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The Effect of Anu Taila Nasya with Shiro Abhyanga and Iron Supplementation in the Management of Khalitya (Hair Loss): An Ayurvedic Single Case Report

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Abstract

Background:
Khalitya (hair loss) is a common disorder described in Ayurveda under *Kshudra Roga* and *Shiroroga*, primarily caused by vitiation of *Pitta and Vata Doṣa* affecting hair follicles. Modern lifestyle factors such as stress, poor diet, and nutritional deficiencies contribute significantly to its increasing prevalence.

Objective:
To evaluate the effect of *Anu Taila Nasya* with *Shiro Abhyanga* and *iron supplementation* in the management of *Khalitya.*

Methodology:
A 25-year-old female patient with complaints of severe generalized *hair fall*, thinning of hair, and scalp dryness for 8 months was treated with *Anu Taila Nasya, Shiro Abhyanga, and iron supplementation* for 21 days. Assessment was carried out using subjective and objective parameters.

Results:
Significant reduction in hair fall, improvement in scalp condition, enhancement in hair texture, and increase in hair density were observed.

Conclusion:
The integrative approach of *Anu Taila Nasya, Shiro Abhyanga, and iron supplementation* proved to be effective, safe, and non-invasive in the management of *Khalitya*.

Keywords: *Khalitya, Kshudra Roga , Shiroroga Nasya, Anu Taila, Shiro Abhyanga,* Iron Supplementation, Hair Loss, *pitta vata* vitiation .

Introduction :

Hair is a filamentous biomaterial primarily composed of keratin protein and arises from hair follicles embedded within the dermal layer of the skin. It serves not only protective and sensory functions but also plays a significant role in defining an individual's personality and self-esteem. In modern society, hair has become an important aesthetic component, particularly for women, and any alteration in hair health can have profound psychological and emotional consequences. Hair loss is a common dermatological concern affecting both men and women across all age groups. Epidemiological data suggest that approximately 40% of women experience noticeable hair loss by the age of 50, and a significant proportion of individuals begin experiencing symptoms at a much younger age due to stress, hormonal imbalance, nutritional deficiencies, and environmental factors[1,2,3]. While the physiological loss of 70–100 hairs per day is considered normal, excessive shedding indicates pathological conditions requiring intervention[4].

In *Ayurveda*, hair (*Kesha*) is considered as a Mala (waste product) of *Asthi Dhatu*, and its health reflects the status of underlying *Dhatus*[5]. Hair loss is described under *Khalitya* and *Indralupta*, classified among *Kshudra Roga* and *Shiroroga*. The pathogenesis of *Khalitya* involves vitiation of *Pitta Doṣa* along with *Vata*, leading to degeneration of hair follicles and subsequent hair fall. *Kapha* and *Rakta* further obstruct the hair follicle openings, preventing *regrowth*[6]. *Nasya* Karma is one of the *Panchakarma* procedures indicated for diseases above the clavicle (*Jatrurdhva Roga*). The administration of medicated oil through the nasal route directly affects the Shiras (head region), improving circulation and nourishment. *Anu Taila* is a classical formulation widely used in *Nasya* therapy due to its *Tridosha* balancing, *Rasayana*, and *Keshya* properties[7].

Shiro Abhyanga (head massage) is another important external therapy that enhances scalp nourishment, improves blood circulation, and reduces stress. Iron supplementation plays a crucial role in hair growth by improving oxygen delivery to hair follicles and correcting nutritional deficiencies. Thus, a combined approach of *Nasya*, *Abhyanga*, and iron supplementation provides a comprehensive and integrative management strategy for *Khalitya*.

Review Of Literature :

Khalitya is described in *Ayurvedic* classics as a progressive disorder characterized by gradual hair loss due to vitiation of *Doṣhas*, predominantly *Pitta* and *Vata*. According to classical texts, aggravated *Pitta* located in *Romakupa* (hair follicles) causes degeneration of hair roots, while *Vata* leads to dryness and subsequent hair shedding. *Kapha* and *Rakta* further contribute by obstructing the follicular openings, preventing *regrowth* of hair[8,9]. *Charaka* has also emphasized that excessive intake of *Kshara*, *Lavana*, and *Viruddha Ahara* leads to vitiation of *Pitta* and contributes to *Khalitya*[10]. Additionally, hair being considered as a Mala of *Asthi Dhatu* indicates that *Dhatu kshaya* also plays a significant role in the pathogenesis[11].

From a modern perspective, hair loss is *multifactorial* and includes *androgenetic* alopecia, *telogen* effluvium, and diffuse hair loss. Among these, *telogen* effluvium is commonly associated

with stress, nutritional deficiencies, and systemic imbalance. Studies have shown that nutritional factors, especially micronutrient deficiencies, play a crucial role in hair follicle cycling and growth[12].

Iron deficiency has been strongly associated with hair loss, particularly in females. Iron is essential for DNA synthesis and oxygen transport, which are critical for rapidly dividing cells such as hair follicle matrix cells. Low serum *ferritin* levels have been identified as a risk factor for diffuse hair loss and *telogen* effluvium[13]. It has been observed that iron deficiency is common among females with hair loss, and most authors recommend iron supplementation when *ferritin* levels are low[14]. Iron improves oxygen delivery to hair follicles, enhances cellular proliferation, and supports *anagen* phase maintenance. Therefore, supplementation with iron preparations such as *Orofer* XT is clinically justified in cases where nutritional deficiency contributes to hair fall. Clinical recommendations also suggest that iron supplementation should be considered when hair loss is associated with confirmed deficiency, as it significantly improves hair growth outcomes.

Biotin, although widely used in hair supplements, has limited scientific evidence in individuals without deficiency. It plays a role in keratin synthesis and follicular health; however, studies indicate that its benefits are mainly observed in cases of biotin deficiency or specific metabolic disorders. Therefore, while biotin may support hair structure, iron remains a more evidence-based intervention in clinical hair loss.

Nasya Karma is considered the most effective therapy for diseases above the clavicle (*Jatrurdhva Roga*). The classical statement "*Nasa* hi *Shiraso Dwaram*" explains that the nose is the gateway to the head, and drugs administered through this route directly affect cranial structures and associated tissues[15]. *Nasya* helps in clearing *Srotas*, improving circulation, and nourishing the scalp and hair follicles.

Anu Taila, a classical medicated oil, is specifically indicated in *Nasya* for disorders of head and scalp. It possesses *Vata-Pitta shamaka*, *Rasayana*, and *Keshya* properties, which help in strengthening hair roots and preventing hair fall[16]. Due to its *Sookshma* (subtle) and *Vyavayi* (penetrating) properties, *Anu Taila* can reach deeper tissues and facilitate *Romakupa Vishodhana* (cleansing of hair follicles), thereby promoting hair growth.

Shiro Abhyanga (head massage) is another important therapeutic modality in the management of *Khalitya*. It involves application of medicated oil over the scalp, which helps in pacifying *Vata Doṣha*, improving local blood circulation, and nourishing hair follicles. Among various oils, *Bhringaraja Taila* is considered the best classical oil for hair disorders due to its *Keshya* (hair promoting) and *Rasayana* properties. *Bhringaraja* (*Eclipta* alba) has been traditionally used for promoting hair growth, preventing hair fall, and improving scalp health. Modern observations suggest that *Bhringaraja* oil penetrates deeply into the scalp, reduces dryness, improves hair strength, and promotes hair growth by enhancing follicular nourishment .

Additionally, *Shiro Abhyanga* helps in reducing stress, which is a major contributing factor in hair loss. Stress-induced hormonal changes can push

hair follicles into the *telogen* phase, leading to increased hair shedding. Regular head massage improves relaxation, reduces *cortisol* levels, and indirectly supports hair growth.

Thus, the integrative approach combining *Anu Taila Nasya*, *Shiro Abhyanga* with *Bhringaraja Taila*, and iron supplementation (*Orofer* XT) addresses *Khalitya* at multiple levels. It provides *Doṣha* pacification, follicular nourishment, improvement in scalp circulation, and correction of underlying nutritional deficiency. This multidimensional approach is more effective than single modality treatment and aligns with both *Ayurvedic* principles and modern scientific understanding.

Materials And Methods :

This study was conducted as a single-case clinical study to evaluate the effect of *Anu Taila Nasya*, *Shiro Abhyanga*, and iron supplementation in the management of *Khalitya* (hair loss). The study duration was 21 days with follow-up assessment.

Study Design :

A single-case observational clinical study.

Case Description:

A 25-year-old female patient presented with complaints of excessive hair fall (approximately 80–100 hairs per day), thinning of hair (*Kesha Tanutva*), and dryness of scalp (*Kesha Rukshata*) for a duration of 8 months. The onset was gradual with progressive worsening. There was no history of systemic illness, hormonal disorder, or long-term medication. Family history revealed similar complaints in the mother.

Inclusion Criteria :

Patients presenting with:

- Clinical features of *Khalitya* (hair fall, thinning, dryness)
- Age group between 18–40 years
- Willingness to undergo *Ayurvedic* treatment

Exclusion Criteria :

- Patients with alopecia *areata* or scarring alopecia
- Patients with severe systemic disorders
- Patients on long-term steroid or hormonal therapy
- Pregnancy and lactation

Intervention Protocol :

The patient was treated with an integrative *Ayurvedic* approach for 21 days.

1. *Anu Taila Nasya*

Anu Taila was administered as Marsha *Nasya* in a dose of 8 drops in each nostril once daily. The procedure was performed in the morning under proper conditions after mild facial massage and fomentation.

2. *Shiro Abhyanga*

Shiro Abhyanga was performed using *Bhringaraja Taila* daily for 10–15 minutes before bath. Gentle circular massage was applied over the scalp to enhance local circulation and nourishment of hair follicles.

3. Iron Supplementation

Orofer XT tablet (iron supplement) was administered orally once daily after food for the entire duration of treatment to correct underlying nutritional deficiency contributing to hair fall.

Assessment Criteria :

Assessment was carried out based on both subjective (*Ayurvedic Lakṣaṇa*) and objective parameters, using a grading scale (0–3) at Day 0, Day 7, Day 14, and Day 21.

Parameter	Ayurvedic Term	0 (Normal)	1 (Mild)	2 (Moderate)	3 (Severe)
Hair fall	Khalitya	<50 hairs/day	50–100 hairs/day	100–150 hairs/day	>150 hairs/day
Hair thinning	Kesha Tanutva	Normal thickness	Slight thinning	Moderate thinning	Severe thinning
Hair dryness	Kesha Rukshata	Smooth, oily	Slight dryness	Moderate dryness	Severe dryness, rough
Hair quality	Kesha Guna Hani	Normal shine	Slight dullness	Dull, weak hair	Very dull, brittle hair

Objective Assessment Criteria :

Parameter	Method of Assessment	0 (Normal)	1 (Mild)	2 (Moderate)	3 (Severe)
Hair density	Visual scalp examination	Normal density	Slight reduction	Moderate reduction	Marked reduction
Scalp condition	Clinical observation	Healthy scalp	Mild dryness	Dry, flaky scalp	Severe dryness/scaling
Hair pull test	Gentle traction test	Negative (≤2 hairs)	Mild positive (3–5 hairs)	Moderate (6–10 hairs)	Strong positive (>10 hairs)
New hair growth	Visual observation	Normal growth	Minimal growth	Moderate regrowth	No regrowth

Overall Grading Interpretation :

Score Range	Clinical Interpretation
0	No symptoms
1	Mild involvement
2	Moderate involvement
3	Severe involvement

Observation :Day-Wise Assessment Of *Khalitya* (Hair Loss)

Parameter	Ayurvedic Term	Day 0	Day 7	Day 14	Day 21
Hair fall	Khalitya	3 (>150 hairs/day)	2–3 (100–120 hairs/day)	2 (70–100 hairs/day)	1 (<50 hairs/day)
Hair thinning	Kesha Tanutva	3 (Severe thinning)	3 (No major change)	2 (Moderate thinning)	1–2 (Mild thinning)
Hair dryness	Kesha Rukshata	3 (Severe dryness)	2–3 (Dry scalp)	2 (Moderate dryness)	1 (Mild dryness)
Hair quality	Kesha Guna Hani	3 (Dull, brittle)	3 (Slight improvement)	2 (Less dullness)	1–2 (Improved texture)
Hair density	—	3 (Marked reduction)	3 (No change)	2–3 (Slight improvement)	2 (Improved density)
Scalp condition	—	3 (Dry, rough scalp)	2–3 (Less dryness)	2 (Better hydration)	1 (Healthy scalp)
Hair pull test	—	3 (>10 hairs)	2–3 (6–10 hairs)	2 (4–6 hairs)	1 (≤2–3 hairs)
New hair growth	—	3 (No growth)	3 (Minimal growth)	2–3 (Visible regrowth)	2 (Improved regrowth)

Results :

The present case study demonstrated a gradual and clinically significant improvement in both subjective and objective parameters of *Khalitya* over the 21-day treatment period. The response to therapy was progressive, with mild changes observed during the first week, followed by moderate improvement by the second week, and marked improvement by the end of the study.

At baseline (Day 0), the patient presented with severe symptoms, including excessive hair fall (>150 hairs/day), marked thinning of hair (*Kesha Tanutva*), severe scalp dryness (*Kesha Rukshata*), and poor *hair* quality characterized by dullness and brittleness (*Kesha Guna* Hani). Objective findings showed reduced hair density, dry and rough scalp condition, strongly positive hair pull test (>10 hairs), and absence of new hair growth.

By Day 7, slight improvement was observed. Hair fall reduced to approximately 100–120 hairs per day, and scalp dryness showed mild reduction. However, hair thinning and density did not show significant change at this stage, indicating that initial response was mainly symptomatic.

By Day 14, moderate improvement was evident in most parameters. Hair fall reduced further to 70–100 hairs per day. Scalp dryness improved noticeably, with better hydration of scalp. Hair quality showed improvement with reduction in brittleness and dullness. Hair pull test showed moderate positivity (4–6 hairs), indicating decreased hair shedding. Early signs of new hair growth were also observed.

By the end of the study (Day 21), significant improvement was noted. Hair fall reduced to less than 50 hairs per day, which is within physiological limits. Scalp condition became near normal with minimal dryness. Hair texture improved considerably, showing better strength and

smoothness. Hair pull test became mildly positive (≤2–3 hairs), indicating stabilization of hair roots. Hair density showed improvement, and visible *regrowth* of new hair was observed. Overall, the intervention resulted in approximately 60–70% improvement in clinical symptoms. Maximum improvement was observed in hair fall, scalp condition, and hair pull test, while moderate improvement was noted in hair density and *regrowth*. These findings indicate that the combined therapy of *Anu Taila Nasya*, *Shiro Abhyanga*, and iron supplementation was effective in reducing hair fall, improving scalp health, and promoting hair growth.

Discussion :

Khalitya (hair loss) is a *multifactorial* disorder described in *Ayurveda* under *Kshudra Roga* and *Shiroroga*, involving the vitiation of *Doṣhas*, *Dhatu kshaya*, and *Srotorodha*. In the present case, the patient exhibited classical features such as excessive hair fall (*Khalitya*), thinning of hair (*Kesha Tanutva*), dryness of scalp (*Kesha Rukshata*), and deterioration in hair quality (*Kesha Guna* Hani). The chronicity of symptoms along with family history indicates the involvement of both *Nidana Sevana* (etiological factors) and *Beeja Dosha* (genetic predisposition).

According to *Ayurvedic* texts, *Khalitya* occurs due to aggravated *Pitta Doṣha* localized in *Romakupa* (hair follicles), which leads to destruction of hair roots. Simultaneously, *Vata Doṣa* contributes to dryness and hair shedding, while *Kapha* and *Rakta* obstruct the hair follicles, preventing *regrowth*[17,18]. The baseline findings in this case—severe hair fall, dryness, and absence of *regrowth*—clearly reflect this classical *Samprapti*. The treatment approach in this study was aimed at *Samprapti Vighatana*, i.e., breaking the pathogenesis at multiple levels.

The significant reduction in hair fall from >150 hairs/day to <50 hairs/day over 21 days suggests effective pacification of aggravated *Doṣas*. The improvement in scalp dryness indicates *Vata shamana*, while reduction in hair fall reflects stabilization of *Pitta*-induced follicular damage. The observed improvement in hair texture and density suggests restoration of *Dhatu poshana*, particularly Rasa and *Rakta Dhatu*, which are essential for hair nourishment.

Nasya Karma plays a central role in the management of *Khalitya*. The classical statement "*Nasa* hi *Shiraso Dwaram*" emphasizes that the nasal route provides direct access to the head region[19]. In this study, *Anu Taila Nasya* was administered, which possesses *Sookshma* (subtle) and *Vyavayi* (pervasive) properties, enabling it to penetrate deeper tissues and act on hair follicles. It facilitates *Romakupa Vishodhana* (cleansing of hair follicles) and improves local circulation. The progressive improvement seen after Day 7 and Day 14 indicates that *Nasya* has a cumulative therapeutic effect. *Anu Taila*, being *Vata-Pitta shamaka* and *Rasayana* in nature, helps in strengthening hair roots and promoting *regrowth*[20].

Shiro Abhyanga using *Bhringaraja Taila* contributed significantly to the improvement in scalp condition and hair quality. *Bhringaraja* is well known for its *Keshya* (hair promoting) and *Rasayana* properties, and its regular application

helps in nourishing the scalp and improving blood circulation. The reduction in scalp dryness and improvement in hair texture observed in this study can be attributed to the *Snigdha* (unctuous) and *Brimhana* (nourishing) properties of the oil. Additionally, *Shiro Abhyanga* plays an important role in reducing stress, which is a major contributing factor in hair loss. Stress-induced *Vāta* aggravation leads to increased hair shedding, and its reduction helps in stabilizing the hair growth cycle.

From a modern scientific perspective, scalp massage has been shown to improve microcirculation and oxygen supply to hair follicles, thereby enhancing hair growth. It also reduces *cortisol* levels, which are associated with stress-induced hair loss. Thus, *Shiro Abhyanga* acts through both physiological and psychological mechanisms.

Iron supplementation in the form of *Orofer* XT also played a crucial role in this study. Iron is essential for DNA synthesis and cellular proliferation, particularly in rapidly dividing cells such as hair follicle matrix cells. Iron deficiency is a well-established cause of hair loss, especially *telogen* effluvium[21,22]. The improvement in hair density and *regrowth* observed in this case may be partly attributed to correction of underlying nutritional deficiency. Iron enhances oxygen delivery to hair follicles and supports the *anagen* phase of hair growth. Studies have shown that low serum *ferritin* levels are associated with increased hair shedding, and supplementation leads to improvement in hair growth[23].

The hair pull test, which was strongly positive at baseline, became mildly positive by Day 21, indicating stabilization of hair roots and reduction in active shedding. This objective improvement supports the effectiveness of the intervention. Similarly, the gradual improvement in hair density and *regrowth* indicates restoration of follicular activity.

The overall improvement observed in this study can be explained by the synergistic action of the three interventions. *Anu Taila Nasya* acted at the level of Shiras and *Srotas*, *Shiro Abhyanga* provided local nourishment and stress reduction, and iron supplementation corrected nutritional deficiency. Together, they addressed the pathology of *Khalitya* at multiple levels—*Doṣha*, *Dhatu*, and *Srotas*.

The pattern of improvement observed in this case is also clinically significant. Minimal changes during the first week followed by progressive improvement in subsequent weeks indicate a cumulative therapeutic effect, which is characteristic of *Ayurvedic* treatments. This highlights the importance of regular and sustained therapy for achieving optimal results.

From a modern viewpoint, the combined therapy likely improved scalp microcirculation, reduced oxidative stress, enhanced follicular metabolism, and regulated the hair growth cycle. The integrative approach thus bridges traditional *Ayurvedic* concepts with contemporary scientific *understanding.However*, as this is a single case study, the findings cannot be generalized. The absence of biochemical parameters such as serum *ferritin* levels is a limitation. Further studies with larger sample size and objective measurements are required to validate these findings.

Overall, the study demonstrates that an integrative approach combining *Anu Taila Nasya*, *Shiro Abhyanga*, and iron supplementation is effective in managing *Khalitya*. It provides a holistic, safe, and non-invasive treatment option that addresses both the root cause and symptoms of hair loss.

Conclusion :

The present case study demonstrates that an integrative *Ayurvedic* approach consisting of *Anu Taila Nasya*, *Shiro Abhyanga* with *Bhringaraja Taila*, and iron supplementation (*Orofer* XT) is effective in the management of *Khalitya* (hair loss). The intervention resulted in a significant reduction in hair fall, improvement in scalp condition, enhancement of hair texture, and initiation of hair *regrowth* within a period of 21 days.

From an *Ayurvedic* perspective, the therapy acts by pacifying aggravated *Pitta* and *Vata Doṣha*, clearing *Srotorodha* at the level of *Romakupa*, and promoting *Dhatu poshana*, thereby restoring normal hair physiology. *Nasya* Karma plays a key role by directly acting on the Shiras, while *Shiro Abhyanga* provides local nourishment and *Vata shamana*. Iron supplementation supports the treatment by correcting underlying nutritional deficiency, which is an important contributing factor in hair loss.

From a modern scientific viewpoint, the observed improvement may be attributed to enhanced scalp microcirculation, improved oxygen delivery to hair follicles, reduction in stress-related factors, and stimulation of follicular activity, resulting in stabilization of the hair growth cycle.

The study highlights that a multimodal, integrative approach is more effective than a single therapy, as it addresses the condition at multiple levels—systemic, local, and nutritional. The treatment was found to be safe, cost-effective, and non-invasive, making it suitable for long-term management.

However, as this is a single case study, the findings cannot be generalized. Further large-scale clinical studies with objective biochemical parameters and longer follow-up are required to validate these results and establish standardized treatment protocols.

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Declaration :

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