

CASE REPORT

MULTIMODAL MANAGEMENT OF KHALITYA (ANDROGENETIC ALOPECIA): A CASE REPORT

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ABSTRACT

Background: In Ayurveda Khalitya has been described under kapalagata rogas and kshudra rogas, correlated with Alopecia in modern science, is a common disorder characterized by progressive hair fall, thinning of hair and eventual baldness, significantly affecting cosmetic appearance and psychological well-being. This case study presents the Multimodal Ayurvedic management of Khalitya through Pracchana Karma (therapeutic bloodletting), external applications and internal medications.

Case report: A 21-year old male patient presented to Shalakya OPD with complaints of excessive hair fall, scalp itching, and visible thinning of hair over the vertex region for the past 4 months. Based on classical Ayurvedic signs and symptoms, the case was diagnosed as Khalitya involving Pitta-Vata dosha and Raktadushti. **Treatment:** The planned treatment protocol included Pracchana Karma (Superficial therapeutic incisions/pricks) over the scalp region, Shirolepa (application of medicinal paste) and oral administration medicine having properties of blood purification, pacifying and Keshya (hair-nourishing) drugs.

Outcome: The patient showed improved scalp health, reduction in hair fall and noticeable hair regrowth over treatment period, with continued improvement documented during subsequent follow-up. **Conclusion:** This case describes the clinical response to a multimodal Ayurvedic treatment regimen comprising Pracchana Karma, Shirolepa and internal medications in the management of Khalitya.

KEYWORDS: Alopecia, Ayurveda, Khalitya, Pracchana, Shirolepa, Therapeutic bloodletting, Triphala Masi.

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INTRODUCTION

Acharya Vagbhata, in the Ashtanga Hridaya, describes Khalitya under Kapalagata Vyadhis of Urdhvajatrugata Vyadhi¹, which clinically correlates with hair loss or androgenetic alopecia. Contemporary evidence associates hair loss with hormonal imbalances, nutritional deficiencies, psychosocial stress, and lifestyle factors. According to Ayurveda, Khalitya occurs due to the vitiation of Pitta and Vata doshas, along with Rakta dushti^{1,2}, affecting the keshha mula (Hair follicles) and keshha bhumhi (Scalp). Androgenetic alopecia is a genetically determined, androgen-dependent condition characterized by progressive miniaturization of hair follicles. Dihydrotestosterone (DHT), formed from testosterone by the enzyme 5-alpha-reductase, binds to androgen receptors in genetically susceptible hair follicles. This leads to shortening of the anagen (growth) phase, prolongation of the telogen (resting) phase, and progressive transformation of terminal hairs into thin, short vellus-like hairs. Repeated hair cycles result in reduced hair density and visible scalp thinning, typically over the frontal, temporal, and vertex regions in males and the central scalp in females.³ Among the Ayurvedic treatment modalities, Pracchana Karma⁴, a form of Raktamokshana, is indicated for conditions involving Rakta-Pitta dushti. It is traditionally considered to facilitate the removal of dushta

rakta from the affected region. Keshya Shirolepa helps in reducing hair fall by strengthening hair follicles and oral administration of Keshya Dravya promotes hair growth. This case report evaluates the role of multimodal Ayurvedic treatment regimen in the management of Khalitya⁵, documenting the observed clinical outcomes and treatment-related adverse effects.

CASE REPORT

A 21-year-old male patient came to the Shalakya Tantra OPD of Khemdas multi-specialty teaching hospital affiliated with the Parul Institute of Ayurved & Research at Parul University in Vadodara, Gujarat. on 5/4/2025, presented with complaints of excessive hair fall, scalp itching, and visible thinning of hair over the vertex region for the past 4 months. The symptoms developed insidiously and worsened over time, leading to noticeable reduction in hair density. The patient also reported experiencing significant psychological stress secondary to hair loss.

There was no history of any significant past illness. The patient has not taken any oral or topical hair loss treatment or nutritional supplements. Additionally, family history was non-contributory, with no known occurrence of similar complaints among close relatives. The patient had regular bowel habits, a good appetite, and normal micturition occurring 4–5 times during the day and 1–2 times at night. Sleep was sound, and there was no history of any addiction.

CLINICAL FINDINGS

General Examination: On general examination, the patient had a pulse rate of 74 bpm, respiratory rate of 18/min, heart rate of 72 bpm, blood pressure of 120/70 mmHg, and a temperature of 98°F. Pallor, edema, nail clubbing, cyanosis, icterus, and lymphadenopathy were absent.

Astavidha Pariksha: Nadi was suggestive of Vata-Pitta predominance, Sparsa was anushnasita, Mala was sama, Jihva was lipta, Mutra and Drik were prakrita, Shabdha was spashta, and Aakruti was madhyama.

Dasavidha Pariksha: Prakrti (Physical constitution) was Vata-Kapha, Vikrti was Vata-Pitta, Sara, Samhanana, Satmya, Pramana, Ahara shakti, and Vyayama sakti were all madhyama, while the patient belonged to the Youvana avastha.

Local examination: On local examination of the scalp, the following parameters were assessed:

- Distribution of hair loss: Visible thinning of hair over the vertex region of the scalp.
- Hair density: Reduced hair density over the affected area compared with the surrounding scalp.
- Scalp skin: There were no erythema, scaling, excoriations, and other inflammatory changes.

Lab investigations: Complete Blood Count (CBC), Hemoglobin (Hb), Serum ferritin, Thyroid profile, CT, BT test were performed and no significant changes were noted. HIV, HBsAg were found negative.

DIAGNOSTIC ASSESMENT

Table 1: Assessment of the effect of treatment based on grading pattern of subjective and objective parameters: ^[6,7]

S.No	Keshashatana (Hairfall)	Grade
1.	No hair fall	0
2.	Hair fall once while washing hairs	1
3.	Hair fall on combing	2
4.	Hair fall even without combing and raised hairline in frontal region (severe hair fall without any manipulation)	3

	Keshabhoomi Kandu (Itching of Scalp)	Grade
1.	No itching	0
2.	Mild itching	1
3.	Moderate itching	2
4.	Severe itching	3

	Keshabhumi Rukshata (Scalp Dryness)	Grade
1.	Smooth hair surface	0
2.	Occasional rough hair surface	1
3.	Slight rough hair surface	2
4.	Rough hair surface	3

	Simple Hair Pull Test	Grade
1.	0-10 hairs	0
2.	11-15 hairs	1
3.	16 - 20 hairs	2
4.	Above 20 hairs	3

	Stages For Male Pattern Baldness: The Modified Norwood – Hamilton Scale	Grade
1.	Full head of hair without any hair fall	0
2.	Minor recession at the front of the hairline	1
3.	Further loss at the front of the hairline which is considered “cosmetically significant”	2
4.	Progressively more loss along the front hairline and at the crown	3
5.	Hair loss extends toward the vertex	4
6.	Frontal and vertex balding areas merge into one and increase in size	5
7.	The last stage of male pattern baldness in which all hair is lost along the front hairline	6

DIAGNOSIS

The contemporary clinical diagnosis in the present case was **male pattern hair loss (androgenetic alopecia)**, characterized by progressive hair thinning predominantly involving the frontal and vertex regions. The patient was a 21-year-old male presenting with gradual-onset hair loss and progressive reduction in hair density over a period of four months.

The differential diagnoses considered clinically included **alopecia areata, telogen effluvium and other common non-scarring alopecias**. Alopecia areata was considered less likely in view of the absence of discrete, well-demarcated patches of hair loss. Telogen effluvium was less likely because the patient demonstrated localized/progressive thinning with a characteristic pattern rather than diffuse shedding alone. There were also no clinical features suggestive of scarring alopecia, such as permanent follicular destruction or significant scalp scarring.

THERAPEUTIC INTERVENTION:

Procedure of Pracchana Karma: The procedure was conducted in minor OT with aseptic measures. Purva karma: The patient was made to sit

comfortably. The point of prachanna karma, i.e., the affected scalp region, was cleaned with betadine solution. Pradhana karma: With the help of Dispovan hypodermic 21 needle, multiple gentle pricks of 1.5–2.5 mm deep were made in the affected area, approximately 25-30 pricks per square centimeter till proper oozing of blood (Approx 2-3 mL). Paschat karma: The pricked site was wiped with sterile cotton, povidone-iodine was applied again as a post-procedure antiseptic measure. After 30 minutes gap, Shirolepa with paste prepared by mixing equal quantity of Triphala Churnam and Bhringaraja Churnam mixed with water was applied over the treated area. It was washed after 1 hour. The procedure was performed for a total of four sittings, on 10/04/2025, 17/04/2025, 24/04/2025, and 01/05/2025.

FOLLOW UP AND OUTCOME:

The patient was monitored throughout the treatment period and showed progressive improvement, including reduction in itching, decreased hair fall, improved hair texture, and visible new hair growth. Hair pull test improved from grade 3 to grade 1. Follow-up after one month revealed sustained improvement. Assessment was based on both subjective and clinical parameters, showing significant overall improvement. The treatment outcome was satisfactory with no adverse effects. In addition, standardized clinical photographs of the affected scalp were obtained before treatment and after treatment to provide visual documentation of the changes in hair density and scalp condition.

Adherence: Adherence to the prescribed medicines was assessed through regular pill counts and quantity check of decoction and powders, maintenance of patient's diary, clinical enquiries during follow-up visits.

Tolerability: Tolerability was evaluated through clinical monitoring and patient's enquiry regarding discomfort or adverse effects following medication administration and during therapeutic procedure. The patient experienced mild pain during prachanna karma which was reported to be tolerable. Fear related to prachanna was addressed through appropriate patient counselling.

Adverse and unanticipated events: No adverse events were reported following the administration of medications or the performance of therapeutic procedures during the treatment protocol.

The **Modified Norwood–Hamilton scale** was applied to objectively document the pattern and severity of hair loss in this male patient. This scale is specifically designed to classify the progression of male pattern hair loss according to the distribution and extent of hair loss over the frontal hairline and vertex. In the present case, the patient's baseline score was **Grade 4**, which improved to **Grade 3 after treatment and Grade 2 during follow-up**, providing a standardized means of documenting the observed clinical improvement.

Table 2: Assessment of patient done by Grading Criteria:

SN	Symptoms	BT (1 st day) 05/04/2025	AT (30 th day) 04/05/2025	After follow up 02/06/2025
1.	Kesha shatana (Hair fall)	3	1	1
2.	Keshabhoomi kandu (Itching)	2	0	0
3.	Kesha bhoomi rukshata	2	1	0
4.	Hair pull test	3	1	0
5.	The modified Norwood – Hamilton scale	4	3	3



Figure 1: Before treatment



Figure 2: After treatment

Table 3: Timeline of Symptoms, Intervention and Clinical Progress

Date	Symptoms / Clinical Progress	Therapeutic Intervention
05/04/2025	Excessive hair fall, scalp itching, and visible hair thinning over the vertex region for 4 months. Hair pull test: Grade 3.	Internal medications: Maha Manjishtadi Kashayam 10 ml BD with 30 ml warm water before food (BF); Krimikutara Rasa 1-0-1 after food (AF); Vidanga Arishta 10 ml BD with 30 ml warm water AF; Triphala Churnam 1 teaspoon BD after food with warm water; Narasimha Ghruta Saptavruthi capsules, 2 capsules at bedtime, for 15 days. External application: Triphala Mashi over the affected area for 15 days.
10/04/2025	Treatment continued.	Pracchana Karma over the affected scalp region, followed by Shirolepa with Triphala Churnam and Bhringaraja Churnam.
15/04/2025	Itching reduced; no significant change in hair fall. Hair pull test: Grade 2.	Continued prescribed treatment.
17/04/2025	Treatment continued.	Pracchana Karma , followed by Shirolepa with Triphala Churnam and Bhringaraja Churnam.
20/04/2025	Second medication regimen initiated.	Internal medications: Maha Manjishtadi Kashayam 10 ml BD with 30 ml warm water BF; Bhringaraja Asava 10 ml BD with 30 ml warm water AF; Asthi Poshaka Vati 1-0-1 AF; Narasimha Ghruta Saptavruthi capsules, 2 capsules at bedtime, for 15 days. External application: Triphala Mashi over the affected area for 15 days.
24/04/2025	Itching absent, hair fall reduced, and new hair growth observed. Hair pull test: Grade 2.	Pracchana Karma , followed by Shirolepa with Triphala Churnam and Bhringaraja Churnam.
01/05/2025	Hair texture improved, itching absent, and hair fall further reduced. Hair pull test: Grade 1.	Pracchana Karma , followed by Shirolepa with Triphala Churnam and Bhringaraja Churnam.
04/05/2025	Second medication course completed.	Completion of the prescribed 15-day medication regimen.
02/06/2025	Sustained improvement in hair fall and visible new hair growth. Hair pull test: Grade 0.	Follow-up assessment.

DISCUSSION

In the present case, improvement in hair fall, scalp itching, scalp texture, and visible hair regrowth was observed following a multimodal Ayurvedic treatment regimen comprising *Pracchana Karma*, internal medications, external application, and *Shirolepa*. However, due to the concurrent use of multiple interventions and the absence of a control group, the improvement cannot be attributed specifically to *Pracchana Karma*. The observed hair regrowth represents a clinical finding and should not be considered definitive evidence of follicular regeneration. The absence of adverse effects indicates that the regimen was well tolerated in this individual case but does not establish its safety in the wider population.

Initially Krimikutara Rasa, Vidanga Arishta and Triphala Churnam were administered for krimihara and anulomana action. Later Bhringaraja Asava and Asthi Poshaka Vati were administered for keshya rasayana action.

Prachanna Karma produces controlled superficial injuries skin to microneedling, which triggers a wound-healing response. This releases growth factors such as platelet-derived growth factor (PDGF), vascular endothelial growth factor (VEGF), epidermal growth factor (EGF), and fibroblast growth factor (FGF), all of which enhance scalp

microcirculation and activate hair follicle stem cells for follicular regrowth. By creating temporary microchannels in the skin, this procedure reduces the stratum corneum's barrier function, allowing better penetration of topical treatments.⁸ Manjistadi Kashaya helps by Free Radical Scavenging, Antioxidant and Blood Purifier properties. *Krimikuthar rasa*, *Vidangarista* were chosen for the *krimighna karma*.⁹ Triphala is Kushtahara, Kaphapittaghni and does dosha anulomana¹⁰. Narsimha Ghruta is indicated in Khalitya, Palitya as well used as Vajikarana and Rasayana.¹¹ Triphala Mashi is the incinerated form of the three myrobalans Haritaki (*Terminalia chebula*), Bibhitaki (*Terminalia bellirica*), and Amalaki (*Embllica officinalis*). Incinerated Mashi adds efficiency in absorption and topical bioavailability. Triphala is acclaimed for its Tridosha-Shamaka (balance of all three Doshas) effects, specifically for the treatment of Rakta Shodhana (blood purification). When administered as a topical medicine, Triphala Mashi acts as an antimicrobial and antioxidant and is known to remove the microbial elements and oxidants related to the pathogenesis of Alopecia. High tannin levels may possess astringent properties that might contribute to reducing follicular inflammation. Its beneficial antioxidant action is attributed mainly to

the vitamin C content and ellagic acid from Amalaki, which helps to neutralise reactive oxygen species (ROS) that aggravate follicular damage. Triphala Mashī has been shown to detoxify the scalp by clearing off environmental toxins and microbes, which could trigger or prolong the inflammatory response in the hair follicles. It may assist in transitioning telogen follicles back into the anagen phase by stimulating dormant follicles. Nature and Likely mode of action of internal medicine.¹² Bhringaraja is rich in several potent bioactive compounds such as wedelolactone, ecliptine, luteolin, apigenin, and β -sitosterol, which contribute to its therapeutic effects. Among these, wedelolactone is particularly significant due to its proven ability to stimulate hair follicle activity, extend the anagen (growth) phase of hair, and promote regeneration of dermal papilla cells that are vital for hair production. These phytochemicals also possess antioxidant, anti-inflammatory, and vasodilatory properties that improve scalp blood circulation, reduce oxidative damage, and support overall follicular health. Furthermore, Bhringraj exhibits antimicrobial and antifungal activity, which helps in managing scalp infections and dandruff—both of which are common contributors to hair fall.¹³ Combined action of all these treatment modalities helped in reduction of hair fall.

CONCLUSION

Multimodal treatment approach found beneficial in khalitya management. The treatment was well tolerated in this individual case, but the findings cannot establish general efficacy or safety. Further controlled clinical studies with standardized outcome measures and longer follow-up are warranted to validate these observations.

Declaration of Patient Consent—The authors confirm that they have acquired a patient consent form, in which the patient or caregiver has granted permission for the publication of the case, including accompanying images and other clinical details, in the journal. The patient or caregiver acknowledges that their name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard their identity. However, complete anonymity cannot be assured.

Patient's Perspective: I was worried about my hair loss, as it was disturbing my mental peace. After Ayurvedic treatment within few days I was able to appreciate reduction in hair fall. I was satisfied with Ayurvedic treatment.

Authors' contributions

Dr. Sumi S conceived and designed the study, collected clinical data, performed patient management, analyzed and

interpreted the data, prepared the manuscript, and approved the final version. Dr. Ganesh Tejasvi S and Dr. Jasna Chandran provided academic guidance, critically reviewed the manuscript, and approved the final version for publication.

Data Availability:

The data supporting the findings of this case report are available from the corresponding author on reasonable request, subject to appropriate confidentiality and ethical considerations

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