Chinese Medicine
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The Chinese Medical Treatment for Coronary Heart Disease Angina

Keywords: Chinese medicine, Chinese herbal medicine, cardiology, coronary heart disease (CHD), angina pectoris, Xue Fu Zhu Yu Tang (Blood Mansion Dispel Stasis Decoction)

During the nineteenth century, Wang Qing-ren published an extremely influential book titled the Yi Lin Gai Cuo (Correcting the Errors in the Forest [or Field] of Medicine). In this book, Wang sought to correct what he believed to be a number of theoretical errors in Chinese medicine based on his observation of numerous dead human bodies. Although Wang’s theories have subsequently been proven wrong, he created a number of famous formulas for the elimination of blood stasis from various areas of the body. These formulas are some of the most effective and commonly used formulas in the Chinese medical repertoire. One of these formulas is called Xue Fu Zhu Yu Tang (Blood Mansion Dispel Stasis Formula). It is meant to dispel blood stasis from the chest and is commonly used for cardiovascular problems associated with signs and symptoms of blood stasis. On pages 9-10 of issue #6, 2006 of Fu Jian Zhong Yi Yao (Fujian Chinese Medicine & Pharmacology), Li Wen-hua et al. published an article titled, “An Analysis of the Therapeutic Effects of Xue Fu Zhu Yu Tang in the Treatment of Coronary Heart Disease Angina Pain.” A summary of this two-wing comparison study is presented below.

Cohort Description
Altogether, there were 90 Coronary Heart Disease (CHD) outpatients from the Zhabei Chinese Medical Hospital in Shanghai enrolled in this study. All 90 of these patients met the Western medical diagnostic criteria for CHD and angina pectoris set forth in two separate Chinese cardiovascular disease diagnostic criteria guidelines as well as criteria established at a 1979 Chinese national symposium on the prevention and treatment of CHD, angina pectoris, and heart arrhythmias. All patients had suffered from CHD angina pain for more than one month and experienced two or more attacks per week. Patients who had had a myocardial infarction within the last six months were excluded, as were menopausal females, those with serious heart arrhythmias, and those with serious cardiopulmonary dysfunction. The angina pain experienced by all 90 patients was class I-III in severity. In addition, all 90 patients presented a Chinese medical pattern of heart blood stasis and obstruction according to the criteria in a 1993 publication setting forth the criteria for Chinese medical patterns used in research protocols.

These 90 patients were randomly divided into two groups of 45 patients each, a Xue Fu Zhu Yu Tang group and a isosorbide dinitrate group. In the Xue Fu Zhu Yu Tang group, there were 21 males and 24 females with a median age of 68.10 ± 9.50 years. These patients had suffered from CHD angina for from six months to 17 years, with median disease duration of 38.9 ± 10.6 months. Five cases presented with class I angina, 32 cases with class II angina, and eight cases presented with class III angina. In the isosorbide dinitrate group, there were 20 males and 25 females with a median age of 67.80 ± 9.70 years. These patients had suffered from CHD angina for from five months to 15 years, with a median disease duration of 36.5 ± 11.8 months. Eight of these cases presented with class I angina, 30 presented with class II angina, and seven cases presented with class III angina. Therefore, these two groups were considered statistically comparable for the purposes of this study (P > 0.05).

Treatment Method
All members of the Xue Fu Zhu Yu Tang group were orally administered the following Chinese herbal formula:

- Tao Ren (Semen Persicae), 12g
- Hong Hua (Flos Carthami), 9g
- Dang Gui (Radix Angelicae Sinensis), 9g
- Sheng Di Huang (uncooked Radix Rehmanniae), 9g
- Chuan Xiong (Rhizoma Chuanxiong), 5g
- Chi Shao (Radix Rubra Paeoniae), 6g
- Niu Xi (Radix Achyranthis Bidentatae), 9g
- Jie Geng (Radix Platycodi), 5g
- Chai Hu (Radix Bupleuri), 3g
- Zhi Ke (Fructus Aurantii), 6g
- Gan Cao (Radix Glycyrrhizae), 6g

One packet per day of these medicinals was decocted in water two times to arrive at 400 ml of medicinal liquid. This liquid was then divided into two doses, which were administered orally (b.i.d.).

All members of the isosorbide dinitrate group were orally administered 10 mg of isosorbide dinitrate each time, three times per day (t.i.d.). Isosorbide dinitrate reduces the blood pressure as well as the capillary pressure (vascular resistance), improving the heart’s efficiency. Isosorbide dinitrate is used for the treatment and prevention of angina. All members of both groups were treated continuously for three months. During angina attacks, it was permissible for patients to use nitroglycerin sublingually.
Study Outcomes

Table 1 shows the outcomes of the two groups in terms of each protocol’s effectiveness in alleviating the angina pain. Table 2 shows the outcomes of the two groups in terms of changes in electrocardiogram (ECG) studies before and after treatment.

Therefore, there were no statistically significant differences in the outcomes between these two groups in terms of relief of angina pain or beneficial changes in ECG readings from before to after treatment (P > 0.05).

Table 3 shows changes in the two groups before and after treatment in media serum levels of total cholesterol (TC), triglycerides (TG), high-density lipids (HDL-C), and low-density lipids (LDL-C).

Thus there were no statistically significant differences in changes in blood lipids before and after treatment between these two groups (P > 0.05).

Table 4 shows differences in various markers of blood rheology for determining plasma viscosity and blood viscoelasticity. In Table 4, mPas stands for mean blood viscosity, HCT stands for hematocrit.

While both groups registered statistically significant changes in the above markers of blood viscosity and viscoelasticity, the Xue Fu Zhu Yu Tang groups registered even better changes. Thus it was concluded that, compared to isosorbide dinitrated, Xue Fu Zhu Yu Tang can markedly decrease blood plasma viscosity (P < 0.01). Further, three cases in the isosorbide dinitrate group experienced headaches and dizziness, while there were no side effects in the Xue Fu Zhu Yu Tang group.

Discussion

The Chinese authors of this study begin their discussion by stating that, in 1998, 30% of all deaths and up to ten percent of all disease in China were due to cardiovascular disease. They further point out that treatment for CHD angina tends to be long-term, and, although anti-anginal nitrate drugs are relatively effective, they have a number of side effects that make their long-term use difficult. For instance, headaches are the most common side effect of isosorbide dinitrate. Flushing can also occur because of the dilating of the blood vessels. Similarly, transient dizziness, palpitations, and weakness can occur which reflect the lowering of the blood pressure. Nausea, vomiting, and rash are less common side effects but can occur. Because Xue Fu Zhu Yu Tang works basically as well as isosorbide dinitrate and it has less side effects, they think that its use for the treatment of CHD angina pain should be encouraged.

Within this formula, Tao Ren breaks the blood and moves stagnation at the same time as it moistens dryness. Hong Hua quickens the blood and transforms stasis in order to stop pain. These two are the sovereign medicinals in this formula. Chi Shao and Chuan Xiong aid the sovereign medicinals to quicken the blood and disperse stasis. Niu Xi quickens the blood and stops pain. It also guides the blood to move downward. Together, these are the ministerial medicinals in this formula. Sheng Di Huang and Dan Gui assist by nourishing the blood and boosting yin at the same time as quickening the blood. Jie Geng and Zhi Ke loosen the chest and move the qi. One upbears, and the other downbears. Chai Hu courses the liver and resolves depression. Thus these medicinals promote the movement of the qi in order to move the blood. Gan Cao then regulates and harmonizes all the other medicinals in this formula. When all these medicinals are used together, their effect is to quicken the blood and transform stasis, move the qi and stop pain. Modern research has shown that this formula increases coronary artery blood flow, improves blood viscosity, controls platelet agglutination and aggregation, prevents blood clot formation, increases cellular oxygenation, and prevents arteriosclerosis.