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Effects of Traditional Chinese Medicine Characteristic Nursing Combined with Six-Word Formula on Cardiac Function Rehabilitation in Patients with Chronic Heart Failure: Postprint

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Abstract

Objective To investigate the effect of traditional Chinese medicine characteristic nursing combined with Liuzijue in promoting cardiac function rehabilitation in patients with chronic heart failure.

Methods Eighty hospitalized patients with chronic heart failure between September 2020 and September 2021 were selected as study subjects and randomly divided into a study group and a control group, with 40 cases in each group. Both groups received conventional drug therapy for heart failure. The control group adopted routine nursing care, including guidance on rest and activity, proper dietary guidance, psychological nursing, and daily life care, etc. The study group received traditional Chinese medicine characteristic nursing and Qigong Liuzijue guidance in addition to routine nursing care. The Minnesota Living with Heart Failure Questionnaire (MLHFQ) was used to assess patients' quality of life, and left ventricular ejection fraction (LVEF) and six-minute walk distance (6MWD) test results were recorded.

Results At 3 months of intervention, both groups showed increased 6MWD distance and LVEF compared with admission, and the improvements in 6MWD distance and LVEF in the study group were significantly greater than those in the control group, with statistically significant differences ($P<0.01$). At 3 months of intervention, MLHFQ scores in both groups decreased compared with admission, and the MLHFQ score in the study group was lower than that in the control group, with statistically significant differences ($P<0.01$).

Conclusion Traditional Chinese medicine characteristic nursing combined with Liuzijue can improve cardiac function, alleviate clinical symptoms, and enhance long-term quality of life in patients with chronic heart failure.

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Full Text

Effect of Traditional Chinese Medicine Characteristic Nursing Combined with Liuzijue Qigong on Rehabilitation of Cardiac Function in Patients with Chronic Heart Failure

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Abstract

Objective: To investigate the effect of Traditional Chinese Medicine (TCM) characteristic nursing combined with Liuzijue Qigong on cardiac function rehabilitation in patients with chronic heart failure (CHF).

Methods: A total of [number] CHF patients hospitalized in [month] were selected and randomly divided into a study group and a control group, with [number] cases in each group. Both groups received routine drug therapy for heart failure during hospitalization. The control group received routine nursing care, including guidance on rest and activity, dietary counseling, psychological support, and daily living assistance. The study group received TCM characteristic nursing and Liuzijue Qigong guidance in addition to routine care. The Minnesota Living with Heart Failure Questionnaire (MLHFQ) was used to assess quality of life, and left ventricular ejection fraction (LVEF) and six-minute walk test (MWD) results were recorded.

Results: At [number] months of intervention, MWD distance and LVEF increased compared with admission in both groups, and the study group showed significantly greater improvement in MWD distance and LVEF compared with the control group ($P <$ [value]). At [number] months, MLHFQ scores decreased compared with admission in both groups, and the study group had lower MLHFQ scores than the control group ($P <$ [value]).

Conclusion: TCM characteristic nursing combined with Liuzijue Qigong can improve cardiac function, alleviate clinical symptoms, and enhance long-term quality of life in patients with chronic heart failure.

Keywords: Traditional Chinese Medicine characteristic nursing; Liuzijue Qigong; chronic heart failure; cardiac function; quality of life

Introduction

Chronic heart failure is a progressive syndrome characterized by chronic primary myocardial disease and long-term ventricular pressure or volume overload, which leads to weakened myocardial contractility, inability to maintain normal cardiac output, and ultimately results in inadequate tissue perfusion and venous congestion. The incidence of chronic heart failure is increasing annually, posing a major challenge to cardiovascular medicine in the 21st century and seriously affecting the health of approximately [missing value]% of adults worldwide. Research has shown that TCM characteristic nursing can help alleviate symptoms and improve cardiac function in chronic heart failure patients. Moreover, TCM nursing techniques are relatively simple to perform, have fewer adverse reactions, are more easily accepted by patients, and help increase patients' confidence in overcoming their disease. China's heart failure guidelines emphasize that patients with stable conditions and improved symptoms can perform regular aerobic exercise under the guidance of rehabilitation professionals to improve cardiac function and clinical symptoms and enhance quality of life. Liuzijue, or the Six-Word Formula, is an exercise method passed down from ancient China. As a breathing exercise, it can effectively improve patients' breathing difficulties and exercise tolerance by training respiratory muscles and limb muscles. The exercise intensity is appropriate and simple to learn, making it suitable for heart failure patients to learn and practice daily. This study investigates the clinical effect of using TCM characteristic nursing combined with Liuzijue to promote cardiac function rehabilitation in chronic heart failure patients.

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1. Materials and Methods

1.1 Participants

We selected [number] chronic heart failure patients hospitalized in the cardiology department in [month] and registered their information after obtaining informed consent. Inclusion criteria were: (1) met diagnostic criteria for chronic heart failure; (2) NYHA cardiac function classification [missing]; (3) educational level of primary school or above, able to communicate normally; (4) could cooperate with treatment and adhere to exercise. Exclusion criteria were: (1) patients with mental illness; (2) patients with other serious diseases such as cancer or severe renal insufficiency requiring long-term dialysis; (3) patients unable to cooperate with the study. Patients were randomly divided into a study group and a control group using a random number table method. The control group comprised [number] males and [number] females with an average age of [missing] years; the study group comprised [number] males and [number] females with an average age of [missing] years. There were no statistically significant differences between the two groups in gender, age, or other general data ($P >$ [value]), indicating comparability.

1.2 Interventions

Both groups received routine drug therapy for heart failure. The control group received routine nursing care, which included: (1) psychological care to establish good nurse-patient relationships, provide psychological support, and reduce anxiety; (2) dietary guidance emphasizing high-protein, high-vitamin, light and easily digestible foods, avoiding spicy and stimulating foods, eating small frequent meals, maintaining bowel regularity, and avoiding straining during defecation; (3) daily living assistance to help patients familiarize themselves with the ward environment, maintaining a quiet, comfortable, and tidy environment to ensure adequate sleep; (4) activity guidance advising bed rest when experiencing chest tightness or shortness of breath, with assisted ambulation when stable; (5) close monitoring of vital signs and ECG changes, attending to patient complaints, monitoring for dyspnea, daily morning weight measurement, and recording 24-hour fluid intake and output; (6) medication guidance for cardiac function improvement drugs, controlling infusion rate and volume, and closely observing for adverse reactions; and (7) disease education about relevant knowledge, emphasizing treatment of primary disease, and avoiding triggers such as infection, overexertion, and emotional excitement.

The study group received TCM characteristic nursing and Liuzijue Qigong guidance in addition to routine care. TCM characteristic nursing included: (1) TCM dietary guidance based on syndrome differentiation: for qi and yin deficiency with blood stasis, recommended sweet and cool foods to boost qi, nourish yin, and activate blood such as Chinese yam, lily bulbs, lotus seeds, and goji berries; for heart and lung qi deficiency with blood stasis and fluid retention, recommended warm foods to supplement heart and lung, activate blood such as lotus seeds, honey, jujubes, peanuts, and brown sugar with white fungus; for yang deficiency with blood stasis and water retention, recommended warm and hot foods to warm yang, activate blood, and promote diuresis such as sea cucumber, mutton, peach kernels, wood ear mushrooms, jujubes, and winter melon; for phlegm and lung congestion, recommended tangerine peel and coix seed porridge to ventilate lung and resolve phlegm. (2) TCM nursing techniques: during dyspnea episodes, strengthen rounds and closely monitor condition, massage Fengmen (BL12), Feishu (BL13), Hegu (LI4) and other acupoints for 3-5 minutes each, 2 times daily to ventilate lung and relieve dyspnea; for constipation, increase honey, fruits, and high-fiber foods, massage abdominal acupoints including Zhongwan (CV12), Zhongji (CV3), Guanyuan (CV4) for 3-5 minutes each; for cold limbs, daily foot baths with mugwort decoction to warm yang and unblock vessels and promote circulation.

Liuzijue Qigong was taught by professionally trained and certified nursing staff. Hospitalized heart failure patients practiced the six sounds ("Xu, He, Hu, Chui, Xi, Shen") starting at [frequency] times daily for [duration] minutes each session. If patients experienced palpitations, chest tightness, or discomfort, exercise was immediately stopped. After one week of guidance, patients gradually transitioned to [frequency] times daily (morning and evening) for [duration]

minutes per session for three months. The exercise method included: (1) posture: standing with feet shoulder-width apart, head and neck upright, chest slightly withdrawn, back straight, waist and hips relaxed, knees slightly bent, whole body relaxed, breathing natural; (2) breathing method: natural abdominal breathing, exhale first then inhale, vocalize the word during exhalation while lifting the anus and contracting the kidneys, shifting body weight; (3) regulation: after vocalizing each word six times, regulate breathing for 1 minute to rest and restore natural breathing. Patients could carry portable pulse oximeters to dynamically monitor heart rate and oxygen saturation during exercise to ensure safety. During hospitalization, nurses assisted and guided exercise; after discharge, patients received guidance via telephone or WeChat.

1.3 Outcome Measures

We used the six-minute walk test (MWD), echocardiography, and the Minnesota Living with Heart Failure Questionnaire (MLHFQ) to evaluate cardiac function and treatment outcomes. The MWD required patients to walk as quickly as possible in a straight corridor, measuring walking distance at baseline, [timepoints]. Echocardiography recorded left ventricular ejection fraction (LVEF) at baseline, [timepoints]. The MLHFQ involves 21 questions regarding diet, rest and activity, psychological status, interpersonal relationships, and heart failure symptoms; patients completed the questionnaire at baseline and [timepoints] under nurse guidance to ensure authentic data, with lower scores indicating better quality of life.

1.4 Statistical Methods

We used SPSS statistical software. Measurement data were expressed as mean ± standard deviation (x±s) and compared between groups using independent samples t-test. $P <$ [value] was considered statistically significant.

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2. Results

At admission, there were no statistically significant differences between the two groups in MWD distance ($P >$ [value]). At [timepoints] post-intervention, MWD distance increased compared with admission in both groups, and the study group showed significantly greater improvement than the control group ($P <$ [value]) .

At admission, there were no statistically significant differences between the two groups in LVEF ($P >$ [value]). At [timepoints] post-intervention, LVEF increased compared with admission in both groups, and the study group showed significantly greater improvement than the control group ($P <$ [value]) .

At admission, there were no statistically significant differences between the two groups in MLHFQ scores ($P >$ [value]). At [timepoints] post-intervention, ML-

HFQ scores decreased compared with admission in both groups, and the study group had significantly lower scores than the control group (P < [value]) .

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3. Discussion

Statistics show that China currently has [number] million heart failure patients, with prevalence and mortality still rising. Heart failure patients experience severe symptoms, recurrent conditions, and poor prognosis, requiring repeated hospitalizations that create significant psychological and physiological stress. Patients often experience anxiety, depression, and despair, with severely decreased quality of life, imposing substantial burdens on families and society.

Traditional Chinese medicine attributes heart failure to qi and yang deficiency with blood stasis obstruction. Based on chronic heart failure symptoms, it falls under categories of "dyspnea," "palpitations," and "edema," representing a condition of root deficiency and branch excess. The pathogenesis can be summarized as "deficiency, phlegm, and water," with blood stasis as the primary manifestation, often accompanied by fluid retention and phlegm turbidity, while root deficiency is mainly qi deficiency, sometimes with yang or yin deficiency. TCM nursing includes dietary care, emotional care, and acupoint care. Emotional care can eliminate adverse emotional factors to achieve harmonious qi and blood flow and yin-yang balance. Dietary care uses TCM syndrome differentiation-based dietary therapy to regulate physiological balance. Acupoint care unblocks meridians to achieve smooth qi and blood flow. Studies have shown that TCM nursing management for cardiovascular disease patients can reduce the incidence of adverse reactions such as constipation, decrease triggering factors for heart failure and arrhythmias, and improve patients' quality of life. Moreover, TCM nursing techniques are relatively simple and more easily accepted by elderly patients.

Heart failure patients exhibit significantly decreased exercise tolerance, making early exercise training under professional guidance extremely important. Liuzijue is a breathing exercise that adjusts internal qi movement through vocalization of "Xu, He, Hu, Chui, Xi, Shen" combined with physical movement to regulate yin-yang and restore organ function. Its characteristic is using breathing guidance to fully mobilize the potential capacity of organs to resist disease and strengthen internal tissue function. Heart failure patients have pulmonary congestion, recurrent pulmonary infections, impaired gas exchange, and low activity tolerance. Liuzijue's breathing methods can mobilize intercostal muscles, chest muscles, and diaphragm movement, enhancing pulmonary gas exchange, improving chest tightness symptoms, and increasing activity tolerance. Most heart failure patients are elderly with poor learning ability and exercise tolerance. Liuzijue movements are simple and gentle, easy for elderly patients to learn and accept, and can be adjusted according to patient condition. Patients can use static breathing training while bedridden and combine breathing with limb movement when stable.

Research has shown that Liuzijue Qigong can improve cardiac function and endurance in patients, and through breathing, guidance, and mindfulness, can regulate qi flow and improve psychological status, thereby enhancing quality of life. This study applied TCM characteristic nursing and Liuzijue to heart failure patients. Results showed that LVEF and MWD distance increased in both groups compared with admission, with better outcomes in the study group at [timepoints], indicating that TCM characteristic nursing and Liuzijue can improve cardiac function and exercise tolerance. Additionally, MLHFQ scores decreased in both groups, with lower scores in the study group at [timepoints], suggesting that TCM characteristic nursing and Liuzijue can improve quality of life and reduce discomfort from heart failure symptoms such as chest tightness, dyspnea, and fatigue.

In conclusion, based on routine heart failure drug therapy and nursing care, the addition of TCM characteristic nursing combined with Liuzijue can further improve cardiac function, increase exercise tolerance, and enhance quality of life, warranting clinical promotion.

Conflict of Interest Statement: The authors declare no conflict of interest in this article.

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