die of wasting-and-thirst due to chest stuffiness. More and more studies have shown that wasting-and-thirst and chest stuffiness affect each other and there is a close relationship between them. In recent years, Chinese medicine has accumulated rich experience in the treatment of wasting-and-thirst chest arthralgia, which fully proves the advantages of Chinese medicine. Through the efforts of different doctors, the etiology and pathogenesis of the disease are gradually improved from the aspects of viscera, phlegm, blood stasis and poison. The clinical application of single Chinese medicine, compound Chinese medicine, classic Chinese medicine and patent Chinese medicine can significantly improve the clinical symptoms of patients, and is expected to be further expanded. However, at present, there is no unified standard for the treatment of wasting-and-thirst complicated with chest stuff. In the future clinical research, a large number of samples should be used to summarize the characteristics of its syndrome types, so as to provide scientific basis for the treatment of wasting-and-thirst complicated with chest stuff.

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