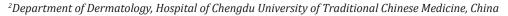


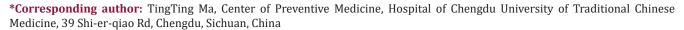
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Successful Treatment of Herpetic Itch with Traditional Chinese Acupuncture and Cotton-Moxibustion Therapy: A Case Report

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ABSTRACT

We presented a case of severe itching in acute herpes zoster, successfully treated with traditional Chinese acupuncture and cotton-moxibustion therapy. The therapeutic approaches are different and indefinite in herpetic itch cases. More reports are needed to provide evidence for herpetic itch treatment strategies.

Keywords: Herpetic Itch; Acupuncture; Cotton Moxibustion; Case Report

Introduction

Herpetic itch is a complication associated with herpes zoster. The prevalence of herpetic itch was 62%, 37% and 45% at the acute, subacute, and chronic stages, respectively [1] Like the post-herpetic neuralgia, herpetic itch also greatly reduces the quality of patient's life, leading to sleep disturbance or even depression [2] Although herpetic itch was recognized as a result of virus inflammation and nerve damage as similar as herpetic neuralgia, its etiology remains unclear and its therapeutic approach has not been established [3] In many cases, herpetic itch was not resolved even after the application of neuropathic pain therapy, which makes the treatment of herpetic itch challenging. Here, we report a case of herpetic itch in good therapeutic effect by traditional Chinese acupuncture and cotton-moxibustion therapy, providing a new and effective treatment choice for herpetic itch patients.

Case Report

A 33-year-old woman was admitted in Hospital of Chengdu University of Traditional Chinese Medicine as herpes zoster with the complaint of intense pain in the left forehead for 3 days. She had a medical history of systemic lupus erythematosusm, lupus nephritis, rheumatoid arthritis and took prednisone (30mg daily) as a routine treatment. Once the rash appeared, she added the treatment with gabapentin (0.3g, three times daily) and valaciclovir (0.6g daily). Acupuncture (Figure 1) on DU24 (shenting), EX-HN5 (taiyang), EX-HN3 (yintang), topical moxibustion and bleeding on the pain point once per day were also applied to relieve the pain after the admission into hospital.



Figure 1: Herpes zoster in acute stage with filiform needling.

Therapeutic Intervention

Three days after treatment, the patient reported a greatly relief of pain but new symptom----itch in this area, rated by the patient as 8-9/10 on the visual analog scale. The itch caused her scratching and a secondary pain in the left forehead. The patient suffered anxiety and insomnia because of persistent itch. Based on previous treatment, we tapped the itch area with plum-blossom needle lightly without bleeding for five minutes and then applied cotton-moxibustion therapy (Figures 2a & 2b). Cotton-moxibustion therapy is one kind of firing treatment with thin dry cotton pieces on the skin. Defated dry cotton was made into pieces as thin as possible to

ensure a quick burning without scald. Blew out sparkles if patient complained burning pain during combustion. The cotton pieces covered all itch skin except the hair. Cotton-moxibustion therapy was applied once rather than repeatedly on itch skin in the same day to avoid fire burn. After the combination of these interventions, her itch stopped for 6 hours, and was 5/10 for the left hours of the day. In the following 5 days of initiating acupuncture and topical cotton-moxibustion therapy (once per day) while keeping all other medications at previous doses, the itch completely disappeared. There was only discomfort around the left eye with average score from 2/10 to 3/10 when her dismissal.



Figure 2:

- a. Preparation of thin defated dry cotton pieces.
- b. The burning of thin defated dry cotton pieces on itch skin.

Follow-Up and Outcome

The patient stopped gabapentin and valaciclovir after dismissal and reported occasional mild discomfort around the left eye at one month follow-up after discharge.

Discussion

Herpes zoster is caused by reactivation of Vari-Cella Zoster Virus (VZV) and occurs when VZV cell-mediated immunity wanes with age or immunocompromise [4,5]. Although acute pain and postherpetic neuralgia are the most common symptoms in herpes zoster patients, patients may also suffer from itch at each stage. Severe disabling herpetic itch even make patients injure themselves by scratching itchy skin. Reduced quality of life, impairment of sleep and social activities are presented in most patients. It is reported that herpetic itch is more likely to occur in cases where the head, face, and neck are affected, with independence of age and sex for its incidence [6]. To date, there is virtually less epidemiologic, anatomic, physiologic, or treatment studies about herpetic itch, and few cases are reported. Herpetic itch, as neuropathic itch, is believed to be due to peripheral sensorineural injury, and currently available treatment strategies are to calm excess neuronal firing with topical or systemic medications. Antihistamines, corticosteroids, and neuro-pain medications are typical treatment for herpetic itch, but are not adequately effective [6]. We summarized the cases of herpetic itch before June 2021 as shown in Table 1 [7-14]. 75% (6/8) herpetic itch happened in the the head, face, or neck, and the occurance of herpetic itch ranged from 3 days to 9 years. Cases reported to be helpful for herpetic itch include oral taken of pregabalin [11], gabapentin [9,12], opioid [10], benzodiazepine [10], hydroxyzine [12,13] or acyclovir [12]; operation of related nerve block [7,10] or spinal epidural infusion [8]; topical use of amitriptyline and ketamine [14]; physical treatment as the pulsed

radiofrequency [7].

Due to the probable difference of neural pathways for pain and itch, it is necessary to investigate further herpetic itch-focused therapies. In our case, the female patient suffered from acute itch after the greatly reduce of herpetic pain, which indicated that the continual use of corticosteroids, antiviral and neuro-pain medications was ineffective. The traditional Chinese acupuncture is widely used in herpes zoster treatment, especially for acute pain or postherpetic neuralgia in clinics in China, with a general acceptance of acupuncture analgesia mechanism. Although little was known for mechanism of acupuncture in itch relief, acupuncture, moxibustion and related techniques are used extensively. In this case, for itch, we applied filiform needing on DU24 (shenting), EX-HN5 (taiyang), EX-HN3 (yintang) to calm down the mind, with the theory of "all kinds of diseases with pin, itching and sore are exclusively related to the Heart (spirit)". After withdraw of needles, the itch skin was tapped with plum blossom needle (a special needle with seven small needles at one end of the handle) gently for five minutes without bleeding. Then, topical cotton-moxibustion therapy was used on the same area of skin. Cotton-moxibustion therapy was the application of ignited thin defated dry cotton pieces on itch skin for one time within few seconds. The dry cotton pieces were as thin as possible to ensue the burning as fast enough therefore to avoid fire burns. The heat and toxin are the reason for the onset of herpes zoster in traditional Chinese medicine theory, and the generation of "wind" during the process of disease development results in itch. The plum blossom needle tapping can free the meridian to expel heat, and cotton-moxibustion will quench the wind and reduce the heat through firing another heat. The itch stopping mechanism of cotton-moxibustion therapy may be associated with calmness of excess neuronal firing by using heat stimulation.

 Table 1: Cases of herpetic itch in the published work.

Treatment (vas) after duration treatment	3 days 0	1 day 0	3 weeks 0	3 times Greatly re- within 2 lieved	1 month 1	Significant improved	2 weeks 0
Treatment	Once a day	Continuous infusion	No descrip- tion		Once a day		No descrip- tion
Treatment of Itchy skin	The pulsed radiofrequency + the great occipital nerve block (1 mg Diprospan, 0.5 mg Vit B12 and 1 ml of 1% lidocaine plain)	Thoracic epidural infusion with clonidine at 1 g/mL + 0.05% bupivacaine at a rate of 5 mL/h $$	Gabapentin	Left stellate ganglion block +opioid+benzodiazepine	Pregabalin (25 mg) oral taken	Gabapentin(600 mg.three times a day), prednisone (2.5 mg. once daily), Hydroxyzine (25 mg.three times a day) + Acyclovir (800 mg, five times a day)	Carbamazepine 200-400mg/d+hydroxyzine 75-50 mg/d
Itchy de- gree (vas)	5-7	8-9	Persistence of the severe	No descrip- tion	8-10	No descrip- tion	10
Location of itchy skin	Left vertex and frontal region	Left scalp extending to the occiput	Left shoulder	Posterior neck, pos- terior back, and posteri- or scalp	Left pinna and cheek	Right back, flank and abdomen	Left eye and forehead
Disease	10 months	1 month	2 years	3 weeks	1 month	9 years	1 week
Comorbidities	No description	Metastatic mela- noma of the left middle cranial fossa	Advanced HIV and toxoplasmosis	Fanconi's syndrome and severe aplastic anemia	myelodysplastic syndromes, cere- bral infarction, and dysthymia	cervical cancer, diabetes mellitus (type 2), scleroderma, and systemic lupus erythematosus	non-Hodgkin lymphoma, chronic renal failure perito- neal dialysis dependent
Age (years)/ sex	56/male	73/female	40/female	10/male	52/female	57/female	22/male
Authors	De-Fang Ding et al. [7]	Mohamed A et al. [8]	Daniela Kroshinsky et al. [9]	Ryan C. Peterson et al. [10]	Nobuhiro Shimada et al. [11]	Shahzeb Hassan et al. [12]	Valentina Semionov et al. [13]
Case no.	1	2	3	4	rc	9	7

Conclusion

So far, both acute herpetic itch and postherpetic itch are difficult to treat. Recommendations for herpetic itch treatment are limited to case reports, and medical management is still challenging. Traditional Chinese acupuncture is widely used for neuropruritus in China with good effect and high safety. We reviewed previous treatment options for herpetic itch and reported this case of cotton-moxibustion therapy in treating acute itch caused by herpes zoster, with the purpose of introducing a good therapeutic effect method for herpetic itch, and providing evidence for herpetic itch treatment strategies.

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Author Contributions

The acupuncture operation was made by Tingting Ma. The manuscript writing was performed by Tingting Ma and Man Yu. Mei Yang and Li Hu were responsible for follow-up outcome assessment. All authors have read and revised the manuscript critically.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article

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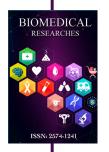
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