

A CASE STUDY OF LEECH THERAPY (*JALAUKAVCHARAN*) IN *KHALITYA W. S. R. ALOPECIA AREATA*

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ABSTRACT

Leech therapy, or *Jalaaukavacharana*, is a traditional Ayurvedic technique under the broader category of *Raktamokshana* (blood purification). Medicinal leeches are used to draw out vitiated blood while simultaneously releasing biologically active compounds through their saliva, including natural analgesics and anticoagulants. This method is particularly effective in conditions involving *Pitta and Rakta Dushti*, which are often associated with dermatological and hematological disorders such as neurodermatitis, psoriasis, eczema, acne vulgaris, and hair loss (*Khalitya*). Conventional treatments for alopecia—such as surgical procedures, hair transplantation, hormone therapy, topical agents, and corticosteroid injections—can lead to adverse effects. In contrast, Ayurvedic interventions like *Vamana, Nasya, Mukha and Shiro Abhyanga, Pradeha, Siravedha*, and *Jalaaukavacharana* offer a gentle, cost-effective,

and minimally invasive alternative. **Case Study:** A 30-year-old female patient reported to our outpatient department with persistent hair fall, accompanied by dandruff, scalp irritation, and dryness, ongoing for six years. *Jalaaukavacharana* was selected as the primary therapeutic approach. The procedure was carried out following classical Ayurvedic protocols, and the patient showed marked improvement. Clinical observations were documented and supported with photographic evidence.

KEYWORDS: *Jalaukavacharana*, *Raktamokshana*, *Khalitya*, Alopecia, Medicinal Leeches, Ayurvedic Hair Therapy, *Pitta-Rakta* Disorders.

INTRODUCTION

Jalaukavacharana (leech therapy) is a classical *Ayurvedic* parasurgical technique, extensively described in the *Sushruta Samhita*, one of the foundational texts of Ayurveda dating back to the 2nd century BCE^[1] *Acharya Sushruta* devoted an entire chapter to this specialized method^[2], highlighting its significance. It is a gentle and minimally invasive form of *Raktamokshana* (therapeutic bloodletting). While outlining the preventive advantages of *Raktamokshana*, *Acharya Sushruta* emphasized that individuals who undergo regular bloodletting are less likely to suffer from *Twak Roga* (skin disorders), *Granthi Rogas* (nodular conditions), *Sopha Rogas* (inflammatory or edematous conditions), and *Rakta Pradoshaja* diseases such as *Khalitya* (hair loss).

Alopecia refers to the loss of previously existing hair on the scalp. It is an autoimmune condition where the body's immune system mistakenly targets hair follicles—the structures responsible for hair growth. Although the damage is typically not permanent, alopecia can affect individuals of all ages, with a higher prevalence in those under 20. Both males and females are equally susceptible. In Ayurvedic literature, the clinical features of alopecia closely resemble those of *Khalitya*.^[3]

In *Khalitya*, the *Bhrajaka Pitta* located in the *Twak* (skin) and *Roma Kupa* (hair follicle openings) becomes aggravated.^[4] This disturbed *Pitta*, along with vitiated *Vata*, infiltrates the skin through the hair follicles, leading to hair fall.^[4] Subsequently, the aggravated *Rakta* and *Kapha doshas* obstruct the follicular openings, thereby halting new hair growth. In *Khalitya* new hair growth stops and hairfall continues.^[5]

Khalitya, commonly known as hair loss, is considered a *Tridoshaja Vyadhi* in Ayurveda, indicating the involvement of all three *doshas*—*Vata*, *Pitta*, and *Kapha*—along with *Rakta Dushti*.^[6] The imbalance of these elements leads to the weakening and blockage of hair follicles, resulting in hair fall.^[7]

For a solution to this, Ayurvedic therapies such as *Jalaukavacharana* (leech therapy) and *Raktamokshana* (therapeutic bloodletting) are employed.^[8] These procedures fall under *Panchakarma* and *Shodhana* treatments, and *Nidanparivarjana* which aim to detoxify the

body and purify the blood. The use of medicinal leeches helps restore *dosh* balance and stimulates hair regrowth by clearing obstructions in the hair follicles.^[9]

Additionally, internal medications are prescribed to support the treatment.^[10] These include *Trivrit avleh*, *Bhringaraja Churna*, *Nimbhadi Churna*, *Manjista Churna*, and *Nasya karma with Anutail*.^[10] These formulations help nourish the scalp and hair roots by calming aggravated Pitta and Rakta doshas, thereby promoting healthy hair growth.^[11]

CASE REPORT

History of the Present Illness

A 30-year-old female presented to O. P. D. of Shalya Tantra. Department with complaints of progressive hair fall, thinning of hair, recession of hairline in the frontal and temporal regions, dandruff, itching scalp, and roughness of hair.

She reported being in good health around four years ago, after which she noticed gradual thinning of hair. Over time, she experienced excessive hair shedding, accompanied by mental stress and disturbed sleep.

The patient had previously undergone allopathic treatment for two years, but reported minimal relief and remained dissatisfied with the outcome.

On presentation, routine laboratory investigations—including complete blood count, blood sugar level, liver and renal function tests, routine urine examination, and thyroid function test—were performed to rule out systemic or metabolic disorders. All parameters were found to be within normal limits.

There was no significant past history of chronic illness, and no history of addiction was noted.

Treatment Plan

Considering the chronicity and nature of her condition, the patient was advised *Samshodhana Karma* in the form of *Jalaukavacharana* (leech therapy), along with supportive oral Ayurvedic medications for three months.

- Jalaukavacharana was carried out regularly at seven days interval upto 90 days.
- Each sitting involved the application of two leeches over the fronto-temporal region bilaterally. The leeches were allowed to detach spontaneously after approximately 30

minutes of bloodletting.

- Post-procedure care included local dressing with *Haridra* (turmeric powder) and *Jatyadi Taila* and *Shatdhaut ghrít* which served as an antiseptic and healing agent.
- The leeches were then subjected to induced emesis of ingested blood and kept for reuse after 7 days under proper storage conditions.

Oral Medications administered

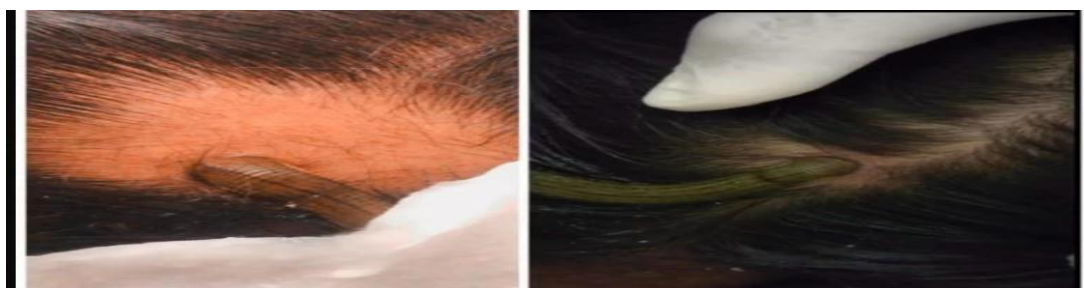
- *Saptamrita Loha*
- *Manjishtha Churna*
- *Bhringaraja Churna*
- *Nimbadi Churna*
- *Abhraloha*
- *Asthiposhaka Vati*.

These were continued **regularly for 3 months. Outcome & Assessment**

At the end of three months, the patient was re-examined. Assessment was done by every 15 days.

- **Clinical observation** – presence of new hair follicles and visible hair growth over the affected scalp areas.
- **Digital photography** – to compare changes before and after treatment.

Noticeable improvement in hair density and regrowth was observed. Follow-up evaluations were carried out on Day 100 which confirmed the sustained improvement.



Evaluation Parameter**Table 1: Gradation of Hair Fall.**

Sr. No.	Symptoms	Gradation
1	Absent	0
2	Mild(Hair fall on washing)	1
3	Moderate(Hair fall while combing)	2
4	Severe(Hair fall while moving fingers)	3

Table 2: Gradations of microscopic examination of hair root and hair shafts spore.

S. No.	Symptoms	Gradation
1	No Growth of Spores	0
2	Occasional fungal and bacterial spores	1
3	Minimal fungal and bacterial spores	2
4	Many fungal and bacterial spores	3

Table 3: Roughness.

S.No.	Symptoms	Gradation
1	Smooth hair surface	0
2	Occasional rough hair surface	1
3	Slight rough hair service	2
4	Rough hair service	3

Table 4: Itching.

S.No.	Symptoms	Gradation
1	Absent	0
2	Mild itching	1
3	Moderate itching	2
4	Severe itching	3

Table 5: Dandruff.

S.No.	Symptoms	Gradation
1	Absent	0
2	Mild	1
3	Moderate	2
4	Severe	3

Assessment criteria	Therapeutic Period							
	While treatment assessment							Follow Up
	BT	Day 15	Day 30	Day 45	Day 60	Day 75	Day 90	Day 100
Hair Fall	3	3	2	2	2	2	1	1
M/E of Hair shafts spore	1	1	1	1	1	1	0	0
Roughness	2	2	1	1	1	1	1	1
Itching	2	1	1	1	0	0	0	0
Dandruff	3	3	2	2	0	0	0	0

DISCUSSION

After Twelve sittings of *Jalaukavacharana* (leech application), the patient showed marked improvement in her symptoms, including a reduction in hair fall, regrowth of hair in the affected areas, increased hair thickness, and complete relief from dandruff, itching, and scalp roughness.

From the Ayurvedic perspective, the principal action of *Jalaukavacharana* is the removal of vitiated *Pitta and Rakta*, along with associated impurities and toxins, through controlled bloodletting. Since *Pitta and Rakta* possess *ushna guna* (hot qualities), and leeches—described by *Acharya Sushruta*—are naturally endowed with *sheeta guna* (cold qualities) due to their aquatic habitat, their application counterbalances the vitiated doshas.

Leeches (*Hirudo medicinalis*) are also described as possessing the unique property of discriminating between impure and pure blood, preferentially sucking out the impure blood and leaving the pure blood intact.

From the modern perspective, the therapeutic effect of leech saliva is attributed to a number of bioactive substances, including:

- **Hirudin** – inhibits blood coagulation by binding to thrombin.
- **Hyaluronidase** – enhances tissue permeability by reducing interstitial viscosity.
- **Bdellins** – act as anti-inflammatory agents.
- **Acetylcholine** – functions as a vasodilator, improving local circulation.

Together, these actions improve local blood flow, reduce inflammation, and aid in controlling infection at the site of application.

In *Khalitya* (alopecia), primarily *Pitta and Rakta doshas* are aggravated in association with *Vata*, while *Vata* and *Kapha* contribute to obstruction. *Jalaukavacharana* assists in the removal of vitiated *doshas* and clears obstructions, thereby restoring healthy circulation of pure blood to the scalp and promoting hair regrowth.

CONCLUSION

The present case demonstrates that *Jalaukavacharana*, when combined with oral Ayurvedic medications, is a safe, effective, and economical therapy for *Khalitya* (alopecia). It offers a viable alternative to conventional treatments, particularly in reducing complications associated with the long-term use of synthetic drugs.

This method is minimally invasive, easy to learn, cost-effective, and free from short-term side effects. The results of this case study indicate the potential of leech therapy as an integrative approach in the management of alopecia, warranting further clinical research and validation.

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