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Case Report

Traditional Wisdom Meets Chronic Disease: Unani Success in Managing Psoriasis with *Zimad* and Leech Therapy-A Case Report

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Abstract



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Background: Psoriasis is a chronic, immune-mediated inflammatory skin disorder marked by erythematous plaques with silvery-white scales, significantly affecting patients' physical and psychological well-being. Conventional therapies, while often effective in symptom control, can result in side effects or limited long-term efficacy. Unani medicine, a traditional holistic system, incorporates unique therapeutic modalities such as *Zimad* (topical applications) and *Taleeq* (leech therapy), which aim to restore humoral balance and detoxify the body.

Objective: To evaluate the efficacy of Unani therapeutic interventions, specifically *Zimad* and Leech therapy, in a patient with chronic psoriasis unresponsive to conventional treatments.

Methods: A 45-year-old female with 15-year history of psoriasis was presented with widespread lesions, erythema, scaling, and pruritus. The patient was treated with Unani regimens like *Taleeq* (Leech Therapy) in which, two leeches over the affected site were applied twice a week for 10 sittings along with herbal *Zimad* containing anti-inflammatory and keratolytic properties was applied twice daily. Clinical assessment was performed at baseline, 21st day and 35th day using Psoriasis Area and Severity Index (PASI) and Dermatological Life Quality Index (DLQI).

Results: Marked improvement was observed after 35 days of treatment. Erythema, scaling, and itching were significantly reduced, with a notable decrease in PASI and DLQI scores. The patient reported improved quality of life and no adverse effects. The outcome suggests potential benefits of Unani therapy in managing psoriasis.

Conclusion: This case demonstrates that Unani therapies, particularly *Zimad* and *Taleeq*, may offer an effective complementary approach for managing chronic psoriasis, especially in patients who are unresponsive to conventional treatments. These modalities appear to support symptom relief through detoxification and humoral correction without adverse events. Larger-scale clinical studies are warranted to validate these findings.

Keywords: Psoriasis, *Taqashshur al-Jild*, *Zimad*, *Taleeq*, Leech Therapy, Unani

INTRODUCTION

The term Psoriasis is derived from the Greek word "*psora*", meaning itch.¹ Psoriasis is a chronic, immune-mediated, non-communicable inflammatory disorder predominantly affecting the skin and joints, clinically presenting as well-demarcated erythematous plaques with hyperkeratotic, micaceous scaling, often resulting in the formation of thick, crusted silvery scales and desquamative lesions.² In India, the overall incidence was estimated as 1.02% with the highest incidence among the age group of 20-39 years.³ Its prevalence is 0.33%-0.6% in different races,^{4,5} and affects around 125 million people worldwide. With the understanding of the biological nature of psoriasis, it has been recognized as an autoimmune disease with significant impacts on health implications extending beyond the skin.⁶

In classical Unani literature, psoriasis is termed "*Taqashshur al-Jild*". It is a prevalent skin condition marked by excessive dryness and the formation of scales resembling fish scales. The condition worsens due to an imbalance of *Akhlat* caused by excessive heat (*hiddat*) and putrefaction of blood (*ta'affun-i-dam*), along with an impairment of bile (*Safrā*) and blood. It arises due to *Ihtiraq-i-Sawdā*, which has an irritant nature that damages the skin, leading to severe itching, roughness, and scaling. According to *Razi* and *Majusi*, an excess of *Khilt-i-Ghaliz* (abnormal *sawdā*) accumulates in the skin, disrupting its nourishment and function, ultimately causing the skin to deteriorate and shed in the form of scales. Unani scholars recommend avoiding sour and sweet foods in the diet to manage the condition.⁷

MATERIALS AND METHODS

A 45-year-old female patient visited the Outpatient Department (OPD) at the National Institute of Unani Medicine (NIUM) seeking Unani treatment for psoriasis, as conventional therapies had been ineffective. She underwent Leech Therapy and *Zimad* application for 35 days. The treatment response was assessed during each OPD visit using the Psoriasis Area and Severity Index (PASI) score and Dermatological Life Quality Index (DLQI), along with photographic documentation of the lesions taken at baseline and after treatment completion. The safety of the therapy was monitored through clinical evaluation for adverse effects at each follow-up, as well as laboratory investigations conducted both at baseline and after 35 days of treatment.

CASE REPORT

A 45-year-old female patient attended the Outpatient Department (OPD -28) at the National Institute of Unani Medicine (NIUM) with a 15-year history of red, scaly, and itchy plaques on the anterior aspects of both legs. Despite undergoing multiple modern treatments, she did not experience relief. On a friend's recommendation, she sought treatment at NIUM, where the diagnosis was established based on her characteristic clinical presentation, detailed medical history, and thorough examination.

Past Medical History

The patient had no significant past medical history. She had no history of Hypertension, Diabetes mellitus, hypothyroidism, asthma, or any previous surgeries.

Family History

There was no significant family history.

Clinical Examination

General Physical Examination

The patient was a well-nourished female with a moderate build and wheatish complexion. There was no evidence of palpable lymph nodes, jaundice, pallor, or edema. Her vitals were within normal limits.

Vital Signs

Blood Pressure: 120/80 mmHg

Pulse Rate: 79 beats per minute

Respiratory Rate: 21 breaths per minute

Temperature: Afebrile

Systemic Examination

CNS – Conscious and Coherent

CVS - S₁ & S₂ audible, No cardiac murmurs

RS – Chest is bilaterally clear on auscultation

Abdomen- Soft and Non-tender

Musculoskeletal examination - The range of motion was normal in all joints, with no signs of Joint swelling, tenderness, effusion, or deformities.

Dermatological examination –

Generalized, symmetrical, well-demarcated, medium to large erythematous plaques with silvery white scales were found over the anterior aspect of both legs (Figure1)

Auspitz sign (pinpoint bleeding within the lesion on the removal of psoriatic scale) was positive.

Candle-grease sign (when scratched, psoriatic scales fall off revealing a shiny candle-like surface) was positive.

PASI Score (Psoriasis Area and Severity Index) was 11.2, revealing that erythema (redness), induration (thickness), and desquamation (scaling) were all severe, with involvement of about 45% body surface area (BSA)

INTERVENTION

Two leeches over the affected site were applied twice a week for ten sittings along with *Zimad* (Medicinal Paste) for local application twice daily up to 35 days, which was started from the next day of leech therapy.

Follow up

Patient was assessed three times. First assessment was done on 0th day and second assessment on 21st day and third on 35th day.

Zimad Preparation

A formulation was selected from the literature, consisting of five ingredients: *Hina* (*Lawsonia inermis* Linn.), *Baloot* (*Quercus incana*), *Jouz-us-Saru* (*Casuarina equisetifolia*), *Gulnar* (flowers of *Punica granatum*), and *Post Anar* (*Punica granatum*). These ingredients were taken in equal amounts, ground into a fine powder, and sieved. To prepare the *Zimad* (paste), Vinegar (*Sirka*) was boiled in a vessel, and the powdered ingredients were gradually incorporated while stirring continuously until a smooth, paste-like consistency was obtained.^{8,9,10}

ASSESSMENT

1. Psoriasis Area and Severity Index (PASI)

The PASI combines assessments of 4 body areas: the head and neck (H), the upper limbs (UL), the trunk (T) and the lower limbs (LL).

The percentage of skin affected by psoriasis in each area is given a numerical score (A) representing the proportion involved: 1(0-9%), 2(10-29%), 3 (30-49%), 4 (50-69%), 5 (70-89%), or 6 (90-100%). Within each area (H, UL, T, LL) the severity of 3 plaque signs - Erythema (E), Thickness/Induration (I) and Desquamation/scaling (D)

$$\text{PASI} = 0.1(\text{EH}+\text{IH}+\text{HH}) \text{ AH} + 0.2(\text{EUL}+\text{IUL}+\text{HUL}) \text{ AUL} + 0.3(\text{ET}+\text{IT}+\text{HT}) \text{ AT} + 0.4(\text{ELL}+\text{ILL}+\text{HLL}) \text{ ALL}$$

Visit	PASI Score	% Reduction
Baseline (0 th Day)	11.2	00.00
1 st Follow-up (21 st Day)	6	46.4
2 nd Follow-up (35 th Day)	2.4	78.6

	Erythema (E)	Induration (I)	Desquamation (D)
Baseline (0th Day)	++++	++++	++++
1st Follow-up (21st Day)	+++	++	+++
2nd Follow-up (35th Day)	+	+	+

++++ = Severe, +++ = moderate to severe, ++ = moderate, + = mild, - = negative

S.No.	Questionnaire	Before Treatment	After Treatment
1	How itchy, sore, painful or stinging has your skin been?	3	1
2	How embarrassed or self conscious have you been?	1	0
3	How much has your skin interfered with you going shopping?	0	0
4	How much has your skin influenced the clothes you wear?	1	1
5	How much has your skin affected any social activities?	0	0
6	How much has your skin made it difficult to do any sport?	1	1
7	Has your skin prevented you from working or studying?	0	0
8	How much has your skin created problem with your partner?	0	0
9	How much has your skin caused any sexual difficulties?	0	0
10	How much has your skin created problem in preparing food	1	1
	TOTAL	7	4

Investigations

Hb, BT, CT, HIV, HbsAg, RBS

All the reports were within normal limits



Figure 1: Before Treatment



Figure 2: After Treatment



Figure 3&4: Application of Leech over affected areas

DISCUSSION

Leech therapy has been utilized in medicinal practices since ancient Egypt and continues to be applied in modern reconstructive surgery. *Galen* advocated for its use in balancing humors, while the esteemed Greco-Arabic scholar *Ibn Sina* recommended leeching to extract blood from deeper tissues.

Psoriasis is an autoimmune disorder driven by T-cell activation, triggered by environmental factors. This activation leads to the release of cytokines, which accelerate keratinocyte proliferation and induce antigenic adhesion molecules in dermal blood vessels. These molecules further stimulate T cells, perpetuating the inflammatory cycle.

In this case study, the combined therapeutic efficacy of Unani medicine and leech therapy was assessed for the management of psoriatic lesions. The patient's progress was evaluated using the Psoriasis Area and Severity Index (PASI). Notably, the PASI score showed a significant improvement, decreasing from 11.2 to 2.4, highlighting the potential benefits of this integrative approach.³

Leech therapy is a well-established biotherapeutic approach that derives its efficacy from the presence of numerous bioactive compounds in leech saliva. Key components such as Hirudin, Calin, Kallikrein inhibitors, histamine-like substances, Hyaluronidase, Collagenase, Pseudohirudin, Destabilase, and Lipase contribute to its therapeutic effects. The vasodilatory properties of these substances enhance blood circulation, while acetylcholine, a histamine-like compound, plays a crucial role in correcting microangiopathy. Additionally, leech therapy exhibits anesthetic properties, providing relief from itching. The presence of *Bdellines* and *Egglins* further enhances its anti-inflammatory effects, effectively reducing local erythema and inflammation. These multifaceted benefits make leech therapy a valuable tool in modern medical applications.¹¹

Recent studies on Malaysian leeches have identified antioxidant properties in their saliva, which may contribute to the healing of psoriatic lesions. This is

particularly relevant given recent findings indicating elevated levels of oxidized low-density lipoprotein (LDL) in such lesions. Furthermore, since psoriasis is an immune-mediated disorder, the immunomodulatory effects of leech saliva could also play a beneficial role in its management.¹²

Lawsonia inermis helps in managing psoriasis by modulating inflammatory pathways involving TNF- α , IL-1 β , and VEGF (vascular endothelial growth factor), which play key roles in the disease's progression. Its natural anti-inflammatory and antioxidant properties can potentially reduce excessive cytokine activity, alleviating skin inflammation and irritation. By targeting these pro-inflammatory mediators, henna offers a promising complementary approach to psoriasis treatment.¹³

Quercus, has been recognized for its therapeutic potential in treating inflammatory conditions, particularly skin disorders. Its diverse bioactive constituents—including pedunculagin, ellagic acid, phenolic compounds, glycosides, flavonoids, gallic acid, galloyl derivatives, malic acid, hexa-hydroxy diphenyl, tannic acid, mucilage, quercin, and pectin—demonstrate potent anti-inflammatory, antioxidant, and regenerative properties. By modulating chemokine and cytokine activity in keratinocytes, *Quercus* shows promise as a natural treatment for chronic inflammatory skin diseases such as psoriasis and atopic dermatitis.^{14,15}

Studies suggest that *Punica granatum* extracts may help treat psoriasis through anti-inflammatory and skin-restoring effects. Punicalagin, a key compound in pomegranate peel, reduced psoriasis-like symptoms in mice by inhibiting the NF- κ B pathway and lowering IL-1 β expression. Polysaccharides from pomegranate peel improved skin barrier function and suppressed inflammation by regulating FLG, AQP3, STAT3, and NF- κ B pathways. In vitro studies showed that pomegranate-derived compounds inhibited thymidine phosphorylase, an enzyme linked to psoriasis. These findings highlight *Punica granatum* as a potential natural remedy for psoriasis.¹⁶

RESULTS

The integration of *Zimad* with Leech therapy demonstrated remarkable efficacy in alleviating psoriatic lesions. The treatment outcomes were objectively assessed using the Psoriasis Area and Severity Index (PASI) and Dermatological Life Quality Index (DLQI), revealing a substantial reduction in the PASI score from 11.2 to 2.4 and a decrease in DLQI from 7 to 4. This significant improvement reflects a marked decrease in erythema, scaling, and induration, highlighting the therapeutic potential of this integrative approach.

The *Zimad*, enriched with anti-inflammatory and keratolytic agents, played a pivotal role in restoring skin homeostasis, facilitating lesion resolution, and reducing hyperproliferation of keratinocytes. Simultaneously, leech therapy contributed through its unique bioactive components, particularly antioxidants and immunomodulatory compounds present in leech saliva. These factors potentially mitigated oxidative stress - recently linked to elevated oxidized low-density lipoproteins (LDL) in psoriatic plaques and modulated immune dysregulation, which is central to psoriasis pathogenesis.

The synergy between Unani pharmacotherapy and leech therapy underscores a novel, holistic approach to psoriasis management, leveraging traditional wisdom with modern scientific insights. This study provides compelling evidence for the revival of bio-integrative therapies in dermatological care. Further clinical trials with larger cohorts are warranted to validate these findings and explore their long-term efficacy.

CONCLUSION

Psoriasis is a chronic autoimmune inflammatory condition affecting the skin. According to the Unani system of medicine, various factors contribute to its development, including infections and imbalances in bodily humours, particularly *Sawda* (black bile) and *Balgham* (phlegm). Effective management aims to alleviate symptoms and prevent recurrence. The high cost, limited availability, and potential side effects of prolonged allopathic treatments pose significant challenges. Therefore, the search for safer and more effective anti-psoriatic therapies remains an active area of research.

Notably, Unani compound formulations along with Leech Therapy have demonstrated excellent tolerance and acceptability in patients, with no reported side effects. Significant improvements have been observed in both subjective and objective parameters, including the Psoriasis Area and Severity Index (PASI) and Dermatological Life Quality Index (DLQI). These findings suggest that Unani treatments could be a safe and effective alternative for managing psoriasis. However, further randomized clinical trials are necessary to establish their efficacy and introduce a novel therapeutic approach using Unani classical medicines.

Informed Consent: Written informed consent was obtained from the patient, and clinical data included in

this case study were collected in compliance with the Declaration of Helsinki (2013).

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