

CASE STUDY

Evaluating the Efficacy of Leech Therapy and Lodhradi Lepa in Acne vulgaris – A Case Study

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ABSTRACT

Ayurvedic classics have discussed Mukhadushika in Kshudra roga. It happens because Rakta, one of the major Dushyas, and the doshas of Vata and Kapha are vitiated. According to Acharya Sushruta, Mukhadushika is a facial outbreak that resembles thorns. It can be referred to as acne vulgaris in the current system a 25-year-old male attended the OPD at the hospital with complaints of multiple pustules and papules on his face. He was diagnosed with acne vulgaris. Ayurvedic treatment, including Jalaukavacharana (leech therapy) to remove Rakta Dushti and Lepa application, was advised for 21 days. And a follow-up after 14 days showed sustained improvement. In this instance, Lodhradi Lepa was administered to the patient once daily for 21 days or jalaukavacharana, was administered in three settings over the course of 15 days at 7-day intervals. Patients' clinical condition has significantly improved by the conclusion of the treatment.

Keywords: Jalaukavacharana, Acne vulgaris, Lodhradi lep, Rakta Dushti

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INTRODUCTION

Acne vulgaris is a common cutaneous inflammatory disorder of the pilosebaceous unit, which runs a chronic course. The condition commonly manifests with papules, pustules, or nodules primarily on the face, although it can also affect the upper arms, trunk, and back. The pathogenesis of acne vulgaris involves the interaction of multiple factors that ultimately lead to the formation of its primary lesion [1] Acne is estimated to affect 9.4% of the global population, making it the eighth most prevalent disease worldwide. Epidemiological studies have demonstrated that acne is most common in postpubescent teens, with boys most frequently affected, particularly with more severe forms of the disease [2]. In the current situation, individuals are highly mindful about both their physical appearance and their health. The whole attractiveness of the body is dependent on the face, which is said to be the "index of mind." Disease is the source of this unsightly appearance that can lead to a permanent deformation that can induce an inferiority complex and a loss of confidence.

Mukhadushika is correlated with acne vulgaris of the contemporary system of medicine. It is an inflammatory disorder of the pilosebaceous unit, which runs a chronic course and it is self-limiting. Acne vulgaris is triggered by Cutibacterium acnes in adolescence, under the influence of normal circulating dehydroepiandrosterone [3]. Mukhadushika is a common disease known to us since from Acharya Sushruta's period. It is considered as one of the kshudraroga [4], occurs due to vitiation of Vata, Kapha and Rakta.

Shodhana chikitsa and shamana chikitsa are the two forms of therapy for Mukhadushika [5] Shodhana chikitsa includes Vamana, Nasya and (Jalaukavacharana) Siravedha. The Shamana chikitsa includes various types of Lepa and Pralepa. Nowadays, there are more topical and systemic medications available to treat acne vulgaris.

The patient attempted all of these treatments, but after stopping the medications and topical creams, he experienced a recurrence. As a result, he was treated with Ayurvedic treatments external application of Lodhradi lepa and Jalaukavacharana Jalaukavacharana, a bio-purifying technique, eliminates ingrained poisons by releasing blood, balancing vitiated Dosha, and clearing Srotas. With no negative side effects, Jalaukavacharana has a high level of effectiveness in both Ropana (healing) and Shodhana (cleaning). It is straightforward to use and reasonably priced. Therefore, the ideal approach of Raktamokshana in Mukhadushika might be Jalaukavacharana, which is the simplest and nearly painless [6]. Leech therapy has been traditionally used in Ayurveda for blood purification (Raktamokshana) and has shown promising results in various skin disorders. The present study aims to assess the effectiveness of leech therapy in managing acne.

CASE REPORT

A male patient of age 25 years, reported to the OPD, with complaint of Pidaka (papules and pustules) on face and forehead including Todavat peeda (piercing pain), Daha (burning sensation), Srava (discharge), and Kandu (itching) associated with recurrent comedones, for 3.5 years. The patient has apparently had good and healthy skin before 4 years. Gradually, the patient suffered with comedones, red papules (Rakta Pidaka), and pustules and nodules around the cheeks, Chin and forehead. For that, the patient consulted contemporary medical sciences for treatment. However, the patient did not get satisfactory relief and hence came for ayurvedic management.

After a detailed examination and observation of the skin the patient was advised

Leech therapy and lepa was chosen as an alternative approach to manage his condition. The procedure was done with patient consent.

Dashavidha Pariksha (Tenfold Examination)

Prakriti	Pita prakriti
Vikriti	Rakta dusthi
Sara	Madhyam
Samhanana	Madhyam
Pramana	Madhyam
Satmya	Madhyam
Satva	Madhyam
Aharashakti	Madhyam
Vyayamashakti	Madhyam
Vaya	Baal

- Past history: No other past history of any chronic disease
- History of allergy: Not any allergic history
- Treatment history: No treatment history of systemic disease, i.e., hypertension/diabetes mellitus/thyroid dysfunction and autoimmune disease, i.e., rheumatoid arthritis/systemic lupus erythematosus
- Medication: The patient was using some allopathic topical medication in the past.
- Family History: No any relevant family history
- Personal History: Diet: mixed
- General Examination: -Vital Data: Pulse: 82/min; R/R: 18/min; BP: 114/72 mmHg; Temp: 98.3°F, Pallor: Absent, Icterus: Absent Cyanosis: Absent Clubbing: Absent Weight: 56 kg, Height: 163 cm.

Disease Evaluation

The formula used to get the severity grade in Tables 1 and 2 is local score = factor multiplied by grade (0–4). [7] The severity of the illness in this case report is = 30

Scale of Ayurvedic Assessment Table 3 displays the results of the Ayurvedic Assessment Scale [8]. The following formula is used to determine the severity grade of acne vulgaris in the particular case: local score = factor multiplied by grade (0–4). The illness severity in this case report is 30

Table 1: The Global Acne Grading System

Type of lesion	Point
No lesions	0
Comedones	1
Papules	2
Pustules	3
Nodules	4

Location	Factor
Forehead	2
Right cheek	3
Left cheek	3
Nose	1
Chin	1
Upper chest and back	1

Table 2: Gradation of acne severity

Severity	Score
Mild	1 - 18
Moderate	19 -30
Severe	31 -38
Very severe	>39

Table 3: Ayurvedic Assessment Scale

Signs and symptoms	Scoring
Kandu (itching)	
Continuous itching	2
Occasional itching	1
No itching	0
Vedana (pain)	
Pain without touch	2
Pain on touch	1
No pain	0
Vivartana (discoloration)	
Reddish yellow	4
Reddish pink	4
Reddish brown	4
Red	3
Black	2
Black gray	1
Normal	0
Shotha (mm)	
10 mm	3
5	2
2	1
No swelling	0

Table 4: Investigation

Hb %	13.4 %
WBC	4300
Differential leukocyte count (%)	N - 65 L - 30 E - 02 M - 03 B - 00

Table 5: Ingredient of Lepa

Name of ingredient	Latin name	Quantity
Lodhra	<i>Symplococcus racemosa</i>	2gm
Dhane	<i>Coriandrum sativum</i>	2gm
Vacha	<i>Acorus calamus</i>	2gm

JALAUKAVACHARANA (Intervention)

(Purva karma)

Two leeches were placed on each patient's cheek during OPD visits, and the application was done once a week for 14 days (three settings). The vata kaphaja disorder acne vulgaris is linked to rakta's function as a key dushya in the fundamental matrix of illness diathesis. Leech therapy may be applied to any individual with ease on one side. On the other half, a kidney tray filled with fresh water and Haridra churn was used, and the leeches were dipped in it before being applied. Following this preparation, the leech became active, meaning it began to move swiftly within the vessel, and was captured.

Removed and placed in a sterile container with cold, fresh water. Before using leeches, the patient was instructed to wash their face with fresh water and then do *Ushanodaka Prakshalana*. The patient's face was then cleansed with dry cloth to get rid of any remaining grease. The patient was then made to lie down in a comfortable position.

Intervention of bloodletting (Pradhan karma)

Blood tests for hemoglobin estimate, total leukocyte count, and differential leukocyte Count were often conducted [Table 4]. Applying active leeches to the afflicted region. A damp cotton pad was positioned over the leech's attachment point.

Two leeches that drew 30 to 40 milliliters of blood were used in this treatment.

Post of procedure (pachata karma)

The leeches were removed from the area once they had accessed the bloodletting indication. In order to check for subsequent bleeding from the application site, the Haridra churna was placed over the cheek bite wounds. To absorb the secondary bleeding, cotton gauze pieces were placed over the bleeding areas and pressed firmly for a few minutes. To prevent any bleeding, the patient was instructed to wait until the next morning to remove it. The leech's anterior sucker, or mouth, was then sprinkled with Haridra churna to induce vomiting. Occasionally, the leech had to be gently squeezed to release the contaminated blood it had swallowed. The leech regained its activity after clearing its gut of all the contaminated blood. The leech became active again and was stored in fresh water.

Hematophagous animals including leeches have been known to possess biologically active compounds in their secretions, especially in their saliva. The blood-sucking annelids, leeches have been used for therapeutic purposes since the beginning of civilization. Ancient Egyptian, Indian, Greek and Arab physicians used leeches for a wide range of diseases starting from the conventional use for bleeding to systemic ailments, such as skin diseases [9],

Local application of *Lodhradi Lepa*

Once a day for 21 days.

Lodhradi Contains: [Table 5] [10]

It is explained in Chakradutta Kshrudraogadhikarana. It contains the same quantity of three medicines. It is made into a fine powder and applied topically to the face and other afflicted regions.

How to Apply Lepa

Fine powder of Lodhra (2 gm) vacha (2gm) and Dhanyaka (2gm) with Gulabjal in the form of paste.

It was recommended that the three-drug mixture (two grams each) be applied to the face once a day, left for fifteen to twenty minutes, and then washed off with cold water. Every day, leppa was made from fresh.

Duration: Daily for 21 days

Table 6: Changes in signs and symptoms before and after each follow-up

Signs and symptoms	Before treatment	1 st follow-up	2 nd follow-up	3 rd follow-up
Kandu (itching)	2	1	1	0
Vedana (pain)	2	2	1	0
Vivarnta (discoloration)	3	2	2	1
Shotha (inflammation)	1	1	1	0



Fig 1: Jalaukavacharana was done (Day 1)
Date: 02/12/2024



Figure 2: First follow-up
Date 09/12/2024



Figure 3 Second follow-up (Jalaukavacharana was done) Date: 16/12/2024



Fig. 4: Third follow-up (without leech application)



Figure 5 lepa application

RESULTS

The severity of acne vulgaris symptoms was assessed before treatment using the formula: local score = factor \times grade (0–4). As shown in Figure 1, the severity score for this case was 30. The patient initially presented with multiple pustules and nodules on both cheeks and the nose, accompanied by pus discharge, discomfort, and swelling. At the first follow-up on Day 7, the patient reported mild relief from burning, itching, and discomfort. Swelling had reduced, and pus discharge had significantly decreased (Table 6, Figure 2). On a subjective scale, the patient reported 30% symptom relief, particularly in terms of discomfort and inflammation.

By the second follow-up on Day 14, there was complete relief from burning, discomfort, itching, and pustules. However, a few small papules were still present (Figure 3). The patient's overall symptom improvement was recorded at 70%, with noticeable skin texture enhancement and reduced redness. By the third follow-up on Day 21, most clinical symptoms had resolved (Figure 4). The patient experienced an 85–90% reduction in acne severity, though a healed scar remained visible at this stage. The patient expressed high satisfaction with the treatment outcome and noted improved confidence due to clearer skin.

DISCUSSION

Role of Jalaukavacharana

Acharya Vagbhata emphasized that when dushita rakta (vitiated blood) is lodged in deeper tissues, Jalaukavacharana [11] (leech therapy) serves as an effective and minimally invasive bloodletting procedure. It is considered safe, less complicated, and nearly painless. In Ayurveda, disease management focuses on addressing the root cause, and Samshodhana Chikitsa (purification therapies) play a crucial role. Bloodletting is one such intervention that helps expel vitiated blood, thereby restoring physiological balance. Three sessions of Jalaukavacharana over 14 days, with a seven-day interval between each session (Figures 1-4). Jalaukavacharana aids in eliminating Strotavarodha (blockage in circulatory channels) by removing deep-seated biotoxins, thereby interrupting the Samprapti Vighatana (disease pathogenesis). This therapy promotes both detoxification and healing, with no reported adverse effects. Recent research suggests that leech therapy not only facilitates blood removal but also introduces biologically active compounds *Vedanasthapana*. With anti-inflammatory, analgesic, and antimicrobial properties, further enhancing its therapeutic efficacy [12].

Probable Mode of Action of the Drug

Lodhradi Lepa, when applied locally, helps balance the vitiated Doshas and promotes skin healing. By covering the pilosebaceous gland openings, the application increases local temperature, which in turn dilates the pores and clears *Strotavarodha* (blockages in the channels). This enhanced permeability allows the active ingredients to penetrate the affected area, thereby disrupting the disease process (*Samprapti Bhanga*) and addressing the root cause of the condition. Acharya Sushruta has elaborated on the mechanism of action of Lepa, stating that when applied against the direction of hair growth (*Pratilom Gati*), the medicinal properties are absorbed through *Romakupa* (hair follicles) and reach deeper tissues via the *Swedavaha Strotas* (sweat-conducting channels). This facilitates better absorption and enhances the therapeutic impact of the formulation. Lodhradi Lepa is a well-known Ayurvedic topical treatment composed of three readily available, safe, and effective herbs:

Table 7: Lodhradi Lepa components and their action

Drug	Action of Drug
Lodhra (<i>Symplocos racemosa</i>)	cooling properties (Sheetaveerya), anti-inflammatory (Shothahar), Kapha-Pitta balancing (Kaphapittaghna), and skin-purifying (Twakdosahara) effects
Dhanyak (<i>Coriandrum sativum</i>)	Anti-inflammatory (Shothahar), pain-relieving (Shulahar), Tridosha-balancing (Tridosahar), and heating (Ushnaveerya) properties.
Vacha (<i>Acorus calamus</i>)	analgesic (Vedanasthapan), anti-inflammatory (Shothahar), and Kapha-Vata pacifier (Kaphavatashamak), with a warming effect (Ushnaveerya)

The combination of Ushna Veerya herbs—Dhanyak and Vacha—helps alleviate *Strotavarodha*, while all three ingredients work synergistically to reduce inflammation (Shothahar) and promote skin detoxification, making Lodhradi Lepa an effective formulation for managing acne and other inflammatory skin condition.

CONCLUSION

The case study demonstrates that leech therapy (Jalaukavacharana) combined with Lodhradi Lepa is an effective Ayurvedic approach for managing acne vulgaris. Over the course of three treatment sessions spanning 21 days, the patient experienced a significant reduction in symptoms, including inflammation, itching, pain, and pustules. By the final follow-up, there was an 85–90% improvement in acne severity, with only minimal scarring remaining.

Jalaukavacharana, played a crucial role in detoxification by eliminating vitiated blood and restoring skin balance. Lodhradi Lepa, composed of Lodhra, Dhanyak, and Vacha, enhanced skin healing through its anti-inflammatory, antimicrobial, and detoxifying properties. The synergistic action of these therapies not only

alleviated symptoms but also addressed the root cause of the condition by balancing the Doshas and clearing circulatory blockages.

This case study supports the use of Ayurvedic interventions as a safe, effective, and side-effect-free alternative to conventional acne treatments. Further research with larger sample sizes is recommended to validate these findings and explore broader clinical applications.

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