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Traditional Chinese Medicine Chronic Disease Nursing Outpatient Management for Stroke Patients with Limb Dysfunction

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Date: 2024-12-03T00:00:00+00:00

Abstract

Objective: To evaluate the management effectiveness of a Traditional Chinese Medicine (TCM) chronic disease care outpatient clinic for stroke patients with limb dysfunction.

Methods: A historical control design was adopted. Sixty stroke patients with limb dysfunction treated at the outpatient clinic from January to October 2023 constituted the control group and received routine outpatient follow-up. Another 60 stroke patients with limb dysfunction treated from January to October 2024 formed the observation group, which received TCM chronic disease nursing for limb dysfunction in addition to routine care. Intervention effects were compared before intervention and at 3 and 6 months post-intervention.

Results: All 60 patients in each group completed the study and follow-up. Between-group comparisons of Fugl-Meyer Assessment scores for motor function and quality of life scores revealed statistically significant differences in time effect and interaction effect (all $P < 0.05$).

Conclusion: Implementing TCM chronic disease care outpatient clinic management for stroke patients with limb dysfunction can more effectively reduce the degree of limb dysfunction, improve patients' disease self-management ability and quality of life, and is suitable for promotion and application.

Full Text

Management of TCM Chronic Disease Nursing Clinic for Stroke Patients with Limb Dysfunction

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Funding: 2024 Chongqing Bishan District Science and Technology Plan Project (No. BSKJ2024089); 2023 Chongqing Jiangbei District Joint Medical Research Project; 2024 Chongqing Joint Medical Research General Project

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Abstract

Objective: To evaluate the effectiveness of traditional Chinese medicine (TCM) chronic disease nursing clinic management for stroke patients with limb dysfunction. **Methods:** A historical control design was employed. Sixty stroke patients with limb dysfunction who attended outpatient clinics from January to October 2023 were assigned to the control group and received routine outpatient follow-up care. Another sixty stroke patients with limb dysfunction treated from January to October 2024 constituted the observation group, which received TCM chronic disease nursing interventions in addition to standard care. Intervention outcomes were compared at baseline, 3 months, and 6 months post-intervention. **Results:** All 120 participants completed the study and follow-up assessments. Significant differences were observed between groups in Fugl-Meyer Assessment (FMA) scores and quality of life scores, with statistically significant time effects and interaction effects (all $P < 0.05$). **Conclusion:** Implementing TCM chronic disease nursing clinic management for stroke patients with limb dysfunction can more effectively alleviate the degree of limb dysfunction, improve disease self-management capabilities, and enhance quality of life, making it suitable for broader clinical application.

Keywords: Stroke; Limb dysfunction; Chronic disease management; Nursing clinic; TCM nursing

Introduction

Stroke, also known as cerebrovascular accident, is caused by the imbalance of yin-yang and reversal of qi and blood in the body, representing the leading cause of death and disability among adults in China. Research indicates that 70%–80% of stroke survivors are left with disabling conditions that prevent independent living, and only approximately 12% of patients regain basic activities of daily living within the first week post-onset [1][2]. These deficits severely impact patients' self-care abilities and quality of life, imposing substantial burdens on patients, families, and society. Studies have demonstrated that chronic disease management can improve activities of daily living and effectively ameliorate

stroke-related disabilities [3]. TCM non-pharmacological chronic disease management, based on the “preventive treatment” philosophy, involves continuous monitoring, periodic assessment, and comprehensive intervention for chronic non-communicable diseases and their risk factors, significantly promoting patient rehabilitation [4]. Our hospital established a TCM nursing clinic in 2019, subsequently developing a TCM chronic disease management clinic that implements TCM non-pharmacological therapies and regular follow-up for stroke patients with limb dysfunction, yielding promising outcomes as reported herein.

Methods

1.1 General Information

This study employed a historical control design. Stroke patients with limb dysfunction who attended the outpatient clinic of the First Affiliated Hospital of Chongqing University of Traditional Chinese Medicine between January–October 2023 and January–October 2024 were selected as participants. **Inclusion criteria:** (1) Diagnosed with stroke via cranial CT or MRI and confirmed limb dysfunction by a specialist; (2) Stable condition and vital signs with ability to cooperate with treatment; (3) Not concurrently participating in other therapeutic studies; (4) Provided informed consent. **Exclusion criteria:** (1) Consciousness, psychiatric, or audiovisual impairments; (2) Limb dysfunction due to other causes such as surgery or trauma; (3) Malignant tumors or severe diseases of the cardiovascular, cerebrovascular, hepatic, renal, or hematopoietic systems. **Dropout criteria:** Patients who withdrew due to condition changes or were lost to follow-up. A total of 120 patients were enrolled, with 60 patients from January–October 2023 assigned to the control group and 60 patients from January–October 2024 assigned to the observation group. All participants completed the study as required. Comparison of baseline characteristics between groups is presented in .

1.2 Intervention Methods

The control group received routine outpatient follow-up care after discharge, including: (1) Following the department’s WeChat public account “Acupuncture Science Popularization Base”; (2) Joining the “Stroke Limb Dysfunction Patients” chronic disease management WeChat group administered by one specialist physician and one clinic nurse; (3) Receiving routine disease management covering daily living, diet, medication, rehabilitation training, psychological support, and complication prevention; (4) Receiving regular health education videos pushed by specialized chronic disease nurses; (5) Having questions answered and guidance provided via WeChat; (6) Receiving telephone follow-up at 3 and 6 months post-intervention with reminders for outpatient appointments.

The observation group received TCM chronic disease nursing management

through the TCM chronic disease nursing clinic in addition to the control group interventions, as detailed below.

1.2.1 Team Building and Patient Record Establishment Clinic nurses were required to have: \$ \$10 years of specialized experience; senior nurse practitioner or higher title; provincial-level or above TCM specialist nurse certificate/chronic disease management specialist nurse certificate; or TCM nursing training completion certificate from municipal-level or above medical institutions; solid theoretical foundation and operational skills; strong communication abilities; and teaching and research capabilities. Four nurses were selected (one chief nurse, two TCM specialist nurses, one chronic disease management specialist nurse, and one stroke specialist nurse). Clinic hours were Monday, Wednesday, and Friday afternoons. After specialist physician diagnosis, clinic nurses conducted comprehensive assessments based on patient condition and rehabilitation needs, including complete evaluation, TCM syndrome differentiation, dietary guidance according to syndrome type, emotional regulation, TCM characteristic treatment and nursing, health education, and regular follow-up. For first-time patients, clinic nurses performed comprehensive assessments, invited them to join the TCM chronic disease management WeChat group, and established health records. The Fugl-Meyer Assessment (FMA) [5][6] and SF-36 scale [7] were used to evaluate self-care ability, motor function, and quality of life, with scores entered into the electronic database and paper records maintained. Initial visits required completion of TCM chronic disease-related health education with documentation.

1.2.2 TCM Characteristic Treatment and Nursing for Stroke Limb Dysfunction Clinic nurses comprehensively assessed limb dysfunction and performed TCM syndrome differentiation, then prescribed TCM characteristic treatments in coordination with physicians. For limb dysfunction, fire dragon cupping therapy was used to warm meridians and unblock collaterals, alternating with bamboo salt umbilicus moxibustion to dispel cold and disperse stagnation while mobilizing whole-body qi and blood. Both therapies were administered twice weekly for one hour per session over three months.

Fire Dragon Cupping Therapy: A small fire dragon cup made of xuan stone and purple clay (Shenzhen Deming Health Management Co., Ltd., product registration No.: Minxia Medical Device 20180337) was used with 30:1 pure qiai moxa sticks (20 mm × 20 mm) as 配套. Based on etiology and pathogenesis, acupoints were selected along meridians: from the Hand Yangming Large Intestine Meridian (Shangyang, Hegu, Yangxi, Shousanli, Quchi, Binao, Jianyu) to dredge meridians and activate blood circulation, and from the Foot Shaoyang Gallbladder Meridian (Xuanzhong, Yanglingquan, Fengshi, Huantiao, Jianjing, Fengchi) to regulate whole-body qi flow and expel toxins and stasis. The six-step manipulation technique included: “meridian soothing and qi regulating, bilateral palm pushing, cup traveling, cold dispelling and stagnation dispersing, holistic kneading and scraping, and warm ironing.” With the patient in

a comfortable position, qiai essential oil was applied to the affected limb. The practitioner held the cup with fingers in a “C” shape around the outer cup body, with the index finger placed at the cup bottom. Using dotting, pressing, ironing, pushing, and kneading techniques, the cup was moved from proximal to distal along the affected limb, repeated multiple times, with enhanced stimulation at key acupoints using dotting, pressing, kneading, and ironing. Temperature was adjusted to patient tolerance for one hour per session.

Bamboo Salt Umbilicus Moxibustion: Patients were placed in supine position. The Shenque (CV8) acupoint was selected. The umbilicus and surrounding area (approximately 10 cm × 10 cm) were disinfected with 75% alcohol. Approximately 3 g of coarse salt was placed in the umbilicus, level with the surrounding skin. A bamboo bowl was positioned over Shenque, filled with approximately 50 g of coarse salt, and moxa cones were placed on the salt and ignited. After each cone burned out, it was replaced, totaling three cones over one hour per session, with warmth adjusted to patient comfort.

1.2.3 “Health Express” Series Education Clinic nurses accessed the “Health Express” column through the hospital’s official WeChat public account homepage, pushing weekly health knowledge to the chronic disease management WeChat group. Monthly health lectures for stroke limb dysfunction patients were conducted in our department’s learning room, covering disease etiology and pathogenesis, syndrome differentiation and corresponding nursing care, daily living guidance, rehabilitation training methods, dietary therapy according to syndrome type, emotional therapy, and medication guidance.

1.2.4 Regular Follow-up Follow-up Content: The chronic disease management WeChat group was managed by administrators who promptly answered patient questions, assessed individual health needs, and developed personalized dietary, medication, and rehabilitation plans, including dietary contraindications, proper limb positioning, active and passive exercise training to regulate whole-body qi and blood circulation and promote blood flow.

Key Points: Clinic nurses documented each treatment session’s condition assessment, treatment details, and syndrome-based nursing care in patient records. Interventions could be discontinued upon patient recovery, with education provided on disease prevention and recurrence. Patients were instructed to return to the nursing clinic for reassessment at 3 and 6 months post-intervention. Patients with persistent limb dysfunction at 3 months continued management at the TCM chronic disease nursing clinic, with referral to medical outpatient or inpatient services when necessary.

1.3 Evaluation Methods

Both groups were evaluated by researchers at baseline, 3 months, and 6 months post-intervention using: (1) **Limb Motor Function:** Fugl-Meyer Assessment

(FMA) [5] evaluating reflex activity, flexor synergies, extensor synergies, movements with synergies, and movements without synergies, with upper extremity scores ranging 0–66 and lower extremity scores 0–34, where higher scores indicate better motor function [6]; (2) **Quality of Life:** SF-36 scale comprising physical and mental health dimensions (four items each). Physical health includes physical functioning (30 points), role-physical (8 points), bodily pain (12 points), and general health (25 points). Mental health includes vitality (24 points), social functioning (10 points), role-emotional (6 points), and mental health (30 points), with total scores ranging 0–145, where higher scores indicate better quality of life [7].

1.4 Statistical Methods

SPSS 22.0 software was used for statistical analysis. Categorical data were described using frequency and composition ratios, while continuous data were expressed as mean \pm standard deviation. t-tests, ² tests, and rank-sum tests were applied with a significance level of $\alpha = 0.05$.

Results

2.1 Comparison of Limb Motor Function Scores Between Groups at Different Time Points

As shown in , significant differences were observed between groups in upper extremity, lower extremity, and total FMA scores, with significant time effects and interaction effects (all $P < 0.001$).

2.2 Comparison of Quality of Life Scores Between Groups at Different Time Points

As shown in , significant differences were observed between groups in physical health dimension, mental health dimension, and total quality of life scores, with significant time effects and interaction effects (all $P < 0.001$).

Discussion

3.1 TCM Chronic Disease Nursing Clinic Management Promotes Limb Function Recovery

Our findings demonstrate significant time and interaction effects (all $P < 0.05$) in FMA scores, upper extremity function, lower extremity function, and total motor function scores between groups, indicating that TCM chronic disease nursing clinic management facilitates limb function recovery in stroke patients. Domestic researchers Li Zeyu et al. [11] and Guan Yue et al. [12] have similarly

reported that integrated Chinese and Western medicine chronic disease management plays a crucial role in improving quality of life and preventing stroke recurrence. Given stroke's high disability and recurrence rates, treatment should emphasize personalized assessment, targeted intervention planning, health education, and long-term follow-up. This study first strengthened patients' correct understanding of their disease and promoted awareness of the nursing clinic platform's importance, thereby enhancing patient motivation and compliance. Second, during clinic visits, professional assessment scales were used for comprehensive evaluation, and clinic nurses performed TCM syndrome differentiation based on medical history to guide the implementation of characteristic fire dragon cupping and bamboo salt umbilicus moxibustion. Grounded in TCM meridian and acupoint theory, key acupoints along the Hand Yangming and Shaoyang meridians were selected, with multiple manipulation techniques (dotting, pressing, ironing, pushing, kneading) applied to affected limbs to mobilize whole-body qi and blood, dredge meridians, and activate blood circulation, effectively reducing limb dysfunction. These findings align with studies by Wang Yueying [13] and Zeng Qiuxia [14] on fire dragon cupping for stroke limb dysfunction.

3.2 TCM Chronic Disease Nursing Clinic Management Improves Patient Quality of Life

Our results show significant time and interaction effects (all $P < 0.05$) in physical health dimension scores, mental health dimension scores, and total quality of life scores between groups, demonstrating that TCM chronic disease nursing clinic management improves physical health, mental health, and overall quality of life in stroke patients, consistent with other domestic studies on TCM therapies for stroke limb dysfunction [15][16]. These benefits likely stem from the clinic's integration of TCM holistic concepts with modern rehabilitation theory through multifaceted approaches. From a "knowledge-attitude-practice" perspective, the program established correct disease cognition through regular health lectures, face-to-face follow-ups, and online consultations. Health education was provided during TCM treatments with real-time assessment to correct misconceptions and behaviors, integrating disease health knowledge into patients' daily lives. This approach improved treatment compliance and self-management capabilities while fostering healthy habits [17]. Consequently, TCM chronic disease nursing clinic management enabled patients to develop correct disease understanding, positive treatment beliefs, and healthy lifestyle behaviors, ultimately enhancing quality of life.

Conclusion

This study demonstrates that integrating stroke patients with limb dysfunction into TCM chronic disease nursing clinic management promotes limb function recovery and improves quality of life and self-management capabilities. Future efforts will focus on integrating information systems into the stroke limb dys-

function TCM chronic disease nursing clinic to further enhance service quality through digital means.

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