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Analysis of the Effect of "Moxibustion-Acupoint Application-Rehabilitation Training" Three-in-one Nursing Model on Patients with Cerebral Infarction

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Abstract: *Objective:* To evaluate the value of a tripartite nursing model (moxibustion-acupoint application-rehabilitation training) in the rehabilitation of patients with cerebral infarction. *Methods:* A total of 80 patients with cerebral infarction admitted to the hospital from May 2024 to May 2025 were enrolled in the study. They were randomly divided into two groups using a random number table. The control group (n = 40) received conventional rehabilitation training, while the observation group (n = 40) received the tripartite nursing model. The daily living ability and neurological impairment were compared between the two groups. *Results:* The observation group scored higher in daily living ability than the control group ($P < 0.05$), and the observation group scored lower in neurological impairment than the control group ($P < 0.05$). *Conclusion:* Implementing the tripartite nursing model in the rehabilitation of cerebral infarction patients can promote the recovery of damaged neural tissues, thereby improving their daily living ability, which is worthy of reference.

Keywords: moxibustion; acupoint application; rehabilitation training; triad nursing model; cerebral infarction

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1. Introduction

Cerebral infarction, as one of the most common types of stroke, is characterized by high rates of morbidity, disability, recurrence, and mortality. Currently, it has become one of the leading causes of death and disability in adults worldwide[1]. Although the mortality rate has significantly decreased in recent years due to advancements in vascular recanalization techniques such as acute thrombolysis and thrombectomy, 70%–80% of surviving patients still exhibit varying degrees of functional impairment, severely affecting their daily living activities and quality of life, and increasing their dependence on care[2]. Neurological recovery after cerebral infarction is a complex and protracted process, involving physiological aspects such as the repair of damaged neurons, compensation and remodeling of neural pathways. The core concept of modern rehabilitation medicine is that standardized rehabilitation training can promote functional recovery, reduce disability, and improve self-care abilities. However, single rehabilitation training alone cannot meet the multidimensional and profound functional recovery needs of patients. Traditional Chinese medicine (TCM) nursing has unique advantages in the management of post-stroke sequelae. For instance, moxibustion, which utilizes the warm effect produced by burning

moxa to stimulate specific acupoints, can warm and unblock meridians, activate blood circulation to resolve stasis, and support vital energy[3]. Acupoint application involves applying herbal ointments to corresponding acupoints, where the dual effects of drug absorption through the skin and acupoint stimulation can achieve the goals of unblocking meridians, harmonizing qi and blood, and alleviating pain. Therefore, integrating modern rehabilitation training with TCM-specific nursing techniques to establish a tripartite comprehensive nursing model is essential. To clarify the specific value of this approach, this study included 80 patients with cerebral infarction admitted to the hospital from May 2024 to May 2025, and the results are reported as follows.

2. Materials and methods

2.1. General information

A total of 80 patients with cerebral infarction admitted to the hospital from May 2024 to May 2025 were enrolled in the study. They were randomly divided into two groups using a random number table, with 40 cases in each group. The control group consisted of 22 males and 18 females, aged 50–78 years (mean age: 54.11 ± 1.26 years). The observation group comprised 23 males and 17 females, aged 51–78 years (mean age: 54.16 ± 1.22 years). No statistically significant differences were observed in the baseline characteristics between the two groups ($P > 0.05$). This study was approved by the hospital ethics committee.

Inclusion criteria: (1) Confirmed diagnosis of cerebral infarction (ischemic stroke) by imaging examinations such as cranial CT or MRI; (2) In the recovery phase (non-acute phase) of cerebral infarction with stable vital signs; (3) Presence of neurological deficits (e.g., motor dysfunction, language impairment, etc.); (4) Absence of severe cognitive impairment and ability to follow rehabilitation training instructions.

Exclusion criteria: (1) Presence of organ failure (e.g., heart, liver, kidney), malignant tumors, hematologic disorders, or systemic infections; (2) Concurrent neurological disorders (e.g., Parkinson's disease, Alzheimer's disease); (3) Pre-existing history of limb motor dysfunction, cognitive impairment, or psychiatric disorders prior to onset; (4) Complications such as cerebral hemorrhage, epilepsy, or severe cerebral edema; (5) Skin lesions, allergic constitution, or hypersensitivity to moxa, making moxibustion or herbal patch application intolerable; (6) Hemorrhagic tendency (e.g., thrombocytopenia) or concurrent use of anticoagulant medications.

2.2. Methods

The observation group adopted a three-in-one nursing approach, with specific measures as follows: (1) Moxibustion, basic acupoints: Zusanli (Shuang), Sanyinjiao (Shuang), Quchi (Shuang), Shenque, Guanyuan, and Mingmen. For upper limb mobility issues, add Jianyu, Hegu, Waiguan, and Shousanli. For lower limb mobility issues, add Huanjiao, Yanglingquan, Xuanzhong, and Chengshan. For swallowing disorders, add Tiantu, Lianquan, and Renying. For cognitive disorders, add Baihui and Sishencong. During suspended moxibustion, ignite the moxa stick and place it 3-5 cm away from the acupoint skin, ensuring local warmth and redness without burning pain. Each acupoint is moxibusted for 10-15 minutes, once daily for 6 days, with a rest day. (2) Acupoint application: For qi deficiency and blood stasis type, select powdered Astragalus, Angelica sinensis, Chuanxiong, and Safflower, mixed with ginger juice. For phlegm and turbidity obstructing collaterals type, select powdered Pinellia, Arisaema, and Acorus, mixed with honey. For yin deficiency and wind agitation type, select powdered Gastrodia, Uncaria, and white peony root, mixed with vinegar. Prepare medicinal cakes with a diameter of 2 cm and a thickness of 0.5 cm. The selected acupoints are basically consistent with moxibustion points. Each session selects 2-4 acupoints as a group, rotating the next day. Avoid skin breaks. Clean the acupoint skin with warm water before application, remove oil and dirt, and apply the medicinal cake to the acupoint. Secure with medical adhesive tape for 4-6 hours (extend to 8 hours for cold syndrome). Apply once daily for 6 days, with a 4-week course. Observe skin reactions after application. Discontinue immediately if itching or blisters occur. (3) Rehabilitation Training: ① Acute Phase (1-2 weeks after onset): Nurses assist with passive exercises, including limb joint flexion, extension, and rotation, 3-5 repetitions per joint, twice

daily. When positioning the unaffected limb, the affected side should be in a supine position, avoiding a semi-recumbent position, with repositioning every 2 hours. Bedside passive movements include shoulder abduction and external rotation, forearm supination, wrist dorsiflexion, and finger extension. Active deep breathing exercises (inhale deeply-hold breath-exhale suddenly) are performed to enhance glottal closure. During bridge exercises, perform double or single bridges, 10 repetitions per set. ② Recovery Phase (2 weeks to 6 months after onset): Sitting training begins with a 30° elevation from the head of the bed, gradually increasing by 10° per session until reaching 90°. Sitting balance training involves lateral and anterior-posterior weight shifts. Standing training requires standing at the bedside with feet shoulder-width apart and weight evenly distributed. Standing balance training progresses from supported standing to independent standing, with gradually extended duration. Walking training progresses from parallel bar walking to walker-assisted walking, then to four-legged crutches, single crutches, and finally independent walking. Step-up/down training requires the unaffected side to ascend first and the affected side to descend first. Upper limb function training includes shoulder internal rotation, adduction, and flexion until the shoulder joint is reached, followed by 8 repetitions of elbow extension to 90°, held for 10 seconds. Wall push exercises involve facing the wall with elbows extended and palms pressed against it. Swallowing function training involves oral muscles performing puffing, pouting, tongue rolling, and tongue extension with lateral movements. Ice-cotton stick stimulation of the tongue base and posterior pharyngeal wall induces the swallowing reflex. Each training session lasts 30-40 minutes, twice daily, until the patient does not experience significant fatigue. Post-training heart rate should not exceed resting heart rate +20 beats per minute. Stop immediately if dizziness, palpitations, or pallor occurs.

The control group received conventional rehabilitation training, with specific measures as described in the observation group.

2.3. Observation Indicators

(1) The ability of daily living is assessed using the ADL scale before and after nursing care, with a score range of 0-100 points. A higher score indicates stronger daily living ability[4].

(2) The degree of neurological impairment was assessed using the NIHSS scale before and after nursing care, with scores ranging from 0 to 42, where higher scores indicate more severe neurological impairment[5].

2.4. Statistical methods

Data were processed using SPSS 28.0 statistical software. Measurement data were expressed as mean ± standard deviation($\bar{x} \pm s$) and analyzed by t-test; count data were expressed as cases (percentage) and analyzed by $\chi 2$ test. A P-value < 0.05 was considered statistically significant.

3. bear fruit

3.1. Comparison of Activities of Daily Living (ADL) between the two groups

Before intervention, the ADL scores of the two groups were compared, with P > 0.05; after intervention, the ADL scores of the observation group were higher than those of the control group (P < 0.05). See **Table 1**.

Table 1. Comparison of activities of daily living (adl) between the two groups ($\bar{x} \pm s$)

group	Before intervention	After the intervention
Observation group (n = 40)	51.46 ± 3.14	88.25 ± 4.16
Control group (n = 40)	51.47 ± 3.25	81.24 ± 3.16
t price	0.014	8.487
P price	0.989	< 0.001

3.2. Comparison of the degree of neurological impairment between the two groups

Before intervention, the NIHSS scores of the two groups were compared, with P > 0.05; after intervention, the NIHSS score of the observation group was lower than that of the control group (P < 0.05). See **Table 2**.

Table 2. Comparison of the degree of neurological impairment between the two groups ($\bar{x} \pm s$), points

group	Before intervention	After the intervention
Observation group (n = 40)	22.11 ± 2.14	10.42 ± 3.16
Control group (n = 40)	22.14 ± 2.46	15.33 ± 2.19
t price	0.058	8.077
P price	0.954	< 0.001

3. Discussion

As one of the common cerebrovascular diseases, cerebral infarction has a high disability rate and significantly impacts patients 'quality of life[6]. In clinical nursing practice, single intervention measures are often insufficient to meet patients' multidimensional rehabilitation needs. In recent years, a comprehensive nursing model integrating various traditional and modern rehabilitation methods has gained increasing attention. This study explores the application of a "trinity" nursing intervention combining moxibustion, acupoint application, and rehabilitation training in the rehabilitation of cerebral infarction patients.

The data indicate that "the observation group had higher ADL scores and lower NIHSS scores compared to the control group," demonstrating the high feasibility of the integrated nursing intervention (moxibustion-acupoint application-rehabilitation training) in improving the prognosis of patients with cerebral infarction.

Moxibustion, as one of the external therapies in Traditional Chinese Medicine (TCM), achieves the effects of warming and unblocking meridians and activating blood circulation to resolve stasis by thermally stimulating specific acupoints. In the nursing care of patients with cerebral infarction, moxibustion commonly targets acupoints such as Baihui (GV20), Zusanli (ST36), and Quchi (LI11). The Baihui acupoint, located at the vertex of the head and connected to the Governor Vessel, can enhance yang energy and improve mental clarity through moxibustion[7]. Zusanli, a combined point of the Stomach Meridian of Foot-Yangming, can strengthen the spleen, replenish qi, and enhance bodily functions. Quchi, belonging to the Large Intestine Meridian of Hand-Yangming, has the effects of unblocking meridians and relieving limb spasms. Acupoint application involves applying medicinal paste to acupoints, where the drug is absorbed through the skin to exert its therapeutic effects. For cerebral infarction patients, herbs with blood-activating, collaterals-unblocking, wind-dispelling, and phlegm-resolving properties, such as Chuanxiong (Ligusticum chuanxiong), Danshen (Salvia miltiorrhiza), and Borneol (Borneol), are often selected. These herbs are ground into powder and mixed with honey or vinegar to form a paste, which is then applied to acupoints such as Yongquan (KI1), Neiguan (PC6), and Hegu (LI4). This method is simple to perform, well-tolerated by patients, and can provide sustained stimulation to acupoints, enhancing drug penetration and thereby assisting in improving limb function and emotional state. Rehabilitation training is a core component of modern cerebral infarction rehabilitation, including limb function training, balance training, and daily living skills training. In the "trinity" model, rehabilitation training should be coordinated with moxibustion and acupoint application. Targeted passive or active limb exercises, such as joint flexion and extension, muscle massage, and gait training, should be performed during the period of accelerated qi and blood circulation after moxibustion or application. Training should follow the principle of individualization, with plans tailored to the patient's degree of disability, gradually increasing intensity and complexity. This not only promotes the recovery of muscle strength and coordination but also enhances the patient's self-confidence and improves their ability to perform daily activities[8].

In conclusion, the integrated nursing approach of "moxibustion-acupoint application-rehabilitation training" provides a multidimensional rehabilitation pathway for patients with cerebral infarction. Through the synergistic effects of meridian stimulation, drug penetration, and functional exercise, it promotes the recovery of neurological and limb functions, making it a valuable reference.

Disclosure statement

The author declares no conflict of interest.

References

[1] Lin MX, Chen LX, Huang LH, et al., 2025, Effects of Moxibustion Combined with Acupoint Patch Application on Cough and Chemotherapy Symptom Complex in Patients with Lung Cancer Undergoing Chemotherapy. Guangxi Journal of Traditional Chinese Medicine, 48(3): 27-29.

[2] Rao LX, Huang CJ, Huang CZ, et al., 2023, Application of Traditional Chinese Medicine Acupoint Patching and Acupoint Moxibustion Combined with Pulmonary Rehabilitation Training in Patients with Chronic Obstructive Pulmonary Disease. China Medical Innovation, 20(21): 129-133.

[3] Chen YR, Yao SS, 2025, The Effect of Moxibustion Combined with Acupoint Application on Headache, Dizziness Symptoms and Quality of Life in Patients with Vertigo. Medical Equipment, 38(2): 95-98.

[4] Peng QJ, Shi YY, Hong L, et al., 2024, Application of Moxibustion Followed by Acupoint Application Combined with Kegel Exercises in Elderly Stroke Patients with Urinary Incontinence. Chinese Journal of General Practice, 22(11): 1942-1944.

[5] Xie TT, Li HY, 2025, Analysis of the Effects of Acupoint Application Combined with Moxibustion on Arteriovenous Fistula in Patients with Chronic Renal Failure. Journal of Anhui Medical College, 24(4): 138-141.

[6] Bu MD, Yang L, 2023, Application of Traditional Chinese Medicine Nursing Techniques in Rehabilitation Care for Stroke Patients with Hemiplegia. Integrated Traditional Chinese and Western Medicine Nursing, 9(3): 5.

[7] Wang L, Gu H, Yu S, et al., 2024, Meta-Analysis on the Effect of Traditional Chinese Medicine Nursing on Constipation Improvement and Quality of Life in Post-Stroke Constipation Patients. Changzhou Practical Medicine, 40(2): 107-114.

[8] Guan MM, 2025, The Effect of Moxibustion Combined with Acupoint Application on Postoperative Sleep Quality in Elderly Patients with Hypertensive Intracerebral Hemorrhage. China Modern Drug Application, 19(12): 127-130.