

Successful maintenance treatment of a patient with chronic dermatitis with leech therapy

Dear Editor,

Chronic dermatitis is a chronic inflammatory skin disease, and chronic itching is one of its most important symptoms that can result in sleep disturbance, social isolation, and psychological disorders.^[1] We present a 60-year-old man with drug-resistant chronic dermatitis since 7 years ago, who responded well to leech therapy, which *Avicenna* recommended for certain dermatology conditions in *The Canon of Medicine*.^[2]

The patient was a farmer and shepherd, who was referred to the Traditional Persian Medicine (TPM) Clinic of Babol University of Medical Sciences, Babol, Iran, with the chief complaint of inflamed and itchy lesions on his face bilaterally in the temporal area. In his medical history, he reported surgery to remove a nevus on the right side of the face sometime before the onset of the lesions. The patient said he did not take any particular medication within the prior 2 years. Examination of the bilateral lesions in the temporal region showed a prominent border with a purple background that was darker than other parts of the facial skin. The lesions continued from the front of the ear to near the eyebrows and had lichenified following constant scratching [Figure 1a]. Due to the patient's lack of consent, a biopsy was not taken for pathological examination. Hence, dermatitis was diagnosed on a clinical basis.

The Eczema Area and Severity Index was used to evaluate the lesions from the first to the last patient visit. Based on the basics of TPM and using Mojahedi's Mizaj Questionnaire,^[3] the patient's Mizaj (temperament) was found to be hot and wet, referred to as the sanguine (Damavi) Mizaj. In this regard, topical leech therapy was administered to the patient once every two weeks. Three medium-sized medical leeches (*Hirudo orientalis*) obtained from the knowledge-based company of ideal nature biotechnologists (Tehran, Iran) were placed directly on the lesions on both sides in each session treatment; the leeches were then allowed to extract blood for about 20 minutes and to leave the tissue themselves.^[4]

Three sessions of leech therapy were administered. During the second session, the patient stated that the itching had reduced by about 60%, and the swelling



Figure 1: (a) First available image showing the lesions 2 weeks after the first leech therapy session; (b) Leech therapy provided during the second session; (c) The lesions 6 weeks after beginning leech therapy

had decreased by 30% based on the visual analog scale (VAS). Ahead of the third session of leech therapy, the patient stated that the light bleeding continued for up to two hours after the second session, but they reported no alarming complications. Remarkable improvement was also seen in the assessment of pruritus and edema. Daily activities impairment due to itching that was previously reported improved prominently. The lesions had become brighter, and the swelling and marked margins had decreased [Figure 1c]. The patient refused to continue leech treatment sessions due to considerable improvement in edema, redness, and especially itching.

In the 4-month follow-up, no particular complication was reported by the patient except a temporary mild tolerable itching, estimated at 10%–20% using the VAS; hence, medication was not administered to the patient. Finally, in the 10-month telephone-based follow-up, he stated that he had no annoying symptoms and did not need to take any medication. In this regard, the patient was satisfied with the treatment protocol. Figure 1 and Table 1 show the patient's condition in each follow-up session.

Leech saliva contains several components, some directly related to its anti-inflammatory, analgesic, antibiotic, and anticoagulation activities.^[5] Prostaglandin E1 in the leech salivary gland has analgesia, anesthesia,

Table 1: Follow-up of the patient's condition according to the Eczema Area and Severity Index

	First visit	2 weeks after beginning treatment	6 weeks after beginning treatment	2 months after the last treatment session	10 months after the last treatment session
Region score	3	3	3	3	3
Erythema	3	2	1	1	1.5
Edema/papulation	3	3	2	2	2.5
Excoriation	3	2	1	1	1
Lichenification	3	3	2	2	2
EASI score	3.6	3	1.8	1.8	2.1

EASI=Eczema area and severity index

anti-inflammation, and anticoagulation activity, which could be effective in treating eczema.^[6] A few clinical evidence-based documents exist on leech therapy's efficacy in treating dermatitis. In this regard, the studies conducted by Shankar *et al.*,^[7] Rai *et al.*,^[8] and Brzezinski *et al.*^[9] supported leech therapy's efficacy in treating eczema, contact dermatitis, and venous congestion, respectively.

In conclusion, the key clinical point of this case report was that leech therapy could possibly be considered an alternative treatment for chronic dermatitis. Therefore, we recommend designing standard clinical trials to evaluate the efficacy of leech therapy in chronic dermatitis.

Ethics statement

Written informed consent was taken from the patient to publish his clinical history, the progress of his treatment, and photographs anonymously. Moreover, the Research Ethics Committee of Babol University of Medical Sciences approved the ethical statement of this case report (IR.MUBABOL.HRI.REC.1400.258).

Acknowledgments

This manuscript was reviewed in terms of language and grammar by a native English-speaking language editor, Dr. Seyed Ali Hosseini (Native Editor Co., Shiraz, Iran).

Financial support and sponsorship

The study was supported by the Vice Chancellor of Research of Babol University of Medical Sciences.

Conflicts of interest

There are no conflicts of interest.

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Submitted: 15-Mar-2022; **Revised:** 16-Apr-2023;

Accepted: 19-Apr-2023; **Published:** 28-Jul-2023

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10.4103/jrms.jrms_199_22

How to cite this article: Mojahedi M, Alizadeh M, Shirzadian Kebria A, Parvizi MM. Successful maintenance treatment of a patient with chronic dermatitis with leech therapy. *J Res Med Sci* 2023;28:60.

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