

Role of Jalokavacharana in the Management of Palmar Keratosis (Vipadika): A CARE-Compliant Case Report

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ABSTRACT

Background: Palmar keratosis is a persistent hyperkeratotic dermatological condition involving abnormal thickening of the palmar epidermis, accompanied by fissuring, pain, burning discomfort, and impaired hand function. Within the Ayurvedic framework, this condition corresponds to Vipadika, classified under Kshudra Kushtha, with predominant involvement of Vata–Kapha Dosha and Rakta Dushti. Conventional dermatological treatments relying on topical keratolytics and corticosteroids tend to offer only transient symptomatic relief and are burdened by the risk of relapse and complications with prolonged use. Jalokavacharana, a therapeutic leech application categorized under Raktamokshana, has been advocated in classical Ayurvedic texts as a potent parasurgical procedure for disorders attributed to Rakta-pradoshaja and Twak Vikara.

Objective: To assess the therapeutic outcome of Jalokavacharana in a patient presenting with palmar keratosis, clinically correlated with Vipadika.

Methodology: A patient with a confirmed diagnosis of palmar keratosis received Jalokavacharana once weekly over three therapeutic sessions, supplemented with adjunctive Ayurvedic oral medication. Symptom evaluation was conducted through a standardized graded scoring system.

Results: Clinically significant improvement was documented across all assessed parameters, including reductions in skin thickness, fissuring, pain, dryness, and burning sensation. No adverse reactions were encountered, and there was no evidence of symptom recurrence during the 15-day post-treatment follow-up.

Conclusion: Jalokavacharana demonstrates potential as a safe, minimally invasive, and well-tolerated therapeutic modality for palmar keratosis by targeting the underlying pathology of Rakta Dushti and Dosha imbalance. It may serve as a viable integrative alternative or complement to conventional long-term corticosteroid-based therapies.

Keywords: *Palmar Keratosis, Vipadika, Jalokavacharana, Raktamokshana, Kshudra Kushtha.*

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INTRODUCTION

Palmar keratosis is a chronic, recurring dermatological condition characterized by progressive thickening of the palmar epidermis, frequently accompanied by fissures, dryness, pain, and reduced hand function.^[1] The impact of this condition on daily life is considerable, as patients often experience significant difficulty in performing routine manual tasks. Standard contemporary management involves the use of topical keratolytic agents and corticosteroids; however, these approaches are largely palliative, and withdrawal of treatment is commonly

followed by symptom relapse and potential steroid-related complications.^[2]

In classical Ayurvedic texts, the clinical features of palmar keratosis closely resemble Vipadika, a subtype of Kshudra Kushtha.^[3] Vipadika is characterized by Panipada Sphutana (cracking of palms and soles), Rukshata (dryness), and Vedana (pain).^[4] Its pathogenesis involves the vitiation of Vata and Kapha Dosha in conjunction with Rakta Dhatu involvement.^[5]

Acharya Sushruta maintained that conditions rooted in Rakta Dushti are most effectively managed through

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Raktamokshana, and among available modalities, Jalokavacharana is regarded as the most refined and safe option for chronic cutaneous ailments.^[6]

Given the chronic and recurrent nature of hyperkeratotic palmar disorders, integrative approaches targeting underlying inflammation, microvascular dysfunction, and impaired tissue repair hold considerable clinical relevance.^[7] This case report seeks to evaluate the therapeutic efficacy of Jalokavacharana in palmar keratosis management.

AYURVEDIC ETIOPATHOGENESIS (SAMPRAPTI)

Ayurvedic Samprapti: Sustained exposure to environmental cold, habitual skin dryness, repeated dermal irritation, faulty dietary patterns, and suppression of natural physiological urges progressively aggravate the Vata and Kapha Dosha. These vitiated Doshas, in association with disturbed Rakta Dhatu, accumulate within the Twak (skin) of the palms, precipitating abnormal keratinization, crack formation, and pain. Chronicity arises from the unresolved Dosha imbalance and impedance within the Raktavaha Srotas.

Samprapti Ghataka:

- Dosha: Vata, Kapha
- Dushya: Rakta, Twak
- Srotas: Raktavaha
- Adhithana: Panitwacha

Probable Mode of Action of Jalokavacharana: Therapeutic leech application functions by extracting vitiated blood from the local tissue, thereby disrupting the pathological sequence at its source.^[8] The saliva secreted by medicinal leeches contains several pharmacologically active substances including hirudin, calin, and hyaluronidase, which collectively confer anticoagulant, anti-inflammatory, and analgesic activities.^[9] The resultant enhancement in local microcirculation and clearance of inflammatory mediators contribute to visible reductions in hyperkeratosis, pain, and fissuring.^[10] In Ayurvedic terms, Jalokavacharana pacifies aggravated Rakta and Pitta, restores appropriate Vata movement, and facilitates durable clinical recovery.

MATERIALS AND METHODOLOGY

Study Design: CARE-compliant case report.

Source of Patients: OPD/IPD of Shalya Tantra Department.

Case Report

A 42-year-old male patient with a documented one-year history of chronic palmar keratosis was enrolled for this observation.

Differential Diagnosis

The differential diagnoses considered during clinical evaluation included palmoplantar psoriasis, chronic

eczema, and hereditary palmoplantar keratoderma.^[11] Following thorough clinical assessment and in the absence of systemic involvement, a confirmed diagnosis of palmar keratosis was established.

Timeline of Clinical Events

Day	Clinical Event
Day 0	Baseline assessment
Day 7	1st Jalokavacharana sitting
Day 14	2nd sitting
Day 21	3rd sitting
Day 36	Follow-up evaluation

Consent

Written informed consent was secured from the patient prior to treatment initiation and for publication of clinical data and photographic documentation.

Ethics Statement

This manuscript constitutes a retrospective, CARE-compliant case report derived from routine Ayurvedic clinical practice. Since the intervention was part of standard clinical care and not an experimental protocol, formal institutional ethics committee approval was not mandated. Nonetheless, written patient consent was obtained covering both treatment and the use of clinical information for publication purposes.

THERAPEUTIC INTERVENTION

Procedure: Jalokavacharana

- Purva Karma: Thorough local cleansing of the palmar site using sterile water
- Pradhana Karma: Controlled application of a medicinal leech over the affected palmar area
- Duration: Leech allowed to remain until spontaneous detachment
- Paschat Karma: Post-procedural local application of turmeric powder dressing

Frequency

The procedure was administered once per week over a total of three sittings.

Associated Therapy

Internal medication: Arogyavardhini Vati was prescribed as adjunctive oral therapy throughout the treatment course.

Clinical Photograph



Figure 1: Pre-treatment appearance of both palms showing marked hyperkeratosis, fissuring, dryness, and areas of discoloration.



Figure 2: Close-up view of medicinal leeches attached to the affected palmar region during Jalokavacharana.



Figure 3: Medicinal leeches applied over multiple affected areas of the palm during the Pradhana Karma phase.

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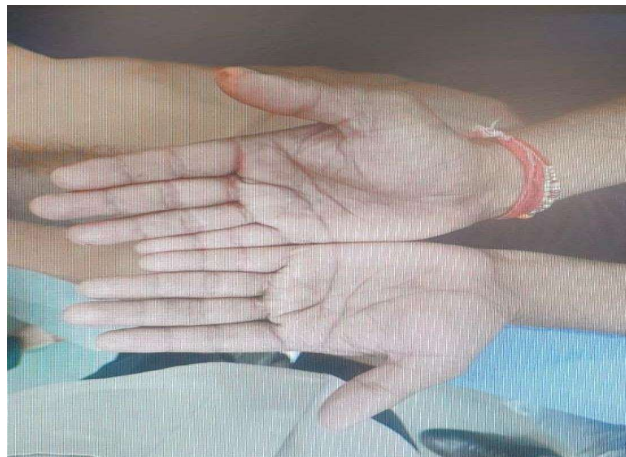


Figure 4: Post-treatment appearance of both palms after three Jalokavacharana sessions, showing reduction in hyperkeratosis and fissuring.

Assesment Criteria

Table 1: Grading Criteria for Symptom Assessment Parameters

Parameter	Grade 0	Grade 1	Grade 2	Grade 3
Skin thickness	Normal	Mild thickening	Moderate thickening	Severe thickening
Palmar fissures	Absent	Superficial	Deep fissures	Bleeding fissures
Pain	Absent	Mild	Moderate	Severe
Dryness	Normal	Mild dryness	Moderate dryness	Severe dryness
Burning sensation	Absent	Mild	Moderate	Severe

Table 2: Comparative Clinical Grading Before and After Jalokavacharana

Clinical Parameter	Before Treatment	After Treatment	Clinical Outcome
Skin thickness	Grade 3 (Severe thickening)	Grade 1 (Mild thickening)	Marked reduction
Palmar fissures	Grade 3 (Deep fissures)	Grade 1 (Superficial)	Significant healing

Clinical Parameter	Before Treatment	After Treatment	Clinical Outcome
Pain	Grade 2 (Moderate)	Grade 0 (Absent)	Complete relief
Dryness	Grade 3 (Severe dryness)	Grade 1 (Mild dryness)	Marked improvement
Burning sensation	Grade 2 (Moderate)	Grade 0 (Absent)	Complete relief

Clinical Outcome

Substantial symptomatic improvement was documented across all parameters following the three treatment sessions. Subjective complaints such as pain and burning sensation showed early and complete resolution, while objective signs including hyperkeratosis and fissuring demonstrated steady progressive improvement over the course of therapy. The patient tolerated all three procedures without difficulty, and no symptom relapse was recorded during the follow-up observation period.

DISCUSSION

Jalokavacharana exerts its therapeutic effect by draining vitiated blood from the affected local tissue, thereby halting the pathogenic cascade at its origin. The bioactive constituents of leech saliva collectively augment regional blood flow, attenuate local inflammatory activity, mitigate pain perception, and support tissue repair mechanisms. From an Ayurvedic standpoint, the therapy works by pacifying Rakta and Pitta while concurrently enabling Vata Anulomana, restoring the normal physiological flow of Vata Dosha.

The resolution of fissures and pain observed in this patient can be attributed to the analgesic and anti-

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inflammatory biochemical properties of leech saliva components. The reduction in hyperkeratosis is likely a consequence of enhanced microvascular perfusion and normalization of cellular metabolic activity at the tissue level.^[12]

Contemporary management of palmar keratosis with topical keratolytics and corticosteroids frequently results in symptom recurrence upon treatment withdrawal. In contrast, Jalokavacharana — through its established actions on inflammation and microcirculation — may confer more sustained clinical benefit while avoiding the systemic and local risks associated with prolonged steroid use, positioning it as a valuable integrative option in the treatment of this condition.

No complications or procedure-related adverse events were observed at any point during the treatment or follow-up period. The anticoagulant and anti-inflammatory properties of leech salivary proteins — particularly hirudin — are known to prevent microthrombus formation, enhance tissue oxygenation, and thereby support epithelial regeneration within hyperkeratotic skin lesions.

Patient Perspective

The patient reported noticeable alleviation of pain and burning discomfort following the first leech therapy session. Gradual but consistent improvement in palmar fissures and reduction in skin thickness allowed him to resume routine manual activities with greater ease. The patient expressed overall satisfaction with the treatment outcome and reported no procedural discomfort during any of the three sessions.

Strength of the Case

This case underscores the clinical potential of Jalokavacharana as a minimally invasive parasurgical approach for chronic hyperkeratotic skin disorders, particularly in scenarios where conventional pharmacological therapies yield limited long-term efficacy.

CONCLUSION

Jalokavacharana appears to be a clinically effective and well-tolerated treatment modality for palmar keratosis, operating through targeted correction of Rakta Dushti and Dosha imbalance. Nevertheless, confirmatory evidence from adequately powered, rigorously designed controlled clinical trials is required before broader therapeutic recommendations can be made.^[13]

LIMITATION

This report is based on a single clinical observation with a restricted follow-up duration of 15 days. Generalization of these findings requires validation through larger-scale, controlled clinical investigations.^[14]

FUTURE SCOPE

- Design and execution of larger randomized controlled clinical trials

- Head-to-head comparative evaluations of Jalokavacharana versus topical corticosteroids
- Biochemical and molecular analysis of leech salivary components in the context of keratotic skin disorders

Conflict of Interest: Nil

Source of Support: Nil

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