

Research Progress in Traditional Chinese Medicine Treatment for Post-stroke Spastic Hemiplegia

Yu Gu¹, Tianhong Ding^{2,*}

¹Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China

²The Second Affiliated Hospital of Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China

*Correspondence Author

Abstract: Stroke is an acute cerebrovascular circulatory disorder with sudden onset, caused by various inducing factors that lead to stenosis, occlusion, or rupture of the cerebral arteries. Its clinical manifestations are primarily characterized by sudden syncope, loss of consciousness, or abrupt occurrence of facial deviation, hemiplegia, stiff tongue with dysphasia, and intellectual impairment. Stroke can result in motor dysfunction, with spastic hemiplegia being the most common condition, severely affecting the patient's quality of life and work capacity. This article reviews recent advances in Traditional Chinese Medicine (TCM) research on post-stroke spastic hemiplegia. By elucidating various treatment modalities and conducting a comprehensive analysis of their outcomes, this review aims to better serve patients and enhance their quality of life.

Keywords: Stroke, Spastic hemiplegia, Review, Acupuncture, Chinese herbal medicine.

1. Introduction

Epidemiological studies indicate that the incidence of ischemic stroke is higher than that of hemorrhagic stroke, accounting for 70% of all stroke cases [1]. Spastic hemiplegia (HSP), also known as upper motor neuron paralysis or central hemiplegia, is a major complication and sequela of stroke. Approximately 65% of stroke patients present with the clinical symptoms of spastic hemiplegia [2]. Its characteristics include a marked increase in muscle tone, with notable paralysis of the extensor muscle groups in the upper limbs and the flexor muscle groups in the lower limbs. The upper limbs manifest as flexion, the lower limbs as extension, and the fingers as a flexed posture. Passive extension of the hand reveals stiffness and resistance, significantly impacting the patient's survival and quality of life, while also increasing the burden on the patient and their family. Therefore, reducing excessive muscle spasticity to maintain it at an appropriate level is a crucial component of rehabilitation therapy for post-stroke sequelae [3].

Stroke falls under the category of “Zhòng Fēng” in Traditional Chinese Medicine. References to “Zhòng Fēng” in the Huangdi Neijing are primarily found in the Suwen · Feng Lun: “Drinking alcohol and being affected by wind results in Lòu Fēng. Sweating during sexual intercourse and being affected by wind results in Nèi Fēng. Washing hair and being affected by wind results in Shǒu Fēng. Prolonged wind invading the interior results in Cháng Fēng Sūn Xiè.” Referring to the same chapter: “When wind harms the body... it may become Lì Fēng, or it may become Piān Kū, or it may become Fēng; the diseases are distinct, their names are different, or they may penetrate internally to the five zang and six fu organs,” and “Wind striking the Back Shu points of the five zang and six fu organs also results in zang-fu wind.” It can be understood that “Zhòng Fēng” at that time referred to being affected by pathogenic wind, representing a causative factor leading to diseases such as Lì Fēng and Piān Kū, rather than being a disease entity itself. Similarly, the references in Lingshu · Xieqi Zangfu Bingxing — “What occurs when the five zang are affected by wind?” and in Lingshu · Jingmai — “Sweating and being affected by wind, with frequent

urination and scanty output” — all use the term “Zhòng Fēng” to denote an etiological meaning, not an independent disease name, differing from the “Zhòng Fēng” discussed in internal miscellaneous diseases [4].

With the continuous advancement of modern medical technology, the rescue and treatment outcomes for stroke, a common disease in middle-aged and elderly populations, have significantly improved. However, among the patients who receive effective treatment, the majority still experience varying degrees of residual limb dysfunction, manifesting as limitations in the coordination and independent manipulation of the arms, palms, fingers, and lower limbs, which severely impacts their daily life and quality of living. In recent years, Traditional Chinese Medicine and herbal remedies have accumulated extensive clinical experience in treating post-stroke limb dysfunction, achieving favorable application outcomes and gaining increasing attention and recognition within the medical community. This article analyzes the current progress in the application of TCM treatments and rehabilitation techniques for post-stroke limb dysfunction [5].

2. Etiology and Pathogenesis

Stroke falls under the category of “Zhòng Fēng” in TCM. In classical texts, spasticity is often classified under categories such as Convulsive Disease, “Flaccidity Disease, and Sinew Channel Disease. The Suwen · Tiaojing Lun states: “When the hand is flexed and cannot extend, the disease lies in the sinews. When impediment (Bi) is in the sinews, then there is flexion without extension, sinew contracture with joint pain, and inability to walk; this is Sinew Impediment.” This indicates that the location of post-stroke spastic hemiplegia is primarily in the sinews. The Shengji Zonglu · General Medical Collection of Holy Relief · Wind Strike with Four-Limb Contracture and Inability to Flex or Extend records: “When healthy qi fails to nourish the sinews, it results in four-limb contracture with inability to flex or extend.” Thus, disorders of the sinew channels primarily manifest as muscle twitching, spasmodic contraction, and flaccid paralysis.

Regarding post-stroke spastic hemiplegia, Professor Han Wei [5] proposed that although the overall pathogenesis is complex, its root cause can be attributed to yin-yang disharmony and disorder of qi and blood. Based on this, he emphasizes “equal emphasis on yin, yang, qi, and blood” in treatment, employing a combination of acupuncture and herbal medicine: at the main points, the “Tongdu Tiaoshen” needling method is used, while at the local limbs, it is combined with sinew channel needling techniques. These two approaches work synergistically to achieve the core objectives of regulating yang qi, relaxing the sinews, and relieving spasticity.

In research on the pathogenesis of post-stroke spastic hemiplegia, Professor Zhuang Lixing [6], based on long-term clinical practice, proposed that the disease involves both the brain and the affected limb, with yin-yang disharmony being the key factor. Professor Yuan Xiuli [7], analyzing from the perspective of zang-fu organs and qi-blood, suggested that liver-kidney deficiency, qi-blood disharmony, unsmooth blood circulation, and malnourishment of the sinew vessels are the main causes of muscle spasticity. Yang Zhengning and colleagues [8] adopted a different approach, guided by the theory of “treating flaccidity by focusing on the Yangming Meridian,” summarizing the etiology and pathogenesis into three major categories: spleen-stomach deficiency, spleen deficiency with dampness obstruction, and food stagnation injuring the spleen—all pointing to malnourishment of the sinew vessels. It is evident that the occurrence of this disease is closely related to the deficiency of healthy qi and the invasion of pathogenic factors after stroke. The core pathological link lies in phlegm turbidity obstructing the meridians and malnutrition of the sinew vessels and muscles, resulting from zang-fu organ disharmony and qi-blood stagnation.

During the Eastern Han Dynasty, stroke was classified into four stages for treatment: affecting the channels, affecting the network vessels, affecting the zang organs, and affecting the fu organs. The Jinkui Yaolüe elaborates on Zhang Zhongjing’s pathogenetic concept of stroke as “emptiness of the network vessels with pathogenic factors unable to be expelled.” During the Jin and Yuan Dynasties, physicians gradually explored internal causes, summarizing etiological theories of “fire, qi, and phlegm.” The Lingshu · Cijie Zhenxie states: “When deficient pathogenic factors lodge in one side of the body, penetrating deeply and residing in the nutritive and defensive aspects, if nutritive and defensive qi slightly decline, then genuine qi departs, the pathogenic factors remain alone, and this manifests as hemiplegia.” This indicates that post-stroke deficiency of healthy qi, internal invasion of pathogenic factors, insecurity of the interstices and muscles, and decline of nutritive and defensive qi, with pathogenic factors becoming dominant, lead to hemiplegia [9].

The modern medical mechanism of post-stroke spastic hemiplegia remains unclear. It is generally believed that if the upper motor neurons controlling movement are damaged after stroke, their inhibitory effect on lower neurons is significantly reduced. This loss of inhibition directly leads to abnormally enhanced excitability of the entire motor system [10], subsequently causing dysfunction of motor neuron groups.

Research indicates that this dysfunction may manifest as persistent activation of certain ion channels, resulting in abnormally elevated internal neuronal potentials. This abnormal state disrupts the normal balance among motor neurons, abnormally activating low-level central stretch reflexes, which may ultimately lead to spasticity. From a physiological mechanism perspective, the regulation of muscle tone depends on the synergistic action of α and γ motor neurons [11]. The aforementioned pathological process directly interferes with this synergistic relationship, specifically manifesting as increased muscle tone and excessive reflex activity, which are also the typical characteristics of spasticity.

3. Acupuncture Treatment

Acupuncture is a distinctive therapeutic modality in TCM and represents the most commonly used TCM treatment for post-stroke limb hemiplegia. It is low-cost, easy to promote, and yields significant effects. Reports indicate that early application of filiform needle acupuncture after stroke can promote the clearance of oxygen free radicals, facilitate the formation of collateral circulation, increase cerebral blood supply, improve cerebral metabolism, and restore neurological function. Timely acupuncture intervention in early-stage stroke patients can significantly reduce the NIHSS score, markedly lower muscle tone in the affected limb, and improve the patient’s quality of life. Therefore, when no obvious contraindications exist, acupuncture intervention should be initiated as early as possible.

There are numerous acupuncture methods for treating post-stroke limb spasticity, such as the Xingnao Kaiqiao needling method, Jiaji (EX-B2) point needling, Jin’s Three Needle Technique, contralateral needling, antagonist muscle needling, elongated needle penetrating needling, yin-yang balanced needling, warm needling, electroacupuncture, bloodletting with cupping, and acupoint catgut embedding. Clinically, the combined application of multiple needling methods is commonly adopted to achieve complementary effects.

3.1 Xingnao Kaiqiao Needling Method

Academician Shi Xuemin believes that the pathogenesis of limb spastic hemiplegia involves the orifices being blocked and the spirit concealed, with the spirit failing to guide qi, combined with blood stasis and phlegm turbidity obstructing the meridians, leading to malnourishment of the sinew vessels and subsequent disease. Therefore, in his long-term clinical practice, he integrated traditional acupuncture with Western medical theories, employing the “Xingnao Kaiqiao” method as the core treatment. By awakening and regulating the spirit and opening the orifices, this method restores the spirit’s guidance over qi, while simultaneously harmonizing yin and yang and improving nourishment of the sinew vessels. The Xingnao Kaiqiao needling method follows a standardized operational protocol using quantitative manipulation techniques. Its main points consist of specific acupoints, with adjunct points modified according to syndrome differentiation. Basic research has confirmed that cerebral ischemia, hypoxia, and necrosis resulting from impaired post-stroke cerebral blood supply are key causes of motor dysfunction. This

needling method can accelerate the mean blood flow velocity of the middle cerebral artery and basilar artery while reducing the pulsatility index of the middle cerebral artery, thereby improving cerebral circulation [12].

Xu Yuan et al. [13] treated stroke patients with hemiplegia using acupuncture combined with modified constraint-induced movement therapy. The treatment group received Xingnao Kaiqiao acupuncture, while the control group received sham acupuncture. Results showed that within a unit of time, the middle cerebral artery blood flow in the treatment group was higher than that in the control group, and the improvement in hemiplegic symptoms was more pronounced in the treatment group. Commonly selected acupoints include Neiguan (PC6), Shuigou (GV26) (or Yintang (EX-HN3)), and Sanyinjiao (SP6) as the main points, supplemented with Jiquan (HT1), Chize (LU5), Weizhong (BL40), Fengchi (GB20), Jianyu (LI15), Hegu (LI4), Baxie (EX-UE9), Yanglingquan (GB34), and Qixu (GB40) penetrating Zhaohai (KI6). Besides its effect of opening the orifices and awakening the spirit, the Xingnao Kaiqiao needling method can also promote neurological recovery of the limbs. Numerous clinical reports have demonstrated that this method effectively reduces muscle tone in the affected limb after stroke [14]. Shi Xiaoxiao et al. [15] found that the FMA scores in the group receiving Xingnao Kaiqiao acupuncture showed significant improvement compared to the control group, indicating a substantial difference and demonstrating that the Xingnao Kaiqiao needling method is highly effective for treating post-stroke dysfunction. Li Haoming et al. [16] found through controlled clinical studies that the Xingnao Kaiqiao needling method better improves patients' motor function and quality of life; both every-other-day and daily acupuncture improve outcomes, but daily acupuncture yields better results. Therefore, for patients with post-stroke limb spasticity, early application of the "Xingnao Kaiqiao" needling method can effectively reduce the disability rate.

When applying the Xingnao Kaiqiao needling method, it is important to note that some acupoints do not require needle retention, as retaining the needle may cause discomfort or interfere with other acupoints. For points such as Shuigou (GV26) and Weizhong (BL40), appropriate lifting and thrusting combined with twisting for about one minute is sufficient. After needling, patients should be instructed to move the affected limb immediately, which can yield rapid results. For elderly patients or those with severe deficiency of healthy qi, the effects of this method may not be as pronounced; clinical differentiation should be carefully observed, and blind application should be avoided.

3.2 Elongated Needle Penetrating Needling Method

The elongated needle is a flexible long needle made of stainless steel wire. The manipulation technique for the elongated needle is relatively complex. The elongated needle penetrating needling method can regulate the zang-fu organs, qi and blood, and the meridians, allowing the needling sensation to reach the diseased site directly. This enhances the regulatory functions among the various zang-fu organs and systems until qi and blood are balanced and yin and yang are harmonized, thereby achieving the desired therapeutic effect

[17]. Liu Dong et al. [18] used elongated needle penetrating needling in the observation group and conventional acupuncture in the control group. The total improvement rate and the degree of improvement in FMA scores after treatment were superior in the observation group compared to the control group, indicating that elongated needle penetrating needling is effective for patients with post-stroke hemiplegia, optimizing muscle tone and motor function.

The elongated needle penetrating needling method involves using a single long needle to penetrate from one acupoint through to another. Penetrating needling can simultaneously stimulate multiple acupoints. For treating post-stroke limb spasticity, commonly used acupoint penetration combinations include Hegu (LI4) penetrating Houxi (SI3), Waiguan (TE5) penetrating Neiguan (PC6), Quchi (LI11) penetrating Shaohai (HT3), Yanglingquan (GB34) penetrating Yinlingquan (SP9), Zusanli (ST36) penetrating Chengshan (BL57), Taibai (SP3) penetrating Shugu (BL65), Xuanzhong (GB39) penetrating Sanyinjiao (SP6), and Qixu (GB40) penetrating Zhaohai (KI6). In clinical application, the penetrating needling method is generally not used alone but combined with other acupuncture techniques, such as yin-yang balanced needling, to achieve better therapeutic outcomes. It is essential to master the correct penetration direction and insert the needle slowly, avoiding excessively fast needling speed or excessive force. At the same time, it is important to avoid vital organs, blood vessels, and nerves to prevent unnecessary harm to the patient.

3.3 Electroacupuncture Therapy

Zhuang Qianru's study [19] indicates that electroacupuncture at the "Baihui Bazhen" has multiple effects: on one hand, it increases cerebral blood flow in patients and improves cerebral circulation; on the other hand, it stimulates cerebral electrical activity and promotes the connectivity and remodeling of neuronal axons. These combined effects achieve the outcomes of regulating qi and unblocking the meridians, as well as supplementing qi and ascending yang. Research by Wu Miao et al. [20] demonstrated that using scalp electroacupuncture to treat patients with ischemic stroke effectively improved upper limb function.

Electroacupuncture therapy is a treatment method that uses an electroacupuncture device to deliver electrical current to the needles after insertion. For treating post-stroke limb spastic hemiplegia, applying electroacupuncture stimulation at appropriate frequencies yields significant effects. Electroacupuncture at acupoints can enhance the needling sensation, increase sensory input, stimulate muscle contraction, and improve the therapeutic effect of acupuncture. Zhang Xinzhong [21] found in clinical research that for stroke patients with hemiplegia, electroacupuncture at Waiguan (TE5) and Wailaogong (EX-UE8) combined with modern rehabilitation training, compared to acupuncture alone, resulted in significant improvements in Ashworth scores, FMA scores, and ADL scores compared to baseline. Electroacupuncture not only improves muscle strength function but also modulates neuroactive substances in the body. However, during treatment, careful attention must be paid to controlling the current and frequency; current or frequency should not be suddenly increased or decreased.

Electroacupuncture should be used with caution in elderly patients, with weak stimulation being preferable, and it is not suitable for patients with cardiac pacemakers.

3.4 Huatuo Jiaji Point Therapy

Huatuo Jiaji points have the functions of regulating the zang-fu organs and unblocking the meridians. They were first recorded in Jin Dynasty Ge Hong's work *Zhouhou Beiji Fang* (Handbook of Prescriptions for Emergencies), where they were primarily used by Hua Tuo in history as the main points for treating cholera [22]. However, in clinical application, the therapeutic scope of Jiaji points has continuously expanded. Needling Huatuo Jiaji points helps patients awaken the spirit and open the orifices, regulate qi and resolve stagnation, relieve meridian obstruction, and thereby promote the recovery of limb function. These points are distributed near the core muscle groups of the back, where surrounding muscles, nerves, and blood vessels are relatively dense, allowing for good regulation of the autonomic nervous system, which is an important basis for their therapeutic effects [23]. Zhang Xiaoxiao [24] selected 85 stroke patients with hemiplegia and divided them into a control group and an observation group based on odd-even assignment. The control group received conventional acupuncture, while the observation group received additional needling at Jiaji points, selecting points at C2~7, T2~12, and L1~5, located 0.5 cun lateral to the cervical spine and 0.6–1.0 cun lateral to the thoracic and lumbar vertebrae. After four weeks of treatment, the nerve conduction velocity in the observation group was higher than that in the control group, and daily living ability and body balance function were superior to those in the control group, indicating that needling Jiaji points has a favorable therapeutic effect on post-stroke spastic hemiplegia.

4. Moxibustion Therapy

Moxibustion has the effects of warming and unblocking the meridians, harmonizing qi and blood, nourishing the sinew vessels, and balancing yin and yang. Post-stroke spastic hemiplegia often involves a pathology of qi and blood deficiency with phlegm and meridian obstruction. Moxibustion therapy can better promote the circulation of qi and blood, resolve phlegm, and unblock the meridians. Li Zhiyan et al. [25] randomly divided 113 patients with post-stroke spastic hemiplegia into two groups. The treatment group (62 cases) received large moxibustion therapy on the back combined with Bobath therapy, while the control group (51 cases) received Bobath therapy alone. Results: In terms of improving the degree of spasticity and motor function in the affected limb, the treatment group was superior to the control group ($P < 0.05$).

5. Chinese Herbal Medicine Treatment

5.1 Oral Administration of Chinese Herbal Medicine

Oral administration of Chinese herbal medicine can directly act on the stroke lesion, improving local blood supply to the brain tissue and exerting its unique pharmacological therapeutic effects. Additionally, it can effectively alleviate symptoms such as flaccidity, weakness, or stiffness of the unilateral limb. Among these, some herbs have the effect of

invigorating blood and resolving stasis, helping to improve cerebral circulation and promote the repair of damaged nerves; others excel at relaxing the sinews and unblocking the meridians, alleviating muscle tension and spasticity.

Pan Gongyi et al. [26] demonstrated that basic treatment combined with Buyang Huanwu Decoction has a favorable therapeutic effect on post-stroke hemiplegia. Buyang Huanwu Decoction originated from Wang Qingren in the Qing Dynasty. He believed that post-stroke hemiplegia and unilateral numbness were due to “qi deficiency and blood stasis.” Therefore, Buyang Huanwu Decoction uses a large dose of raw Huangqi as the sovereign herb, aiming to supplement the original qi. When qi is abundant, blood circulation is promoted, stasis is resolved, and meridians are unblocked. This formula heavily uses qi-supplementing herbs, supplemented by a small amount of blood-invigorating herbs, so that abundant qi promotes blood circulation, primarily treating the root. At the same time, it resolves stasis and unblocks the meridians to treat the manifestation, addressing both root and manifestation. Danggui invigorates blood and unblocks meridians without harming blood, serving as the minister herb. Chishao, Chuanxiong, Taoren, and Honghua work synergistically with Dangguiwei to invigorate blood and resolve stasis. Dilong unblocks the meridians and collaterals, with a good penetrating property, circulating throughout the body to assist the medicinal effects, also serving as an assistant herb. The formula is precisely formulated, supplementing qi without causing stagnation and invigorating blood without harming healthy qi. When all herbs are combined, qi becomes abundant, stasis is resolved, meridians are unblocked, and the various symptoms naturally improve. Tongqiao Huoxue Decoction has the effects of invigorating blood, unblocking the meridians, reducing swelling, and alleviating pain, aligning with the pathological mechanism of “qi deficiency leading to blood stasis” in spastic hemiplegia. Li Qingzhe et al. [27] found that adding Tongqiao Huoxue Decoction to conventional treatment yielded significant therapeutic effects. Zhang Ruijie et al. [28] applied Wenyang Huatan Tongluo Decoction to treat patients with spastic hemiplegia due to yang deficiency with phlegm stasis obstructing the meridians. After treatment, the degree of limb spasticity improved significantly, outperforming Western medicine alone. Chen Yingling et al. [29] treated post-stroke limb spasticity with Gualou Guizhi Decoction, achieving favorable results and playing a positive role in the rehabilitation of patients' daily living and limb motor function.

When using oral Chinese herbal medicine to treat spastic hemiplegia, the principle of treatment based on syndrome differentiation must first be strictly followed. Accurately determine the patient's syndrome pattern, such as qi-blood deficiency, liver-kidney yin deficiency, wind-phlegm obstructing the meridians, etc., ensuring that the selected formula and herbs correspond to the syndrome to avoid delaying the condition due to incorrect medication. Second, pay attention to herb compatibility contraindications. Understand the interactions among Chinese herbs to avoid irrational combinations that may affect efficacy or cause adverse reactions. Furthermore, pay attention to individual differences and allergic reactions. Different patients may have varying tolerance and reactions to Chinese herbs. Understand

the patient's allergy history before medication and closely observe for allergic symptoms during treatment. Dosage and treatment duration should also be strictly controlled. Follow medical instructions and avoid arbitrarily increasing or decreasing dosage or shortening or prolonging treatment duration, as this may affect therapeutic outcomes or cause toxic side effects. Additionally, attention should be paid to the interactions between Chinese herbs and other treatment methods or medications.

5.2 External Application of Chinese Herbal Medicine

External application of Chinese herbal medicine allows the medicinal components to directly reach the diseased site through skin penetration. Some herbs have the effects of relaxing the sinews, unblocking the meridians, relieving spasm, and alleviating pain. They can regulate neuromuscular excitability, inhibit excessively excited nerve conduction, reduce muscle tension, and allow spastic muscles to relax. The affected limb in patients with spastic hemiplegia often presents with inflammatory reactions. The active components in Chinese herbs can reduce inflammation, eliminate tissue edema, and create favorable conditions for restoring normal muscle function. Additionally, some Chinese herbs can regulate the circulation of qi and blood within the body, balancing yin and yang. By improving the overall physiological state of the body, they enhance self-regulation and repair capabilities, contributing to the restoration of normal neuromuscular function. Currently, many Chinese herbs have the effect of invigorating blood and resolving stasis, which can improve local blood circulation and increase blood supply to muscle tissue, thereby alleviating ischemia and hypoxia in muscles and reducing spasticity. Currently, external application of Chinese herbs alone primarily targets local symptoms of the hemiplegic limb after stroke, such as spasticity and swelling. It is often combined with other treatment methods for comprehensive management of post-stroke hemiplegia.

Zhang Ting et al. [30] prepared acupoint plasters made from 15g each of Danshen, Chuanxiong, Honghua, Chishao, Wuzhuyu, and Danggui, applied to relevant acupuncture points for 12 hours per session, once daily. After four weeks of treatment, patients receiving the herbal acupoint plasters showed significant improvement in hemiplegic symptoms. Wang Shidong et al. [31] selected 80 patients with post-stroke spastic hemiplegia and randomly divided them into an observation group and a control group. The control group received herbal fumigation and washing, using herbs such as Honghua and Shenjincao that invigorate blood, unblock meridians, relax sinews, and alleviate pain. After soaking and steaming, the steaming head was placed near the affected limb for approximately 30 minutes of fumigation, once daily. After two consecutive weeks of treatment, the patient's limb function showed favorable improvement compared to before treatment, indicating that herbal fumigation has a particularly significant therapeutic effect on spastic hemiplegia. Herbal fumigation and washing is a commonly used external therapy in Chinese medicine. It can conduct thermal effects, invigorate blood, and unblock meridians, enabling faster and better recovery of limb function.

When using external application of Chinese herbs to treat

spastic hemiplegia, first ensure skin integrity. Before using external Chinese herbal therapy, carefully examine the skin for any damage, ulcers, inflammation, etc., to prevent the medication from exacerbating skin problems. Second, understand the patient's allergy history. Ascertain whether the patient is allergic to the herbal components or dressing materials to avoid allergic reactions. Furthermore, strictly control the concentration and dosage of the medication. Correctly prepare the medication according to medical instructions or drug labeling, avoiding excessive concentration or dosage that may cause skin damage. During application, observe the patient's reaction. If symptoms such as skin redness, itching, or pain occur, discontinue use immediately and provide appropriate management. Also, pay attention to the duration and frequency of application. Follow the physician's recommendations and avoid prolonged application, which may affect normal skin respiration and metabolism. Maintain cleanliness and dryness of the application site. Clean the skin before and after application to prevent infection. Additionally, different external application methods such as plastering, fumigation-washing, and topical rubbing have their own characteristics and precautions, requiring strict adherence to corresponding operational standards. If the patient is simultaneously undergoing other treatments, attention should be paid to the interactions between external Chinese herbal therapy and other treatment methods, consulting the physician in advance. Finally, proper storage of external Chinese herbal preparations is also important. Store under the required conditions to ensure the quality and efficacy of the medication.

6. Conclusion

In summary, Traditional Chinese Medicine treatment for post-stroke spastic hemiplegia offers the advantages of a holistic concept and treatment based on syndrome differentiation. The application of TCM methods, particularly acupuncture and Chinese herbal medicine, can effectively improve patients' limb motor function, significantly reduce the degree of spasticity, and is associated with minimal side effects and less harm to the human body, warranting continued clinical promotion and application. However, the author believes that post-stroke spastic hemiplegia is a disease with a prolonged course, requiring more effective treatment protocols derived from extensive clinical trial data. Given that many current studies have relatively small sample sizes, short observation periods, and results that contain varying degrees of error, future research should further conduct large-sample, multi-center, long-term clinical studies to validate the efficacy and safety of TCM treatment for post-stroke spastic hemiplegia.

Guided by the concept of "Zhì Wèi Bìng", targeted interventions using corresponding therapeutic principles and formulas can be applied to address the risk factors and pathological links of stroke. This approach should be integrated throughout the entire process of stroke prevention and treatment—whether preventing the disease before its onset or preventing its progression after manifestation—by differentiating syndromes, considering the involvement of other zang-organs, and adapting treatments according to circumstances. This fully demonstrates the significant clinical value of the TCM "Zhì Wèi Bìng" philosophy in stroke

prevention and treatment [32].

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