REVERSING THE FOLLICULAR FATE: A CASE STUDY ON AYURVEDIC MANAGEMENT OF ANDROGENETIC ALOPECIA (KHALITYA)

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ABSTRACT

Androgenetic alopecia (AGA) is a common, progressive form of hair loss characterized by follicular miniaturization and a patterned distribution. In Ayurveda, AGA can be clinically correlated with *Khalitya*, a type of *Shiroroga* caused predominantly by vitiation of *Pitta* and *Vata*, with secondary involvement of *Rakta* and *Kapha* at the level of *Romakupa* (~hair follicles). A 23-year-old female patient presented with complaints of progressive hair thinning and patchy hair loss over the fronto-parietal region of the scalp. Clinical examination and symptomatology were consistent with female pattern androgenetic alopecia. An integrated Ayurvedic treatment protocol comprising *Shodhana* (~internal purification) [*Snehana* (~internal oleation) and *Svedana* (~sudation) was followed by *Virechana* (~purgation therapy), *Basti* (~enema therapy), and *Nasya Karma* (~Nasal drop therapy)] and *Shamana Chikitsa* (~oral medications) were administered. External therapies such as *Shiro Abhyanga* (~head massage), *Shiro-Lepana* (~hair mask), and *Kesha Prakshalana* (~hair wash) were also employed. Appropriate dietary and lifestyle modifications were followed by the patient throughout the treatment duration. After 45 days of treatment, a marked reduction in hair fall, improvement in scalp health, and visible regrowth in previously thinned areas were observed. By 6 months, the patient showed significant improvement in hair density, texture, and sustained regrowth, without any adverse effects. The present case highlights the effectiveness of an integrated Ayurvedic approach in the management of androgenetic alopecia through *Shodhana* and *Shamana Chikitsa* combined with *Rasayana* and *Keshya* therapies.

KEYWORDS: Androgenetic alopecia; *Khalitya*; *Panchakarma*; Female pattern baldness

1. INTRODUCTION:

Hair plays a significant role in physical appearance and psychological well-being, profoundly influencing self-image, confidence, and identity. *Kesha* is described as "*Shirasa Abhushana"* the crowning glory of an individual's appearance[1]. In women, it symbolizes femininity "*Prakriti Dattam Abharanam*", while in men it represents *Yauvana*, *Ojas*, and vitality. AGA is the most common type of progressive alopecia and is genetically determined, affecting nearly 50% of both men and women. It is caused by increased follicular sensitivity to androgens, particularly dihydrotestosterone. Clinically, AGA manifests after puberty with distinct gender-specific patterns. In males, hair loss predominantly affects the vertex and frontotemporal regions, whereas in females, the frontal hairline is usually preserved with diffuse thinning over the crown, leading to widening of the anterior scalp[2]. In contemporary society, the prevalence of hair and scalp disorders such as hair thinning, premature hair fall, and patterned baldness is increasing. Factors such as unhealthy dietary habits (*Ahita Ahara*), improper lifestyle practices (*Vihara*), psychological stress (*Manasika Karana*), environmental pollution, urbanized living conditions, and genetic predisposition contributes significantly to the pathogenesis. These factors lead to vitiation of *Tridosha*, derangement of *Asthi Dhatu* and *Rakta Dushya*, and impaired nourishment of *Romakoopa*, resulting in hair loss[3,4]. Beyond cosmetic concerns, alopecia is associated with significant psychosocial distress. Conventional management options include topical and intralesional corticosteroids, minoxidil, topical immunotherapy, prostaglandin analogs, retinoids, and systemic immunosuppressive agents. However, these treatments are often associated with variable efficacy, recurrence after discontinuation, and potential adverse effects, emphasizing the need for safer and holistic therapeutic approaches[5].

In Ayurveda, hair loss disorders are classified as *Indralupta*, *Khalitya*, and *Ruhya (Rujya)*. As described in *Madhava Nidana* with *Madhukosha* commentary: *"Indralupta Shmashruvaleshu, Khalityam Shirasi, Ruhyam Sarvange"* [6]. Here, *Indralupta* affects the beard and moustache, *Khalitya* involves the scalp, and *Ruhya* denotes generalized alopecia. Ayurvedic management emphasizes *Shodhana Cikitsa* as the first line of treatment, followed by *Shamana* and *Rasayana* therapies. *Caraka Saṃhita* recommends procedures such as *Lepana*, *Svedana*, *Raktamokshana*, *Vamana*, *Virechana*, and *Basti* in the management of hair disorders[7].

2. PATIENT INFORMATION:

A 26-year-old female patient from Germany presented to the outpatient department of Ayurvedic Hospital on February 14th 2025 with a chief complaint of progressive patchy hair loss over the scalp, hair thinning and hair fall for the past 3 years. According to the patient's history, she had been apparently healthy prior to the onset of hair loss. She had previously consulted a dermatologist in Germany, where a scalp biopsy confirmed the diagnosis of androgenetic alopecia. Despite prolonged allopathic treatment, she experienced only minimal improvement.

In addition to hair loss, the patient reported chronic bilateral shoulder joint pain and nape of neck pain for the past 2 years, along with complaints of abdominal heaviness and bloating persisting for the last 3 years. Her past medical history was significant for hypothyroidism, diagnosed 10 years ago, for which she has been on tablet Euthyrox 50 µg once daily in the early morning (6:00 AM). She was also consuming nutritional supplements, including stress-balancing formulations, vitamin B12, and B-complex.

Her past surgical history revealed an appendectomy performed in 2021. Family history was significant for type 2 diabetes mellitus in her father. Due to inadequate relief with conventional treatment and a desire for holistic care, the patient approached Ayurveda for further management.

3. CLINICAL FINDINGS:

General Examination: On general physical examination, the patient was conscious, oriented, and cooperative. No contributory systemic findings such as fever, pallor, icterus, cyanosis, clubbing, edema, or abnormal skin pigmentation were noted. Vital parameters were within normal limits: blood pressure 118/76 mmHg, heart rate 78 beats per minute and respiratory rate 18 breaths per minute.

Local Examination: Local examination of the scalp revealed multiple non-scarring alopecic patches predominantly over the fronto-parietal region, along with diffuse thinning of hair over the entire scalp. The underlying scalp skin appeared normal, with no erythema, scaling, or signs of inflammation. No other dermatological abnormalities were observed elsewhere on the body.

4. DIAGNOSTIC ASSESSMENT:

Figure 6 shows findings of scalp biopsy; pre-diagnosed with AGA.

Based on Ayurvedic clinical evaluation, the patient was assessed to have *Pitta-Kaphaja Prakruti*. *Ashtavidha Pariksha* findings were- *Nadi*: *Vata-Pitta*, *Jihva*: *Uplipta* (~coated), *Akruti*: *Madhyama* (~moderate build), *Mala*, *Mutra*, *Shabda*, *Sparsha*, and *Drika*: *Prakruta* (~normal).

Lifestyle assessment revealed irregular meal timings with frequent snacking, consumption of junk food, disturbed sleep patterns, and frequent travel.

Routine hematological and biochemical investigations were within normal limits. Hemoglobin was 12.4 g%, total leukocyte count 6490/mm³, with differential counts showing neutrophils 46%, lymphocytes 45%, eosinophils 1%, and monocytes 2%. Urine routine and microscopy were normal. Thyroid function tests showed T3 - 1.22 ng/mL, T4 - 7.28 µg/dL, and TSH - 2.96 µIU/mL, indicating euthyroid status under medication.

Based on clinical features, previous biopsy confirmation, and Ayurvedic assessment, the condition was diagnosed as androgenetic alopecia, correlating with *Khalitya*.

5. TIMELINE:

The chronological sequence of disease onset, associated symptoms, therapeutic interventions, and clinical outcomes is depicted in **Figure 2**, which illustrates the progression of symptoms, treatment administered, and response to therapy during the study period.

6. THERAPEUTIC INTERVENTION:

The patient was treated with an integrated Ayurvedic protocol comprising systemic purification (*Shodhana*), pacification (*Shamana*), rejuvenation (*Rasayana*), and local therapies. The detailed therapeutic timeline and interventions are depicted in **Figure 1**.

Dietary intake (*Pathya-Apathya*)

***Pathya* (Advised diet):** The patient was advised to consume easily digestible and *Pitta-Kapha Shamaka* foods, including green gram (*Mudga*), green gram soup, and boiled vegetables such as ridge gourd, sponge gourd, bottle gourd, pointed gourd, ash gourd, fenugreek leaves, drumstick, and bitter gourd. Rice was recommended as the staple cereal. Lukewarm water was advised for drinking.

***Apathya* (Foods to avoid):** The patient was instructed to avoid oily, spicy, fried, and fermented foods; dairy products; refined wheat products; biscuits; excessive salty items; pickles; curd; buttermilk; tomato; lemon; and other *Amla* and *Vidahi* substances.

Strict adherence to dietary regulation, sleep hygiene, and stress management was emphasized throughout the treatment period.

7. FOLLOW-UP AND OUTCOMES

In observation first the assessment of *Samyaka Snigdha Lakshanas* of patient is observed during *Shodhanartha Snehpana* with assessing daily *Sneha Jiryaman Lakshana* and *Sneha Jeerna Lakshana*. On 4th day we found *Samyaka Snigdha Lakshana* like- *Vatanulomana* (~ flatulence), *Tvaksnigdhata* (~unctuousness of skin), *Agnideepti* (~improved digestion and metabolism), *Snigdha Varchas* (~unctuousness in stool) with 4 times *Mala Pravrutti* (~stool frequency).

In *Virechana Karma* 23 *Vegas* are done as *Pravara Shuddhi* is observed. In *Basti Chikitsa*, *Niruha Basti* retention time was 15-20 minutes and *Matra Basti* retention time was 10-12 hours of patient as described in *Basti Dharana Kala* (~enema retention time) which is beneficial for *Mala Nirharana* and *Vata* pacification. After *Nasya Karma*, *Shiro Abhyanga* and *Shiro lepana* mild relief in symptoms was observed.

At the time of discharge moderate relief in symptoms was observed. At the site of patches baby hair growth was observed and hair falling was reduced, the patient remained stable; hence, the patient was discharged and advised to come for follow-up after one month.

After 2 month of discharge, the patient's condition had improved, and a moderate improvement in hair texture, hair density was observed. During this period, no aggravation of symptoms was observed; therefore, the same oral medicaments were continued.

At the second follow-up, the patient condition remained stable, with good relief in symptoms, and improvement in hair density, hair texture, and overall scalp health was observed and the patches were almost covered with new hairs. No relapse or worsening of symptoms was observed during the five-month follow-up period. The patient demonstrated full compliance with prescribed medications, *Pathya*, and lifestyle modifications.

Photographic Documentation:

Figures 2 and 3: Baseline clinical images before initiation of treatment

Figures 4 and 5: Images after 3 months of treatment

Figures 6 and 7: Images after 5 months of follow-up

8. DISCUSSION:

Khalitya, as described in classical Ayurvedic texts, is primarily caused by the combined vitiation of *Vata* and *Pitta Doshas*, accompanied by *Rakta Dushṭi*. Aggravated *Vata*, in association with *Pitta*, leads to dryness and instability of the *Romakoopa*, resulting in loosening and shedding of hair. Subsequent involvement of *Rakta* and *Kapha* produces obstruction (*Avarana*) at the follicular level, thereby inhibiting hair regrowth. This pathophysiological mechanism is described in *Ashtanga Hridaya* as "*Vātaḥ Pittena Saṃyuktaḥ Kṣipraṃ Romakūpān Pibati Tataḥ Keśāḥ Patanti*"[8]. This classical explanation closely parallels the modern understanding of follicular miniaturization, shortened anagen phase, and impaired follicular cycling observed in androgenetic alopecia. The therapeutic strategy in the present case was designed based on the fundamental Ayurvedic principle that vitiated *Doṣas* cannot be effectively pacified without prior elimination "*Doṣa-Duṣṭaḥ Śarīraḥ Śodhanena Vinā Na Śāmyati*"[9]. Accordingly, *Shodhana Chikitsa* was prioritized to expel morbid *Doshas* from their site of origin, followed by *Shamana*, *Rasayana*, and *Sthanika Chikitsa* to achieve *Samprapti Vighatana* and reduce the likelihood of recurrence.

Shodhanartha nehapana with *Panchatikta Ghrita* helped mobilize morbid *Doshas* and acted as *Pitta-Rakta Shodhana*, creating a suitable foundation for purification. *Sarvanga Abhyanga* with *Narayana Taila* followed by *Bashpa Svedana* facilitated *Dosha Utklesha*, improved peripheral circulation, and relieved *Srotorodha*, which is considered a key factor in follicular miniaturization[10]. *Virechana karma* using *Eranda Sneha* with *Dindayala Churna* and *Draksha Kvatha* effectively eliminated vitiated *Pitta* and *Rakta*, the chief *Doshas* involved in *Khalitya*[11]. Proper *Samsarjana krama* restored *Agni* and helped maintain the benefits of *Shodhana*.

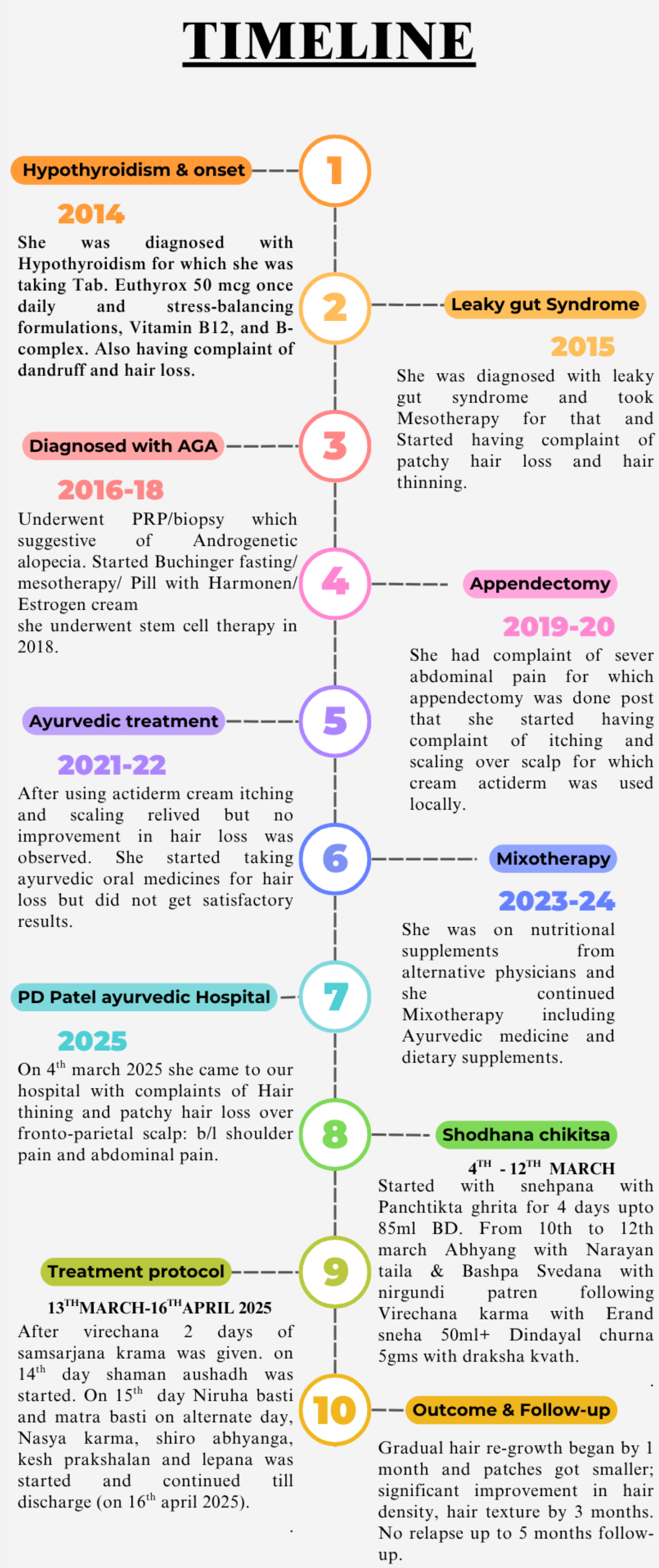
After *Shodhana, Shamana* therapy focused on sustained *Pitta Shamana* and *Dhatu Poshana*. The combination of *Avipattikara Churna, Sutshekhar Rasa*, *Kamdudha Rasa*, and *Shatavari Churna* helped regulate *Pitta* at the gastrointestinal and systemic levels, thereby reducing excessive hair fall. *Samshamani Vati* supported metabolic balance, while *Amalaki Rasayana* acted as a potent antioxidant and *Rakta prasadhaka*, improving nourishment of hair follicles[12]. *Bhringraja Churna*, a classical *Keshya* drug, promoted hair regrowth and improved hair strength. *Chyavanprash Avleha* contributed to *Rasayana* effect, enhancing *Ojas* and tissue regeneration[13]. From a *Dhatu* perspective, *Kesha* are considered the *Mala* of *Asthi Dhatu*, which becomes depleted under chronic *Vata* aggravation[14]. Therefore, *Basti* therapy was incorporated to control *Vata*, which plays a crucial role in follicular degeneration and hair thinning. *Niruha Basti* with *Triphala Kvatha* aided in systemic detoxification, while *Matra Basti* with *Nilibhringadi Taila* provided sustained nourishment and *Vata Shamana*[14]. *Nasya Karma* with *Nilibhringadi Taila* acted directly on *Urdhvajatrugata Doshas*, improving scalp circulation and strengthening hair roots. Supportive local measures such as *Shiro Abhyanga*, Local therapies played a critical role in addressing *Sthanika Dosha Avarana*[15]. *Kesha Prakshalana* with *Amalaki Churna*, *Shiro Abhyanga* using *Nilibhringadi Taila* combined with *Suktika Bhasma*, and *Lepana* with *Vishana Bhasma* and *Chakramarda Churna* in *Gomutra* facilitated follicular stimulation, improved local circulation, and enhanced scalp nourishment[16,17].

Overall, the combined therapeutic approach resulted in reduction in hair fall, improvement in hair texture and scalp health, and stabilization of disease progression. The sequential use of *Shodhana* followed by *Shamana* and *Rasayana* appears effective in interrupting the pathogenesis of *Khalitya* and may help delay progression of androgenetic alopecia. Additionally, adherence to *Laghu* and *Pitta-Shamaka Ahara*, avoidance of *Ati-Lavana*, *Ati-Amla*, *Kshara*, and *Ruksha* foods, and incorporation of *Pranayama* and *Dhyana* addressed psychosomatic contributors to chronic hair loss, thereby supporting long-term disease control and relapse prevention[18]. This highlights the potential role of classical Ayurvedic protocols as a holistic and safe management strategy for AGA.

9. CONCLUSION: The integrated protocol combining ***Shodhana (Virechana, Basti, Nasya),***

Shamana, Rasayana and Sthanika chikitsa produced a multi-dimensional action including Removal of vitiated *Doshas* and *Rakta*; Nourishment of *Dhatus*; Direct stimulation of *Romakoopa*; Restoration of scalp health and regrowth of healthy hairs. This demonstrates the effectiveness of **classical Ayurvedic principles** when applied in a structured, holistic manner to manage ***Khalitya***.

10. INFORMED CONSENT: The patient has provided informed consent for publication, and no identifying information is included.



Date	Symptoms	Intervention
04/03/2025 to 12/03/2025	Patient got admitted in our hospital with complaint of: • progressive patchy hair loss over the scalp • Hair thinning and hair fall • B/L shoulder joint and nape of the neck pain • Abdominal heaviness and bloating	1. *Shodhanartha Snehapana* with *Panchatikta Ghrita* - upto 85 ml BD on 4th day *2. Sarvanga Abhyanga with Narayana Taila* *3. Sarvanga Bashpa Svedana* with *Nirgundi-patra* *4. Virecana Karma with Eranda Sneha* 50 ml + *Dindayala Churna* 5 g with *Draksha Kvatha*
13/03/2025	Mild weakness	*Samsarjana Krama*
14/03/2025	Mild relief in Abdominal heaviness and bloating and no further weakness.	5. Combination of *Avipattikar Churna 2gm+ Sutshekhar Rasa 250mg + Kamdudha Rasa 250mg + Shatavari Churna 2gm* twice a day with lukewarm milk (empty stomach) *6. Samshamni Vati* 2 Tab (of 500mg) with lukewarm water twice a day *7. Amalaki Rasayana* 2 Tab (of 500mg) with lukewarm water twice a day *8. Bhringraja Churna* 3gm with lukewarm water twice a day *Shatavari Kshirpaka* 100 ml twice a day (empty stomach) *9. Chyavanprash Rasayana* 1tsp with lukewarm milk
15/03/2026 to 15/04/2025	Mild relief in Abdominal heaviness and bloating and no further weakness.	*2,3,5,6,7,8,9,* *10. Niruha basti with Triphala Kvatha* 320ml(empty stomach) *11. Matra Basti with Nilibhringadi Taila* 40ml(evening after meal) *12. Nasya Karma with Nilibhringadi Taila 8-8 drops* *13. Siro Abhyanga with Nilibhringadi Taila + Suktika Bhasma once in a day* *14. Kesha Prakshalana with Amalaki Churna Kvatha once in a day* *Shiro-Lepa with Vishana Bhasma + Chakramarda Churna with Goumutra once in a day*
16/04/2025	Patient is discharged with moderate relief in symptoms.	Oral medications given at home at the time of discharge and advised patient to follow Pathya-Apathya.

16/06/2025	Marked improvement in all above-mentioned symptoms were observed after 3 months (from date of admission)	Oral medications given at home.
16/08/2025	Almost complete relief in all above-mentioned symptoms was observed after 6 months of treatment (from date of admission).	No oral medications were continued by patient as he felt good relief.

Table no. 1 showing therapeutic intervention along with symptomatic relief and outcome.

Figure 2 Before treatment

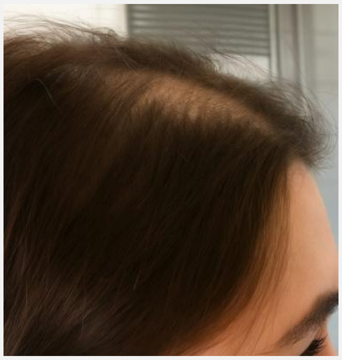


Figure 3 Before treatment

Figure 4 After 3 months

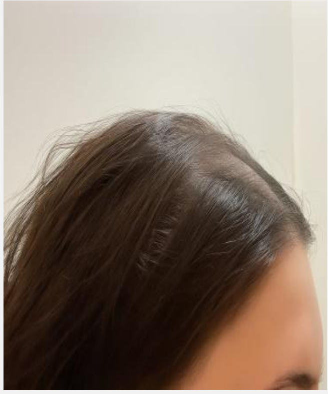


Figure 5 After 3 months

Figure 6 After 5 months

Figure 7 After 3 months

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