

Exploration and Discussion on the Safety of Patients with Coronary Heart Disease Treated by Zhigancao Decoction Combined with Western Medicine

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Abstract: The purpose of the thesis is to discuss the effect and safety of modified Zhigancao decoction combined with western medicine in the treatment of coronary heart disease. I'd like to use the methods listed as follows to prove my theory: From June 2023 to February 2024, 90 patients admitted to hospital for coronary heart disease were selected for research, and were randomly divided into control group and observation group. The former included 45 patients who were treated with conventional western medicine, while the latter included 45 patients who were treated with modified Zhigancao decoction combined with western medicine. The cardiac function index, treatment efficiency and incidence of side effects were compared between the two groups. Results: After treatment, many indexes of cardiac function in the observation group were tested, and the results were better than those in the control group, with statistical significance ($P < 0.05$). Compared with the control group (82.2%), the effective rate of the observation group (95.6%) was significantly higher, and the curative effect was statistically significant ($P < 0.05$). After the treatment, the incidence of side effects in the observation group was 6.7% significantly less than that in the control group (20.0%), and the difference was significant ($P < 0.05$). Accordingly, we can draw a conclusion that the application of modified Zhigancao decoction combined with western medicine in the treatment of coronary heart disease is helpful to improve the overall therapeutic effect and cardiac function, and the treatment scheme will not increase adverse reactions, which is safe and worth popularizing.

Keywords: Coronary heart disease; Decoction of Radix Glycyrrhizae Preparata; Western medicine; Security; treatment effect

1. Introduction

According to incomplete statistical investigation, the prevalence of coronary heart disease in cardiology diseases is very high, which will seriously damage cardiac function and have a high mortality rate. At present, drugs are mainly used in clinic to delay the development of the disease and reduce other complications, among which western medicine is the most widely used method, which can effectively alleviate the bad symptoms and improve the blood circulation of the heart, but taking too much may cause various adverse reactions and affect the treatment effect [1]. Therefore, on the basis of routine western medicine treatment, our hospital combined with modified Zhigancao decoction to intervene. Traditional Chinese medicine decoction can achieve the effect of relaxing muscles and collaterals, promoting blood circulation and removing blood stasis, which is helpful to improve ventricular pumping function and myocardial structure [2]. In this paper, 90 patients with coronary heart disease admitted in the past year were randomly selected as the observation objects, and the effect of modified Zhigancao Decoction combined with western medicine was discussed. The specific data are arranged as follows:

2. Data and methods

2.1 General information

From June, 2023 to February, 2024, 90 patients admitted to hospital for coronary heart disease were selected for research, and were randomly divided into control group and observation group. The former included 45 patients treated with conventional western medicine, while the latter included 45 patients treated with modified Zhigancao decoction combined with western medicine.

Control group: The number of males/females was 25 /20, with the age ranging from 58 to 74 years, with an average age of (63.9 2.7) years, and the course of disease lasted for 1-10 years, with an average course of disease of (5.6 1.6) years.

Observation group: The number of males/females was 24 /21, with the age ranging from 57 to 75 years, with an average age of (64.5 2.3) years, and the course of disease lasted for 1-12 years, with an average course of disease of (6.3 1.9) years.

After systematic analysis, there was no significant difference in the general information of patients with coronary heart disease between the two groups, and there was no statistical significance, so comparative analysis could be carried out ($P > 0.05$).

Inclusive criteria: (1) 90 patients with coronary heart disease were admitted to the hospital, and the results were consistent with the relevant diagnostic criteria in Internal Medicine. After admission, they all had different degrees of edema, dyspnea, cyanosis, chest tightness and other adverse symptoms [3]; (2) All the subjects understand the contents of this study and sign relevant agreements; (3) The hospital ethics committee has known the contents of this study and signed the relevant informed consent.

Exclusion criteria: (1) Those who have been diagnosed with infectious diseases are excluded; (2) Patients with abnormal liver and kidney function were excluded; (3) exclude patients with malignant tumor; (4) Patients with poor treatment cooperation were excluded; (5) Those who lack perfect information are excluded [4].

2.2 Treatment methods

The control group was given the routine western medicine plan, and the treatment process was as follows: Trimetazidine hydrochloride tablets produced by Shiweiya (Tianjin) Pharmaceutical Co., Ltd. were selected, with the approval number of H20055465, 20mg each time, 3 times a day, and the course of treatment was 30 days.

The observation group was treated with modified Zhigancao decoction combined with western medicine, and the treatment process was as follows: the medicinal materials used in Zhigancao decoction included 30g of Astragalus membranaceus and 20g; of Radix Glycyrrhizae Preparata; 15g of Angelica sinensis, 15g of Ligusticum Chuanxiong and 15g of Achyranthes bidentata; 12g of peach kernel and 12g of platycodon grandiflorum; 10g of ginger, 10g of Bupleurum, 10g of prepared aconite root, 10g of poria cocos, 10g of white peony root, 10g of safflower and 10g of bitter orange. If the patient has angina pectoris, add 15g; of Fructus Trichosanthis; If the patient is accompanied by qi deficiency and yin deficiency, 10 g of Trichosanthis Radix, 10 g of Semen Cuscutae and 10 g of Fructus Ligustri Lucidi are added; If the patient is accompanied by palpitation and fatigue, 60g of Astragalus membranaceus, 10g of winter melon skin, 10g of Polygonatum odoratum and 10g of Poria cocos skin are added. Decoct 1 dose of the formula every day, take out 300ml, and take it twice. Trimetazidine hydrochloride tablets were selected as western medicine treatment drugs, and the taking method was the same as that of the control group. The curative effect is 30 days.

2.3 Effect observation

2.3.1 Cardiac function index

After treatment, the cardiac function indexes of the two groups were detected, including heart rate (HR), left ventricular ejection fraction (LVEF), left ventricular end-diastolic diameter (LVEDD) and left ventricular end-systolic diameter (LVESD), and the results were compared.

2.3.2 Clinical efficacy

Evaluation criteria of therapeutic effect: (1) The curative effect is remarkable: after taking the medicine, the cardiac function indexes all return to normal, the clinical symptoms basically disappear and the self-care ability is normal; (2) Effective treatment: after taking the medicine, the cardiac function index has improved, the clinical symptoms have improved, and the self-care ability has recovered; (3) The treatment is ineffective: after taking the medicine, the cardiac function index shows no signs of improvement, and even the symptoms are aggravated. The formula for calculating the total effective rate is the sum of significant curative effect and effective treatment [5].

2.3.3 Side effects

Observe the adverse symptoms such as rash, palpitation, gastrointestinal reaction and shortness of breath in the two groups of patients with coronary heart disease after treatment, and calculate the incidence and compare them.

2.4 Statistical analysis

All the research data were processed by SPSS20.0 statistical software. The measurement data were tested by T test (X S) and the calculation data were tested by X test, and the difference was statistically significant ($P < 0.05$).

3. Results

3.1 Comparison of cardiac function indexes between two groups of patients with coronary heart disease

From the test results, the observation group tested many indexes of cardiac function after treatment, and the results were better than those of the control group, with statistical significance ($P < 0.05$). As shown in table 1

Table 1 Comparison of cardiac function indexes between two groups of patients with coronary heart disease

group	HR (times /min)	LVEF(%)	LVEDD(mm)	LVESD(mm)
Observation group (n=45)	78.32±6.25	40.85±1.28	48.09±3.36	46.33±3.58
Control group (n=45)	72.13±6.39	49.38±1.15	42.62±3.52	40.19±3.66
t	4.6455	33.2539	7.5405	8.0449
P	<0.05	<0.05	<0.05	<0.05

3.2 Comparison of clinical efficacy between two groups of patients with coronary heart disease

From the analysis of the test results, compared with the control group, the treatment effective rate of 95.6% in the observation group was significantly higher, and the curative effect was statistically significant ($P < 0.05$). As shown in table 2.

Table 2 Comparison of clinical efficacy between two groups of patients with coronary heart disease

group	Effective in treatment	Effective treatment	Ineffective treatment	Total effective rate
Observation group (n=45)	24(53.3)	19(42.2)	2(4.4)	43(95.6)
Control group (n=45)	20(44.4)	17(37.8)	8(17.8)	37(82.2)
X ²				4.0747
P				<0.05

3.3 Comparison of side effects between two groups of patients with coronary heart disease

According to the observation and analysis of medical staff, after the treatment, the incidence of side effects in the observation group was 6.7% significantly less than that in the control group (20.0%), and the difference was significant ($P < 0.05$). As shown in table 3.

Table 3 Comparison of side effects between two groups of patients with coronary heart disease

group	rash	palpitate	Gastrointestinal reaction	dyspnea	Total incidence rate
Observation group (n=45)	0(0.0)	1(2.2)	1(2.2)	1(2.2)	3(6.7)
Control group (n=45)	2(4.4)	3(6.7)	3(6.7)	1(2.2)	9(20.0)
X ²					3.4615
P					<0.05

4. Discussion

From the analysis of existing clinical research, coronary heart disease is the main cause of complications such as myocardial infarction, angina pectoris and arrhythmia. After the disease is produced, it will cause hypoxia and ischemia of myocardial tissue, and it will threaten life safety if it is not treated in time. The course of coronary heart disease lasts for a long time, which will greatly affect patients' psychological state and quality of life. Therefore, we need to find efficient and safe treatment measures to delay the development of the disease and relieve the bad symptoms [6]. Trimetazidine hydrochloride is a commonly used drug to treat coronary heart disease, which can effectively delay the development and relieve symptoms after application. However, the effect of simple western medicine treatment is limited, and it is easy to increase adverse reactions when the drug is taken for a long time or the dose is too large. Therefore, more and more experts suggest combining traditional Chinese medicine with western medicine treatment [7]. In the field of traditional Chinese medicine, coronary heart disease belongs to the category of "chest obstruction". The modified formula of Zhigancao Decoction can play the roles of enriching blood, benefiting qi and nourishing yin, in which the monarch drugs are Zhigancao and ventilation, both of which are drugs for benefiting qi and restoring pulse. The combination of Chuanxiong and Angelica can give full play to the effect of promoting blood circulation and removing blood stasis. The selected drugs in this prescription are all mild in nature, and dialectical treatment is carried out according to the different symptoms of each coronary heart disease patient, which is more targeted [8]. Through the analysis of the results of this study, the observation group tested many indexes of cardiac function after treatment, and the results were better than those of the control group, with statistical significance ($P < 0.05$). Compared with the control group (82.2%), the effective rate of the observation group (95.6%) was significantly higher, and the curative effect was statistically significant ($P < 0.05$). After the treatment, the incidence of side effects in the observation group was 6.7% significantly less than that in the control group (20.0%), and the difference was significant ($P < 0.05$). The results fully confirmed the good effect of modified Zhigancao decoction combined with western medicine. Compared with single medicine treatment, the combination of traditional Chinese and western medicine plays a more significant role in improving the efficiency of heart function. During the treatment, the composition of Chinese herbal medicines in Zhigancao decoction formula can be adjusted according to the actual cause, so as to ensure the pertinence of treatment, reduce the occurrence of adverse reactions and have both curative effect and safety.

5. Conclusion

To sum up, the application of modified Zhigancao decoction combined with western medicine in the treatment of coronary heart disease is helpful to improve the overall treatment effect and cardiac function, and the treatment scheme will not increase adverse reactions, which is safe and worthy of popularization.

References

- [1] Zhou Jiatan, Lu Jianqi, Tam Kuan, et al. Meta-analysis of therapeutic effect of Zhigancao decoction combined with western medicine on angina pectoris of coronary heart disease [J]. *China Modern Doctor*, 2023,61(13):1-7.
- [2] Song Banglin, Wu Fang. Observation on the efficacy and safety of modified Zhigancao decoction combined with routine western medicine in treating coronary heart disease complicated with arrhythmia [J]. *Guizhou Medicine*, 2022,46(08):1288-1289.
- [3] Zou Xiaofeng. Clinical observation of Zhigancao decoction combined with Shengmai powder in the treatment of coronary heart disease with premature ventricular beats with deficiency of both qi and yin [D]. *Hunan University of Traditional Chinese Medicine*, 2022.
- [4] Wang Shiling. Analysis of the effect of modified Zhigancao decoction in patients with arrhythmia of coronary heart disease [J]. *Reflex Therapy and Rehabilitation Medicine*, 2022,3(07):1-3+79.
- [5] Qi Zhao. Effect of modified Zhigancao decoction combined with routine western medicine on patients with viral myocarditis [J]. *China Minkang Medicine*, 2022,34(05):98-100.
- [6] Tian Jinyan. Application of modified Zhigancao decoction in the treatment of patients with coronary heart disease complicated with arrhythmia [J]. *Electronic Journal of Cardiovascular Diseases*, 2022,10(06):31-34.
- [7] Zhao Qifei, Peng Guangcao, Wang Xinlu, et al. Meta-analysis of the efficacy and safety of Zhigancao decoction combined with routine western medicine in treating chronic heart failure [J].

New Chinese Medicine and Clinical Pharmacology, 2021,32(08):1197-1205.

[8] Cao Peizhen. Clinical effect and safety of modified Zhigancao decoction combined with metoprolol in treating ventricular arrhythmia of coronary heart disease [J]. *Systematic Medicine*, 2021,6(10):32-34.