

Clinical Observation of the Treatment of Postherpetic Neuralgia by External Application of Self-prepared Chinese Prescription Decoction Combined with Gabapentin and Cotton Moxibustion

Min YE, Shengxin ZHANG, Fengqin ZHANG, Yong XIANG*

Department of Pain Treatment, Taihe Hospital, Hubei University of Medicine, Shiyan 442000, China

Abstract [Objectives] To discuss the curative effect of the external application of self-prepared Chinese prescription decoction combined with gabapentin and cotton moxibustion on postherpetic neuralgia (PHN) and analyze its mechanism. [Methods] 96 patients with PHN were divided into the control group (group A) and observation group (group B) ($n = 48$). In group A, the patients were given gabapentin orally and treated by cotton moxibustion. In group B, the patients were treated by the external application of self-prepared Chinese prescription decoction on the basis of the above basic treatment. The total effective rate, apparent time and recurrence rate of the two groups were compared. [Results] The cure rate (72.91%) and total effective rate (95.83%) of patients in group B were higher than those in group A (54.16%, 83.33%). The average apparent time [(5.79 ± 1.40) d] and recurrence rate (5.97%) of patients in group B were significantly lower than those in group A [(7.03 ± 4.37) d, 10.45%], and the difference between the two groups was statistically significant ($P < 0.05$). [Conclusions] The external application of self-prepared Chinese prescription decoction combined with gabapentin and cotton moxibustion therapy had a significant curative effect and low recurrence rate.

Key words Herpes zoster, Neuralgia, self-designed Chinese prescription decoction, Cotton moxibustion therapy, Curative effect

1 Introduction

When a patient infected with shingles is tired and the resistance is reduced, the varicella-zoster virus latent in the heel neurons of the spinal cord can reproduce again, and the resulting inflammatory response causes spontaneous tearing lightning-like pain in areas innervated by neurons^[1]. In this paper, the combination of self-prepared Chinese prescription decoction with gabapentine and cotton moxibustion therapy was used for the comprehensive treatment of postherpetic neuralgia (PHN).

2 Data and methods

2.1 General information A total of 96 PHN patients admitted to the Department of Pain Treatment from October 2022 to January 2024 were randomly divided into the control group (group A) and observation group (group B) ($n = 48$) according to the order of treatment. In group A, there were 25 males and 23 females, respectively. The average age of the patients was (40.69 ± 8.65) , and the maximum age was 79, while the minimum age was 17. The longest course of disease was 11 months, while the shortest one was 6 d, and the average was (6.02 ± 4.24) months. In group B, there were 26 males and 22 females, respectively. The average age of the patients was (41.50 ± 9.32) , and the maximum age was 80, while the minimum age was 18. The longest course of disease was 13 months, while the shortest one was 5 d, and the mean course of disease was (11.26 ± 3.35) months. There was no significant difference between the two groups in gender, average age and average course of disease ($P > 0.05$), indi-

cating that the study was comparable.

2.2 PHN diagnosis and inclusion criteria Diagnostic criteria: PHN patients infected with herpes zoster developed persistent local skin and deep nerve pain within 1 month to 1 year after clinical cure; patients had emotional depression; the patients had abnormal sense of touch, obvious distribution of innervation areas of pain, and skin pigmentation in related areas; they had lightning-like pain, paroxysmal knife cutting, persistent burning pain or tight bundle pain; there was feeling of tightness, itching and (or) ant movement in the affected area^[2]. Inclusion criteria: their symptoms met the above diagnostic criteria, and the course of disease was within 3 years; (i) they were 18–90 years old and had not taken medication or received treatment in the past week; (ii) they volunteered to participate in the experiment, signed the informed consent, denied allergies and had no history of drug allergy^[3].

2.3 Treatment methods

2.3.1 Basic treatment of the two groups. Patients in groups A and B were given gabapentin orally (Jiangsu Hengrui Pharmaceutical Co., Ltd.). On the first day, each patient was given 0.3 g (3 capsules) of gabapentin orally once. On the second day, they took 0.6 g (6 capsules) of gabapentin in two doses. On the third day, they took 0.9 g (9 capsules) of gabapentin in three doses, and then the dose can be gradually increased to 1.8 g (18 capsules) per day in three doses as needed for pain relief. Acupoint selection and treatment by cotton moxibustion; the acupoint selection of groups A and B was the same, and patients were treated by cotton moxibustion therapy. If the symptom appeared on the head, local pain points, Taichong and Hegu points were selected. If the diseased parts were shoulders, back, chest, and waist, Jiaji points and pain points on the affected side of the ganglion were selected. If it appeared on the four limbs, the distal pain points of nerve innervation, Quchi and Zusanli points were selected. During

Received: November 25, 2024 Accepted: January 6, 2025

Min YE, bachelor, supervisor nurse, research fields: dermatology treatment and nursing.

* Corresponding author. Yong XIANG, PhD., chief physician, research fields: dermatology treatment.

the treatment, the doctor spread a small amount of medical cotton on the affected area and the selected points, and then burnt the skin with quick fire (the fire should be controlled to prevent burns during the moxibustion).

2.3.2 Treatment of group B. On the basis of cotton-laying moxibustion therapy and oral administration with gabapentine, external application of self-prepared Chinese prescription decoction was adopted in group B (9 g of Gardeniae Fructus, 9 g of Coptidis Rhizoma, 6 g of Scutellariae Radix, and 6 g of Phellodendri Chinensis Cortex were decocted by the Department of Pain Treatment). Both groups were treated for 4 courses, and 7 d were 1 course.

2.4 Statistical method SPSS 26.0 statistical software was used for data analysis. The measurement data were expressed as

mean \pm standard difference ($\bar{x} \pm s$), and *t*-test was carried out. Counting data were expressed as percentage, and chi-square test was conducted. *P* < 0.05 means that the difference was statistically significant.

3 Results and analysis

3.1 Comparison of the curative effect of patients in the two groups The clinical cure rate of patients in group B was 72.91%, and the total effective rate was 95.83%. The clinical cure rate of group A was 54.16%, and the total effective rate was 83.33%. The difference of cure rate and total effective rate between group B and group A was statistically significant (*P* < 0.05) (Table 1).

Table 1 Comparison of the clinical curative effect of patients in the two groups (*n* = 48)

Group	Number of cured patients	Number of improved patients	Number of patients without curative effect	Cure rate//%	Total effective rate//%
B	35	11	2	72.91 ¹⁾	95.83 ¹⁾
A	26	14	8	54.16	83.33

NOTE Compared with group A, ¹⁾*P* < 0.05.

3.2 Comparison of the average apparent time and recurrence rate of cured patients in the two groups According to the comparison of VAS score, the average apparent time of cured patients in group B (7.03 \pm 4.37) d was shorter than that in group A (7.03 \pm 4.37) d (*P* < 0.01). After 3 months, the recurrence rate of group B (5.97%) was lower than that of group A (10.45%) (*P* < 0.01) (Table 2).

Table 2 Comparison of the average apparent time and recurrence rate of cured patients between the two groups ($\bar{x} \pm s$)

Group	<i>n</i>	Average apparent time	Recurrence rate//%
B	29	5.79 \pm 1.40 ¹⁾	5.97 ¹⁾
A	18	7.03 \pm 4.37	10.45

NOTE Compared with group A, ¹⁾*P* < 0.01.

4 Discussion

PHN belongs to "Bi Zheng", also known as "waist wrapped dragon", "snake disc sore", "snake string sore" in Chinese medicine^[2]. After infection with varicella-zoster virus, it is often latent in the ganglia of the posterior nerve root of the spinal cord. When the body's resistance is reduced, the virus reproduces and invades the nerve fibers again and produces severe pain in the innervated area (skin and subcutaneous tissue), which is often described by patients as tearing or (and) lightning-like pain (*i. e.* hyperalgesia, spontaneous pain and hyperalgesia). It causes great physical and mental harm and pain to patients^[4].

In Huanglian Jiedu Decoction used in this study, Scutellariae Radix can clear heat and dry dampness; Coptidis Rhizoma is bitter and cold, and can solve the hot poison of sore; Gardeniae Fructus can purge fire for removing toxin; Phellodendri Chinensis Cortex has the effect of purging fire and treating sore. The combination of all the drugs can strengthen spleen and tonify lung, middle-Jiao and qi, playing the effect of regulating qi and detoxification, drying dampness and removing steam, clearing heat and detoxification^[5]. The cotton moxibustion therapy can prevent internal toxic-

ity and external infection, and significantly improve the surface symptoms of skin in the affected area. This therapy has a positive effect on regulating the local physiological function of the affected area and improving the local blood circulation to restore the local tissue rehabilitation. The patients were treated by the external application of self-prepared Chinese prescription decoction, gabapentin and cotton moxibustion therapy. Compared with the single use of gabapentin or cotton moxibustion therapy, the cure rate and total effective rate of the combined treatment reached 72.91% and 95.83%, respectively, significantly higher than the latter. The average apparent time of the combined treatment was also significantly shortened, and the recurrence rate was also significantly reduced. These results suggest that the external application of self-prepared Chinese prescription decoction combined with gabapentin and cotton moxibustion therapy had a significant curative effect and low recurrence rate.

References

[1] LIU MJ. Clinical research on postherpetic neuralgia treated by floating-acupuncture combined with collateral-bloodletting puncture and cupping [J]. World Journal of Acupuncture-Moxibustion, 2014, 24(3): 35–39.

[2] HUANG P, GUO LH, FANG W, *et al.* Tieman moxibustion combined with floating needle laser treatment for herpes zoster neuralgia[J]. Journal of Clinical Acupuncture and Moxibustion, 2016, 32(1): 46–49. (in Chinese).

[3] CHEN PF, ZHENG CY. Clinical observations of electroacupuncture and bleeding cupping therapy in treating postherpetic neuralgia of herpes zoster [J]. Journal of Modern Clinical Medicine, 2010, 36(1): 45–46. (in Chinese).

[4] ZHANG Y, JIN Y. Clinical advances in early intervention to prevent postherpetic neuralgia[J]. Chinese Journal of Pain Medicine, 2023, 29(5): 376–380. (in Chinese).

[5] YANG LM. Evaluation of therapeutic efficacy of gentian diarrhea liver soup combined with Chinese herbal formula soup addition and subtraction in the treatment of herpes zoster [J]. Strait Pharmaceutical Journal, 2019, 31(3): 211–213. (in Chinese).