Application and Research of TCM Chronomedicine Combined with Traditional Chinese Medicine Application in Abdominal Distension of Patients After Cardiac Surgery

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Abstract: Objective: To observe the effect of TCM (Traditional Chinese Medicine) chronomedicine combined with TCM application on improving abdominal distension in patients after cardiac surgery. Methods: A total of 70 patients who underwent cardiac surgery in our hospital from March 2024 to March 2025 were selected and randomly divided into two groups. One group (control group, 35 cases) received TCM application treatment, and the other group (observation group, 35 cases) received TCM chronomedicine combined with TCM application treatment. The abdominal distension symptoms and time indicators during postoperative recovery were compared between the two groups. Results: The degree of abdominal distension in the observation group was lower than that in the control group (P<0.05). The time indicators during postoperative recovery in the observation group were shorter than those in the control group (P<0.05). Conclusion: TCM chronomedicine combined with TCM application in patients after cardiac surgery helps relieve postoperative abdominal distension and promote the rapid improvement of corresponding symptoms.

Keywords: TCM Chronomedicine; TCM Application; Post-Cardiac Surgery; Abdominal Distension

1. Introduction

Cardiac surgery has maintained a high implementation rate in clinical practice and plays an important role in the treatment of heart diseases. The surgery is highly difficult, and postoperative recovery is relatively slow. Factors such as reduced postoperative activity of patients will increase the incidence of postoperative abdominal distension, which is not conducive to patient recovery[1-2]. To comprehensively ensure the clinical treatment effect of patients undergoing cardiac surgery, effective measures need to be taken to improve postoperative abdominal distension. This study mainly explores the value of TCM chronomedicine combined with TCM application in improving abdominal distension in patients after cardiac surgery.

2. Materials and Methods

2.1 General Data

A total of 70 patients who underwent cardiac surgery in our hospital from March 2024 to March 2025 were selected and randomly divided into two groups. One group (control group, 35 cases) received TCM application treatment, and the other group (observation group, 35 cases) received TCM chronomedicine combined with TCM application treatment. In the control group, there were 18 males and 17 females, aged 48-77 years, with an average age of (62.12±1.73) years. The body mass index (BMI) was 21-25 kg/m², with an average of (22.74±1.23) kg/m². In the observation group, there were 19 males and 16 females, aged 49-76 years, with an average age of (62.25±1.35) years. The BMI was 21-25 kg/m², with an average of (22.25±1.65) kg/m². There was no significant difference in baseline data between the two groups (P>0.05).

2.2 Methods

Both groups received conventional treatment after surgery, including anti-infection and intravenous rehydration. The control group received TCM application treatment on the basis of conventional postoperative treatment. 15g of Radix Paeoniae Alba, Radix Aucklandiae, Radix Rehmanniae, and Radix Glycyrrhizae, and 12g of Pericarpium Citri

Reticulatae, Rhizoma Chuanxiong, Radix Angelicae Dahuricae, Olibanum, and Sautéed Herba Schizonepetae were taken, ground into powder, mixed with vinegar, and applied to the center of an 8cm×8cm plaster, which was then applied to the patient's Shenque (CV8), Shenmen (HT7), Zhongwan (CV12), Taichong (LR3), and Zusanli (ST36) acupoints, 4 hours each time, once a day. The observation group received treatment based on TCM chronomedicine theory on the basis of the control group. In TCM theory, the morning is the time when yang qi rises, and warming and tonifying treatments can be carried out for patients. The acupoint application time can be chosen in the morning to accelerate the gastrointestinal peristalsis of patients and help their abdominal distension symptoms be relieved quickly. Both groups received treatment for 7 consecutive days.

2.3 Observation Indicators

(1) Comparison of abdominal distension degree before and after treatment:

Mild abdominal distension: No anal exhaust, loss of appetite, self-reported abdominal distension, no obvious bowel sounds (2-3 times/min).

Moderate abdominal distension: Nausea, abdominal distension, abdominal bulge, weak bowel sounds (10-15 times/min).

Severe abdominal distension: Vomiting, nausea, abdominal distension, no anal exhaust, tenderness, abdominal tension, abdominal bulge, no bowel sounds.

(2) Statistical analysis of time indicators: The recovery time of bowel sounds, first defecation time, and abdominal distension relief time of the two groups during treatment were counted.

2.4 Statistical Methods

Relevant data in the study were processed using SPSS 26.0. Measurement data were expressed as mean ± standard deviation and tested by t-test. Enumeration data were expressed as percentages and tested by chi-square test. $P<0.05$ was considered statistically significant.

3. Results

3.1 Comparison of Abdominal Distension Symptoms Between the Two Groups

There was no difference in abdominal distension degree between the two groups before treatment. After treatment, the abdominal distension degree in the observation group was lower than that in the control group ($P<0.05$), as shown in Table 1.

Table 1. Comparison of Abdominal Distension Symptoms Between the Two Groups [n, (%)]

Group	Number of Cases	Mild		Moderate		Severe	
		Before Treatment	After Treatment	Before Treatment	After Treatment	Before Treatment	After Treatment
Observation	35	10(28.57)	30(85.71)	15(35.71)	4(11.43)	10(28.57)	1(2.86)
Control	35	11(31.43)	20(57.14)	14(33.33)	10(28.57)	10(28.57)	5(14.29)
t	-	0.051	6.455	0.053	4.085	0.000	13.345
P	-	0.821	0.042	0.818	0.031	1.000	0.012

3.2 Statistical Analysis of Time Indicators

The time indicators during postoperative recovery in the observation group were shorter than those in the control group ($P<0.05$), as shown in Table 2.

Table 2. Statistical Analysis of Time Indicators Between the Two Groups ($\bar{x}\pm s$,h)

Group	Number of Cases	Recovery Time of Bowel Sounds	First Defecation Time	Abdominal Distension Relief Time
Observation	35	10.45±1.63	20.46±3.25	12.34±2.35
Control	35	13.26±1.25	31.46±2.45	16.67±2.11
t	-	16.045	26.758	13.141
P	-	0.001	0.001	0.001

4. Discussion

Cardiac surgery has maintained a high implementation rate in clinical practice. This type of surgery is highly difficult and causes great trauma to patients during the operation. In the early postoperative period, patients need to stay in bed for treatment, with reduced activity and slow gastrointestinal peristalsis, which will increase the incidence of symptoms such as abdominal distension and is not conducive to patient recovery[3]. To ensure the

comprehensive treatment effect of patients undergoing cardiac surgery, effective treatment measures need to be taken to promote the improvement of abdominal distension in a short time.

TCM application has a high utilization rate in improving gastrointestinal function in surgical patients. This treatment plan is a commonly used external therapy in TCM. According to the characteristics of patients' symptoms, corresponding drugs are selected for acupoint application, which can regulate qi activity, improve visceral function, and help relieve abdominal distension in a short time. In TCM theory, visceral functions of the body are closely related to acupoints and meridians. Intervention through TCM application can improve various symptoms of patients in terms of promoting blood circulation, regulating qi, and replenishing qi. In addition, applying to acupoints such as Shenque (CV8), Shenmen (HT7), Zhongwan (CV12), Taichong (LR3), and Zusanli (ST36) can regulate qi and blood, calm the mind, improve visceral function, and help patients recover[4-5]. TCM chronomedicine is also a core content in TCM theory. In this theory, it is believed that human life activities are closely related to disease changes, namely physiological cycle rhythm and circadian rhythm. According to the characteristics of patients with abdominal distension after cardiac surgery, reasonable selection of TCM application time helps to further enhance the effect of this treatment plan. Combined with this study, the observation group received treatment with TCM chronomedicine combined with TCM application, and the patients' abdominal distension symptoms were quickly improved, and gastrointestinal function recovered rapidly, indicating that this combined treatment plan can promote the rapid improvement of corresponding symptoms in patients with abdominal distension after cardiac surgery and accelerate their recovery.

In conclusion, TCM chronomedicine combined with TCM application can be used in the treatment of patients with abdominal distension after cardiac surgery to help them recover.

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