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(CASE REPORT)



## A case report of fire needle treatment for Recalcitrant Eczema

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#### **Abstract**

This case report presents a patient with recalcitrant eczema who underwent fire needle therapy. The patient experienced recurrent eczema exacerbations that were unresponsive to conventional Western medical treatments, which also caused significant adverse effects and increased the disease burden. The patient opted for traditional Chinese external therapy using fire needles. After the initial fire needle treatment, the patient exhibited noteworthy exudation, and pruritus significantly diminished. The therapy was administered weekly for eight consecutive weeks, resulting in marked symptom improvement. Subsequently, the treatment frequency was reduced to biweekly sessions for an additional seven treatments, culminating in a total of 15 fire needle sessions. A Follow-up after one month revealed no recurrence of eczema symptoms.

**Keywords:** Recalcitrant eczema; Traditional Chinese Medicine; Acupuncture; Fire needle; Pricking method

#### 1. Introduction

Eczema is a chronic inflammatory skin condition characterised by intense itching, redness, and a tendency for exudation. This condition significantly impairs the quality of life for affected individuals and is often resistant to conventional treatments, which primarily include topical corticosteroids and antihistamines. The chronic nature and frequent recurrence of eczema necessitate alternative treatment approaches. Traditional Chinese Medicine (TCM) offers various modalities, including fire needle therapy, which has shown promise in managing refractory cases.

## 2. Case Presentation

The patient, a 24-year-old female, initially presented on March 14, 2021, with a chief complaint of recurring eczema affecting the dorsal aspect of both hands, persisting for over two years. Her medical history, as recounted by her mother, revealed a longstanding battle with eczema dating back to infancy, with the first manifestation noted at six months of age. The condition exhibited a pattern of exacerbation with changes in weather and sun exposure, extending to regions including the neck, back, elbow fossae, popliteal fossae, and limbs over the span of more than two decades. Despite seeking treatment at various facilities and utilizing medications such as topical hydrocortisone, betamethasone, mupirocin, and oral cetirizine, her systemic eczema exhibited limited improvement.

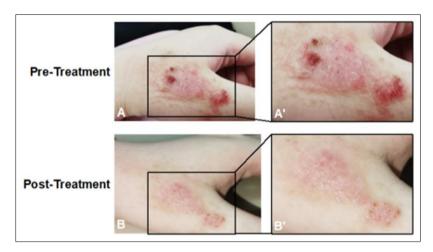
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In 2019, a distinct manifestation emerged on the dorsal surfaces of her hands, proving refractory to conventional Western therapies. This localized eczema progressively worsened, spreading to involve the joints of the thumb and index fingers, with greater severity noted on the right hand. Severe nocturnal pruritus prompted her to seek acupuncture outpatient services. Clinical examination revealed characteristic findings, including thickened, erythematous, erosive, exudative, and scabbed lesions on the dorsal surfaces of the hands and affected joints, along with intense nocturnal itching (Fig.1A, 2A).

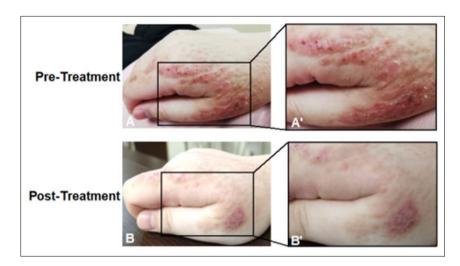
Systemic symptoms, including lethargy, a yellowish complexion, obesity, abdominal distension, anhidrosis, normal appetite and sleep patterns, infrequent dry stools, regular urination, and irregular menstruation characterized by scanty, dark red, thick blood, occasionally containing clots, were noted. Examination findings of a pale tongue with thin white coating and a deep and wiry pulse corroborated the TCM diagnosis of damp sores syndrome attributed to spleen deficiency with dampness accumulation.

The treatment strategy focused on reinforcing spleen function and resolving dampness while addressing wind-related itching. Fire needle therapy was administered locally on the dorsal aspects of the hands and affected joints, initially weekly for eight sessions, followed by biweekly sessions for an additional seven treatments, totalling 15 sessions.

Remarkably, following the first session, notable exudation was observed, accompanied by a significant reduction in itching sensation. Subsequent evaluations demonstrated marked improvement in lichenified skin and substantial relief from pruritus (Fig.1B, 2B). A one-month post-treatment follow-up revealed no recurrence of eczematous lesions on the hands indicating the efficacy of the treatment approach.



**Figure 1** Skin images of the dorsal aspect of the left hand before and after treatment. A: Pre-treatment; B: Post-treatment A' and B' are magnified views of the local area



**Figure 2** Skin images of the dorsal aspect of the right hand before and after treatment. A: Pre-treatment; B: Post-treatment A' and B' are magnified views of the local area

#### 3. Discussion

Eczema, an inflammatory skin disorder characterized by chronic and recurrent episodes, poses significant challenges to patients due to its uncertain origins and propensity for exudation[1]. It is widely understood to stem from a combination of factors, including immune dysregulation, compromised skin barrier function, genetic predisposition, and allergic responses [2]. Conventional Western medical interventions primarily revolve around topical corticosteroids, calcineurin inhibitors, and antihistamines; yet these often encounter issues of poor adherence due to adverse effects such as skin discoloration, burning sensations, and drowsiness [3].

In Traditional Chinese Medicine (TCM), eczema is categorized as "damp sores," typically attributed to spleen deficiency accompanied by the accumulation of dampness. Classical texts like the 'Huangdi Neijing' and 'Yizong Jinjian' underscore the spleen's pivotal role in managing dampness-related conditions, with symptoms akin to those of eczema. Notably, the patient's obesity suggests a pattern of spleen deficiency overlaid with excessive dampness, compounded by a longstanding history of eczema since childhood, indicative of inherent constitutional weaknesses that render conventional treatments ineffective.

Fire needle therapy, originating from ancient TCM texts such as 'Lingshu - Officials of Needles' and later elaborated upon in 'Xiaopin Fang,' harnesses the principles of warming meridians, boosting yang energy, dispelling cold, expelling pathogens, and alleviating itching [4]. Professor He Puren's 'Three-Tong Needle Method' further elucidates the mechanism, emphasizing its dual action of reinforcing deficient yang energy while expelling pathogenic factors. Observations during the course of treatment underscored the noteworthy exudative response, indicative of dampness expulsion, affirming the TCM tenet that 'dampness cannot be eradicated without fire.' Fire, being inherently yang, ascends and disperses, facilitating the movement of vital energy (qi) and the elimination of dampness [5,6]. Scientific investigations support the notion that fire needle therapy contributes to the normalization of local tissue proliferation and modulation of aberrant sensory perceptions associated with eczema [7].

#### 4. Conclusion

In conclusion, fire needle therapy emerges as a promising adjunctive modality for managing recalcitrant eczematous lesions characterized by local damp sores. Its efficacy warrants further integration into mainstream clinical practice to address the therapeutic challenges posed by refractory eczema.

## Compliance with ethical standards

## Disclosure of conflict of interest

The authors declare no conflicts of interest in this work.

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## Statement of informed consent

Informed consent was obtained from the patient for this case report.

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