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## Advances in Fire Dragon Cupping Therapy and Nursing Care for Post-stroke Shoulder-Hand Syndrome (Postprint)

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### Abstract

This article summarizes the progress in fire dragon cupping therapy and nursing care for post-stroke shoulder-hand syndrome, outlines the mechanism of action, operational methods, and key nursing points of fire dragon cupping treatment for post-stroke shoulder-hand syndrome, with the aim of providing reference for clinical nursing care of fire dragon cupping treatment for shoulder-hand syndrome.

### Full Text

## Progress in Fire-Dragon Moxibustion Therapy and Nursing Care for Post-Stroke Shoulder-Hand Syndrome

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### Abstract

This paper reviews recent research progress on fire-dragon moxibustion therapy and nursing care for shoulder-hand syndrome following stroke. We summarize the therapeutic mechanism, operational methods, and key nursing considerations of fire-dragon moxibustion for post-stroke shoulder-hand syndrome, aiming to provide clinical reference for nursing practice.

**Keywords:** stroke; shoulder-hand syndrome; fire-dragon moxibustion; acupoints; body position; psychological care

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## 1. Mechanism of Action

Shoulder-hand syndrome following stroke falls under the categories of “hemiplegia,” “bi syndrome,” and “sinew bi syndrome” in traditional Chinese medicine. The pathogenesis is characterized by deficiency in the root and excess in the branch, with liver-kidney deficiency and qi-blood insufficiency as the root, and qi stagnation, blood stasis, and water retention as the branch. Clinical literature indicates that qi deficiency and blood stasis patterns are most common in shoulder-hand syndrome, making the therapeutic principle of “tonifying qi and blood, removing stasis, and unblocking collaterals” essential for treating both root and branch.

Fire-dragon moxibustion represents a novel therapeutic approach modified from conventional cupping. It integrates multiple traditional Chinese external treatment modalities including acupoint pressure, gua sha, and moxibustion into a comprehensive therapeutic protocol. During mobile cupping, practitioners employ rolling, vibrating, pressing, and pushing maneuvers to stimulate corresponding skin areas while simultaneously utilizing the photothermal and warming radiation of moxibustion to achieve diuretic, stasis-dispelling, collateral-unblocking, qi-supplementing, and blood-activating effects. This therapy employs cupping vessels with excellent thermal conductivity, allowing reasonable temperature regulation during application to ensure treatment safety and constant temperature maintenance. The moxibustion fuel consists of pure *Artemisia argyi* from Qichun, characterized by long burning duration, strong penetration, vigorous fire, and potent medicinal effects, enabling both tonification and purgation, firmness and gentleness. This approach not only effectively reduces edema but also alleviates pain, enhances muscle strength in the affected limb, and promotes rehabilitation.

## 2. Application Method

**Preoperative Preparation** The patient assumes a prone position. The practitioner assists the patient in removing upper garments to fully expose the back and affected upper limb. Approximately mL of Qiai essential oil is applied as a lubricating medium to the corresponding skin areas. The practitioner inserts a moxa pillar into the cup, compresses and ignites it, then inverts the cup so the moxa smoke flows downward, preparing for mobile cupping.

**Fire-Dragon Cupping Techniques** Mobile cupping is performed along the Governor Vessel (from Dazhui to Yaoyangguan), Hand Yangming Large Intestine Meridian (from Futu to Shangyang), and Hand Shaoyang Sanjiao Meridian (from Tianliao to Yemen). Specific acupoints include Quchi (LI11), Jianyu

(LI15), Hegu (LI4), Yangchi (SJ4), and Zhongzhu (SJ3). The cupping sequence follows the principle of upper body before lower body, and yang regions before yin regions.

The technique comprises three specific steps:

**Step 1: Fuyang Shujing (Yang-Supporting Meridian-Dredging Method)**

The cup teeth are positioned at a  $^{\circ}$  angle to the skin. The practitioner's hypothenar eminence remains in contact with the skin while moving the cup downward along the Governor Vessel, Hand Yangming Large Intestine Meridian, and Hand Shaoyang Sanjiao Meridian. Simultaneously, the hypothenar muscle performs pushing and kneading maneuvers along the Hand Shaoyang Sanjiao Meridian.

**Step 2: Guajiu Sanyu (Scraping-Moxibustion Stasis-Dispersing Method)**

First, one cup tooth is applied perpendicularly ( $^{\circ}$ ) to the corresponding acupoint for acupressure. The cup teeth are then angled at  $^{\circ}$  to the skin for rotational scraping until the patient experiences sensations of soreness, distension, and numbness. Subsequently, penetrating heat moxibustion is applied by aligning the moxibustion inside the cup with the acupoint, repeatedly opening and closing the cup while fanning to increase heat and enhance moxibustion sensation until the local skin becomes flushed. Finally, mild moxibustion is applied until sensations of heat penetration, soreness, distension, and numbness dissipate.

**Step 3: Gongzhen Xuhua (Resonance Sequencing Method)**

The practitioner supports the affected limb with one hand while applying the cup opening flat against the skin with the other hand. Mobile cupping is performed again along the Governor Vessel, Hand Yangming Large Intestine Meridian, and Hand Shaoyang Sanjiao Meridian from top to bottom, achieving simultaneous oscillating vibration among practitioner, affected limb, and cup at a unified resonance point.

Each treatment session lasts approximately minutes, administered weekly for courses, with continuous treatment.

### 3. Nursing Care Methods

**Psychological Nursing** Negative emotions reportedly occur in % of post-stroke shoulder-hand syndrome patients during hospitalization, which can seriously impact treatment and nursing measures and impede rehabilitation. Therefore, implementing active and effective nursing interventions to alleviate or eliminate negative emotions is particularly important. Pan Qiongtong proposed that psychological-behavioral interventions, including enhancing patient cognition of disease-related knowledge and guiding relaxation training, can effectively improve anxiety and depression, increase compliance with treatment and rehabili-

tation exercises, and positively promote disease recovery and quality of life.

**Positioning and Body Alignment** Proper limb positioning is crucial for preventing complications and promoting functional recovery. Specific positions include:

- **Healthy Side-Lying Position:** The shoulder joint is supported with a soft pillow, the affected upper limb is positioned forward and flexed with naturally extended wrist and finger joints, while the healthy upper limb is positioned comfortably.
- **Affected Side-Lying Position:** The elbow joint is naturally extended, the scapular region is protracted with the forearm supinated and the shoulder joint flexed, the wrist joint is slightly extended with five fingers naturally extended.
- **Supine Position:** The affected shoulder is elevated with the scapula protracted at  $^{\circ}$  to the trunk. A soft pillow is placed under the affected upper limb with extended joints, the wrist joint is slightly extended, five fingers are naturally extended with palm facing upward.
- **Sitting Position:** The patient's back is supported with a blanket to straighten the trunk, with the affected upper limb placed on the left side, naturally extended with five fingers extended, while the healthy upper limb is positioned naturally and comfortably.
- **Standing Position:** The affected upper limb is supported with a shoulder sling to prevent joint dislocation, excessive drooping, or traction.

**Exercise Intervention** Exercise intervention is key to early rehabilitation.

**Passive Movement:** During bed rest, proper limb positioning reduces spasticity and prevents complications and disuse syndrome. Passive joint activities begin early, starting with the healthy side then the affected side, using gentle techniques from upper to lower limbs. Patients and families are instructed in muscle massage and passive joint movement methods, performing these daily with assistance. Patients are turned every hours with attention to pressure area skin care to prevent pressure injuries.

**Active Movement Guidance:** Bed training includes turning exercises, Bobath handshake, bridging exercises, bed mobility, and supine-to-sitting transitions, gradually progressing to sitting balance training, then standing training and standing balance. Once patients can stand with balance, indoor walking practice is initiated, progressing to corridor walking, and from level ground to stair climbing. During practice, dedicated supervision is required to prevent accidents. Based on these exercises, self-care activities such as dressing, feeding, and toileting are gradually introduced.

**Fire-Dragon Cupping Nursing Care Pre-treatment Education:** Practitioners systematically explain the therapeutic mechanism and operational methods of fire-dragon cupping, informing patients that local skin redness,

sha marks, and warm sensations during treatment are normal phenomena to alleviate concerns.

**Environmental Management:** Maintain good ventilation and regular disinfection during treatment. Adjust room temperature to °C during cupping to prevent cold pathogen invasion through dilated pores.

**Safety Precautions:** During technique application, ash should be flicked away promptly to prevent skin burns. Before cupping, the practitioner should test the cup edge temperature—it should feel comfortably warm. After touching the cup edge to the patient’s skin, the practitioner should inquire about the patient’s sensation and proceed only when the temperature is appropriate.

**Skin Monitoring:** During treatment, nursing staff should closely observe local skin reactions. If the area becomes too hot, the location should be changed or treatment stopped. If millet-sized vesicles appear, apply burn ointment appropriately. For larger blisters, disinfect with iodophor, aspirate fluid with a sterile syringe, apply burn ointment, cover with sterile gauze, and maintain daily skin cleanliness.

**Contraindications:** Fire-dragon cupping is contraindicated in patients with high fever, skin damage or ulceration, gastrointestinal bleeding, excessive menstrual bleeding, pregnancy, or skin allergies.

#### 4. Conclusion

Fire-dragon moxibustion therapy represents a characteristic traditional Chinese external treatment with comprehensive efficacy and high safety, demonstrating good patient compliance and achieving favorable clinical outcomes in shoulder-hand syndrome treatment and nursing. This review examined the therapeutic mechanism, application methods, and nursing measures for fire-dragon cupping in shoulder-hand syndrome management. Due to its therapeutic particularities, fire-dragon cupping requires coordinated scientific nursing measures to enhance efficacy and prevent adverse events. However, standardized protocols for fire-dragon cupping treatment and nursing remain undeveloped, with limited basic research. Further in-depth studies on foundational theories and treatment standardization are needed. Current literature lacks large-scale data and remains at the simple clinical observation stage without adequate basic experimental support, necessitating strengthened scientific rigor. Although fire-dragon cupping demonstrates therapeutic effects for various conditions, most reports involve clinical observations combined with other medications or therapies rather than pure fire-dragon cupping studies. Standardized criteria are lacking regarding nursing scoring, methods, and efficacy evaluation, representing certain limitations. Additionally, in-depth research is needed on indications for different subtypes of post-stroke shoulder-hand syndrome, and reference standards are lacking for syndrome differentiation-based nursing. In future clinical practice, healthcare professionals should continue innovative exploration to develop practical and effective nursing methods and broaden therapeutic approaches, thereby

benefiting patients with post-stroke shoulder-hand syndrome.

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