

## Efficacy Observation of Warm Moxibustion and Guasha Therapy for Post-stroke Limb Dysfunction

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### Abstract

**Objective:** To observe the clinical efficacy of warm moxibustion and gua sha therapy for post-stroke limb dysfunction. **Methods:** Sixty patients with post-stroke limb dysfunction admitted to the Third Ward of the Department of Encephalopathy in our hospital were randomly divided into two groups. The control group (30 cases) received moxibustion therapy combined with conventional treatment, while the study group (30 cases) received warm moxibustion and gua sha therapy combined with conventional treatment. The intervention effects, limb and motor functions, and Barthel Index were analyzed for both groups. **Results:** Compared with the control group, the total effective rate of the study group was significantly increased ( $p < 0.05$ ). The MRC, TCT, and Barthel scores of the study group were higher than those of the control group ( $p < 0.05$ ). **Conclusion:** Warm moxibustion and gua sha therapy combined with conventional treatment can effectively improve post-stroke limb dysfunction, enhance patients' limb function and quality of life, is suitable for clinical promotion, and holds promising prospects.

### Full Text

#### Observation on Therapeutic Effect of Warm Moxibustion and Scraping Therapy on Limb Dysfunction After Stroke

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### Abstract

**Objective:** To observe the clinical efficacy of warm moxibustion and scraping therapy in treating limb dysfunction after stroke. **Methods:** Sixty patients with post-stroke limb dysfunction admitted to the Third Ward of the Encephalopathy

Department in our hospital were randomly divided into two groups. The control group (30 cases) received conventional moxibustion combined with routine treatment, while the study group (30 cases) received warm moxibustion and scraping therapy combined with routine treatment. The intervention effects, limb and motor functions, and Barthel Index were analyzed for both groups.

**Results:** Compared with the control group, the total effective rate of the study group was significantly higher ( $p<0.05$ ). The MRC, TCT, and Barthel scores of the study group were also higher than those of the control group ( $p<0.05$ ).

**Conclusion:** Warm moxibustion and scraping therapy combined with routine treatment can effectively improve limb dysfunction after stroke, enhance patients' limb function and quality of life, and is suitable for clinical promotion with promising prospects.

**Keywords:** Warm moxibustion and scraping therapy; Stroke; Limb dysfunction

## Introduction

Post-stroke limb dysfunction is a condition resulting from damage to brain cells and nerves caused by sudden cerebral hemorrhage or ischemia, leading to motor impairment in patients [1]. The incidence of motor dysfunction after stroke accounts for approximately 70% of cases [2], severely affecting patients' quality of life. Clinically, conventional moxibustion combined with routine treatment is commonly used to improve post-stroke limb dysfunction. Our hospital newly introduced warm moxibustion and scraping therapy, a characteristic technique of traditional Chinese medicine, last year. To observe the clinical efficacy of this therapy in treating post-stroke limb dysfunction, we selected 60 patients with post-stroke limb dysfunction admitted to the Third Ward of the Encephalopathy Department from August 2022 to July 2023 as study subjects, with 30 cases in the study group receiving warm moxibustion and scraping therapy combined with routine treatment. The results are reported as follows.

## Methods

### 1.1 General Information

We collected 60 patients with post-stroke limb dysfunction admitted to the Third Ward of the Encephalopathy Department from August 2022 to July 2023, who were randomly divided into two groups of 30 cases each. The control group comprised 20 males and 10 females, with a mean age of  $(59.07\pm 9.18)$  years and a mean disease course of  $(10.30\pm 4.35)$  years. The study group comprised 20 males and 10 females. There were no significant differences in clinical data between the two groups ( $P>0.05$ ), making them comparable.

## 1.2 Diagnostic Criteria

The diagnostic criteria for this study [3] were: (1) Main symptoms: limb weakness, numbness, hemiplegia, dizziness, and tinnitus; (2) Secondary symptoms: insomnia, dry stool, five-center heat, dark tongue, white greasy coating, and wiry slippery pulse.

## 1.3 Inclusion and Exclusion Criteria

**Inclusion criteria:** (1) Meeting the above diagnostic criteria; (2) Patients with limb dysfunction after stroke; (3) Age  $\geq$  70 years; (4) Clear consciousness and stable vital signs; (5) Patients and their families voluntarily participated in this study.

**Exclusion criteria:** (1) Spinal cord diseases such as spinal cord compression that could cause unilateral limb weakness; (2) Limb dysfunction caused by trauma, Parkinson's disease, or brain space-occupying lesions; (3) Patients with complete loss of limb function or bedridden status unable to undergo rehabilitation training; (4) Patients with other comorbidities affecting limb function; (5) Poor tolerance or inability to fully cooperate with traditional Chinese medicine nursing throughout the treatment course.

## 1.4 Interventions

**1.4.1 Control Group** The control group received conventional moxibustion combined with routine treatment. Routine treatment included daily local hot compresses and muscle relaxation applied by nursing staff to the affected limbs of patients.

**1.4.2 Study Group** The study group received warm moxibustion and scraping therapy combined with routine treatment. **Warm moxibustion and scraping therapy:** (1) Acupoint selection: For the affected upper limb, acupoints along the Hand Yangming Large Intestine Meridian, Hand Shaoyang Sanjiao Meridian, and Hand Taiyang Small Intestine Meridian were selected, including Hegu (LI4), Quchi (LI11), Jianyu (LI15), Dazhui (GV14), Jianzhen (SI9), Bingfeng (SI12), and Waiguan (TE5). For the affected lower limb, acupoints along the Foot Yangming Stomach Meridian, Foot Shaoyang Gallbladder Meridian, and Foot Taiyang Bladder Meridian were selected, including Zusanli (ST36), Liangqiu (ST34), Weizhong (BL40), Chengshan (BL57), Xiyangguan (GB33), and Fengshi (GB31). (2) Procedure: Before operation, prepare and check all equipment, including moxa sticks and warm moxibustion scraping cups. Assess the skin condition of the scraping area, the patient's tolerance to pain, heat, and odor, and inquire about any history of asthma or moxa allergy. Explain the purpose, method, and effects of the operation to the patient, inform them of local sensations, and obtain their cooperation. Close doors and windows in the treatment room to protect patient privacy, maintain warmth, and avoid drafts. Assist the patient in a comfortable position, fully exposing

the warm moxibustion and scraping areas. Apply an appropriate amount of medium to the scraping area, fix the moxa cone in the scraping cup, hold the warm moxibustion scraping cup with one or both hands placed on the palm, secure the cup, and maintain an angle of less than 45° with the skin. Scraping sequence: Follow the direction of meridian flow, starting with the upper limbs then lower limbs, and the medial side then lateral side. Apply uniform pressure, gradually increasing from light to heavy, within the patient's tolerance, in a single direction without back-and-forth scraping. Scrape each area 20-30 times for 5-10 minutes until local red-purple petechiae or ecchymosis appear, or pores open; do not forcefully pursue sha formation. During the operation, observe skin sha formation, inquire about the patient's feelings, appropriately adjust technique pressure, monitor moxa cone burning, and avoid burns.

### 1.5 Observation Indicators and Efficacy Criteria

- (1) **Efficacy evaluation:** Referenced the “Criteria of Diagnosis and Therapeutic Effect of Diseases and Syndromes in Traditional Chinese Medicine” (ZY/T001.1-94): Cured: Symptoms and signs disappeared, basically able to live independently; Improved: Symptoms and signs improved, able to walk with a cane, or basically able to care for oneself; Not cured: No change in symptoms and signs.
- (2) **Limb and motor function:** Assessed using the Medical Research Council (MRC) scale and Trunk Control Test (TCT). The MRC scale uses a 6-grade muscle strength assessment, with higher scores indicating better muscle strength sensitivity. TCT is a scale for evaluating trunk control, assessing four movements: rolling to the affected side, rolling to the healthy side, sitting balance, and moving from lying to sitting position, with higher scores indicating stronger trunk control.
- (3) **Modified Barthel Index (MBI):** Used to assess activities of daily living, evaluating ten aspects including toileting, bathing, dressing, eating, mobility, and transferring, with a total score of 100. Higher scores indicate greater independence in daily living and less limb dysfunction.

### 1.6 Statistical Methods

SPSS 22.0 software was used for analysis. Measurement data were expressed as ( $\bar{x} \pm s$ ) and analyzed using t-tests. Count data were expressed as percentages and analyzed using  $\chi^2$  tests. Ranked data were analyzed using rank-sum tests.  $P < 0.05$  was considered statistically significant.

## Results

### 2.1 Efficacy Comparison

In the study group, 6 cases were cured, 21 cases improved, and 3 cases not cured, with a total effective rate of 90%. In the control group, 3 cases were cured, 19

cases improved, and 11 cases not cured, with a total effective rate of 63.33%. The study group's total effective rate was significantly higher than that of the control group, with statistically significant difference ( $p=0.044$ ). See Table 1 .

## 2.2 Comparison of Limb and Motor Function Before and After Intervention

After treatment, both groups showed improvement in MRC and TCT scores compared with before treatment, and the study group was significantly better than the control group, with statistically significant difference ( $p<0.05$ ). See Table 2 .

## 2.3 Barthel Index Comparison

After treatment, both groups showed improvement in Barthel scores compared with before treatment, and the study group was significantly better than the control group, with statistically significant difference ( $P<0.05$ ). See Table 3 .

## Discussion

According to traditional Chinese medicine theory [4], stroke is caused by blood stasis and qi deficiency, leading to muscle atrophy. Limb dysfunction caused by stroke is called hemiplegia, which often results in loss of living ability [5]. Post-stroke limb dysfunction is mainly related to wind-phlegm obstructing collaterals, collateral blockage, or qi deficiency and blood stasis causing malnourishment of collaterals.

Moxibustion can warm and unblock meridians, dispel cold pathogen, and dissipate blood stasis, thereby improving qi and blood circulation [6]. Warm moxibustion and scraping therapy is a characteristic traditional Chinese medicine therapy combining moxibustion and scraping. It stimulates meridians through the thermal therapy of moxibustion and performs scraping with scraping cups to achieve the purposes of unblocking meridians, dispelling pathogenic factors, supporting healthy qi, and harmonizing viscera. Additionally, warm moxibustion and scraping therapy can not only dispel wind, cold, and dampness, regulate qi and blood, and promote metabolism, but also improve local blood circulation, relieve pain, and activate collaterals, thereby alleviating pain and improving motor function and daily living ability [7].

In summary, on the basis of routine treatment, combined warm moxibustion and scraping therapy for post-stroke limb dysfunction offers advantages such as shortening disease course, improving therapeutic effect, and providing good long-term efficacy, which helps restore limb motor function, improve condition, and enhance patients' quality of life.

## References

- [1] Guo Y, Li Y. Research progress on acupuncture and rehabilitation training

for post-stroke spastic hemiplegia [J]. *Journal of External Therapy of Traditional Chinese Medicine*, 2021, 30(5): 86-87.

[2] Wang LD, Li JA, Zhang T, et al. *Stroke Rehabilitation Therapy* [M]. Beijing: People's Medical Publishing House, 2019: 11.

[3] Ni XJ, Chen YL, Cai YF. Evidence-based practice guidelines for integrated traditional Chinese and Western medicine in stroke (2019) [J]. *Chinese Journal of Evidence-Based Medicine*, 2020, 20(8): 901-912.

[4] Cui C, Wang PQ, Shao Y, et al. Clinical study on recovery of limb motor dysfunction after stroke using transcranial direct current stimulation aftereffects combined with eye acupuncture exercise therapy [J]. *Journal of Liaoning University of Traditional Chinese Medicine*, 2021, 23(5): 123-126.

[5] Lai S, Yu YL, Jiang JQ, et al. Observation on therapeutic effect of traditional Chinese medicine directional drug penetration combined with task-oriented training on limb dysfunction after stroke [J]. *Journal of External Therapy of Traditional Chinese Medicine*, 2023, 32(2): 7-9.

[6] Hu CH, Qi LP, Zhang YY. Clinical observation of warm acupuncture combined with scraping therapy for knee osteoarthritis [J]. *Health Research*, 2016, 36(6): 686-689.

[7] Wang X. Observation on therapeutic effect of warm moxibustion and scraping therapy for neck and shoulder pain [J]. *Journal of External Therapy of Traditional Chinese Medicine*, 2021, 30(6): 78-79.

*Note: Figure translations are in progress. See original paper for figures.*

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