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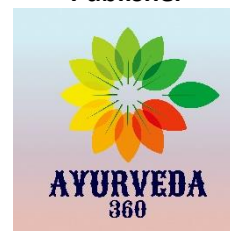
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DOI: [10.63247/3048-7390.vol.2.issue1.3](https://doi.org/10.63247/3048-7390.vol.2.issue1.3)**Randomized Control Clinical Trial to assess the combine effect of Bhringaraj Tail Shiroabhyanga and Yastimadhuka Tail Nasya in Khalitya of Females**Tirankar M.P.¹, Patrikar V.G.², Thatere V.A.³

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ABSTRACT**Introduction:**

Khalitya (hair fall) is a prevalent concern among females, often impacting physical appearance and psychological well-being. Ayurveda attributes this condition to the vitiation of Pitta and Vata doshas, affecting hair follicles. This study was conducted to assess the synergistic effect of *Bhringaraj Tail Shiroabhyanga* and *Yastimadhuk Tail Nasya* in the management of Khalitya.

Methods:

A randomized controlled clinical trial was conducted on 104 female patients diagnosed with Khalitya. Participants were randomly allocated into two groups: **Group A** (52 patients) received both *Bhringaraj Tail Shiroabhyanga* and *Yastimadhuk Tail Nasya*, while **Group B** (52 patients) received only *Yastimadhuk Tail Nasya*. The intervention lasted for 21 days, followed by a one-month observation period. Clinical parameters such as hair density, hair fall count, scalp visibility, and associated symptoms were assessed at baseline, post-treatment, and during follow-up. Statistical analysis was performed using paired and unpaired t-tests.


Results:

Group A showed statistically significant improvement in hair density, reduction in hair fall, and decreased scalp visibility compared to Group B ($p < 0.05$). Symptom relief was notably higher in the combined therapy group, with sustained benefits during follow-up. No adverse effects were reported in either group.


Discussion:

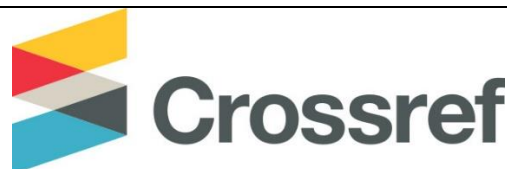
The combined therapy of *Bhringaraj Tail Shiroabhyanga* and *Yastimadhuk Tail Nasya* proved more effective than Nasya alone. This supports the Ayurvedic principle of combined external and internal application for better therapeutic outcomes in Khalitya.

Keywords: Khalitya, Hair Fall, Bhringaraj Tail, Shiroabhyanga, Yastimadhuk Tail, Nasya.

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Introduction

Hair loss, medically referred to as alopecia, affects approximately 2% of the global population ^[1]. Among women, it is not only a physical concern but also significantly impacts psychological and emotional well-being. Female Pattern Hair Loss (FPHL), the most prevalent type, is reported in 12% of women aged 20–29 years and up to 50% of those over 80 years ^[2]. Early onset is becoming increasingly common, and diagnosis now involves both clinical criteria and advanced modalities such as dermoscopy ^[3].

Conventional therapeutic strategies include topical applications like minoxidil, systemic agents such as spironolactone, and invasive interventions like hair transplantation. However, these treatments are associated with limitations including high cost, inconsistent efficacy, and potential adverse effects. This necessitates the exploration of alternative, cost-effective therapies.

Ayurveda offers promising interventions in the form of *Shiroabhyanga* (therapeutic head massage) and *Nasya* (nasal administration of medicated oils) for the management of *Khalitya* (hair fall) ^[4]. *Bhringaraj Taila* and *Yashtimadhuk Taila* are classical formulations extensively cited in traditional texts for their rejuvenating and hair-promoting properties ^[5,6]. While individual efficacy of these oils has been explored, scientific studies evaluating the combined effect of *Bhringaraj Taila*

Shiroabhyanga and Yashtimadhuk Taila

Nasya in comparison to *Nasya* alone remain limited. This study seeks to address this gap.

Purpose of the Study

1. Need for the Study

The cosmetic industry's rapid growth reflects an increasing demand for hair restoration solutions. However, many commercial products that claim to promote hair growth are expensive and may paradoxically aggravate hair loss due to chemical components. In contrast, Ayurvedic interventions offer a safer, economical alternative, grounded in centuries of experiential knowledge.

Khalitya continues to pose a clinical challenge with limited curative solutions in modern medicine. Given the psychosocial burden of hair loss, especially among women, the current study aims to scientifically validate the effectiveness of Ayurvedic therapies—specifically *Bhringaraj Taila* *Shiroabhyanga* combined with *Yashtimadhuk Taila* *Nasya*—in the management of *Khalitya*.

2. Criteria for Establishing Purpose

a. Essentiality

Hair loss is a distressing concern for women, especially beyond the age of 30, often leading to low self-esteem and social withdrawal. Current allopathic solutions are either symptomatic, inconsistent, or prohibitively costly. There is an

Tirankar M.P. et al. Evaluation of Bhringaraj & Yashtimadhuk Taila in Female Hair Fall
essential need to explore and validate
evidence-based Ayurvedic alternatives
that are affordable and effective.

b. Feasibility

Initial screening conducted at Government Ayurved College OPD indicated both patient interest and suitability of these treatments. The ingredients used in the formulations are readily available, and the preparation methods are cost-effective, ensuring accessibility even at a household level.

c. Plausibility

With the aid of dermatoscopic evaluation, accurate assessment of scalp pathology was achieved. Training was provided to participants for both *Nasya* and *Shiroabhyanga* procedures, empowering them to carry out treatments independently at home, thereby improving adherence and outcome monitoring.

Hypothesis

Null Hypothesis (H₀):

Bhringaraj Tail Shiroabhyanga and *Yastimadhuk Tail Nasya* combined, and *Yastimadhuk Tail Nasya* alone, are equally effective in managing *Khalitya* in females, as assessed by dermoscopic evaluation.

Alternative Hypothesis (H₁):

The combination of *Bhringaraj Tail Shiroabhyanga* and *Yastimadhuk Tail Nasya* is more effective than *Yastimadhuk Tail Nasya* alone in managing *Khalitya* in females, as assessed by dermoscopic evaluation.

Aim and Objectives

Aim:

To assess the combined effect of *Bhringaraj Tail Shiroabhyanga* and *Yastimadhuk Tail Nasya* in *Khalitya* of females.

Objectives:

Primary Objectives:

- To evaluate the combined effect of *Bhringaraj Tail Shiroabhyanga* and *Yastimadhuk Tail Nasya* in *Khalitya* of females using dermoscopic readings.
- To evaluate the effect of *Yastimadhuk Tail Nasya* alone in *Khalitya* of females using dermoscopic readings.

Secondary Objectives:

- Authentication, preparation, and standardization of *Bhringaraj Tail* and *Yastimadhuk Tail*.
- To review classical and modern literature related to *Khalitya*.
- To review classical literature regarding *Shiroabhyanga* and *Nasya*.
- To review literature regarding the selected drugs as per Ayurveda.
- To review the principles and usage of dermoscopy in hair disorders.

Material and Methods

Place of Work:

The study was conducted in the Department of Swasthavritta and Yoga at the research institute.

Study Type: Randomized Controlled Clinical Trial

Study Design:

The study included healthy female individuals aged 18 to 35 years with sedentary occupations. A total of 110 subjects fulfilling inclusion and exclusion criteria were enrolled.

Participants were briefed about the protocol, and written informed consent was obtained. All were instructed to adhere to regular use of medicated oils as per the study regimen.

Table 1. Distribution of Subjects into Groups

	Group A – Experimental Group	Group B – Control Group
No. of Subjects	55	55
Drug	Bhringaraj Tail Shiroabhyanga + Yashtimadhuk Tail Nasya	Yastimadhuk Tail Nasya only
Shiroabhyanga	Twice a week	Not applicable
Dose of Nasya	8 drops in each nostril daily	8 drops in each nostril daily
Time (Kāla)	Morning	Morning
Duration	3 weeks + 1 week follow-up (8th, 15th, and 22nd days)	3 weeks + 1 week follow-up (same)

Table 2. Preparation of Tail: Ingredients

Bhringaraj Tail	Yashtimadhuk Tail
Bhringaraj (<i>Eclipta alba</i>)	Yashtimadhuk (<i>Glycyrrhiza glabra</i> Linn.)
Gunja (<i>Abrus precatorius</i>)	Aamalaki (<i>Emblica officinalis</i>)
Ela (<i>Elettaria cardamomum</i>)	Godugdha (Cow milk)
Jatamansi (<i>Nardostachys grandiflora</i>)	Til Tail (<i>Sesamum oil</i>)
Devdaru (<i>Cedrus deodara</i>)	

Picture-1**PREPARATION OF BHRINGARAJA TAIL****Picture-2****PREPARATION OF YASTHIMADHUK TAIL**

Name of the Parameter	Bhringaraj Tail	Yashtimadhuk Tail
1. Colour	Greenish black	Golden yellow
2. Odour	Characteristic smell of Bhringaraj Tail	Sesame oil smell
3. Feel	Non-sticky	Oily and liquid
4. Specific gravity @ RT	0.997	0.996
5. Moisture Content	2.8%	4.3%
6. Saponification Value	203.36	238.42
7. Iodine Value	10.34	10.998
8. Acid Value	1.942	2.39
9. Refractive Index	1.2751	1.4682
10. Viscosity	0.93	0.97
11. TLC (Rf Value)	0.47	0.43

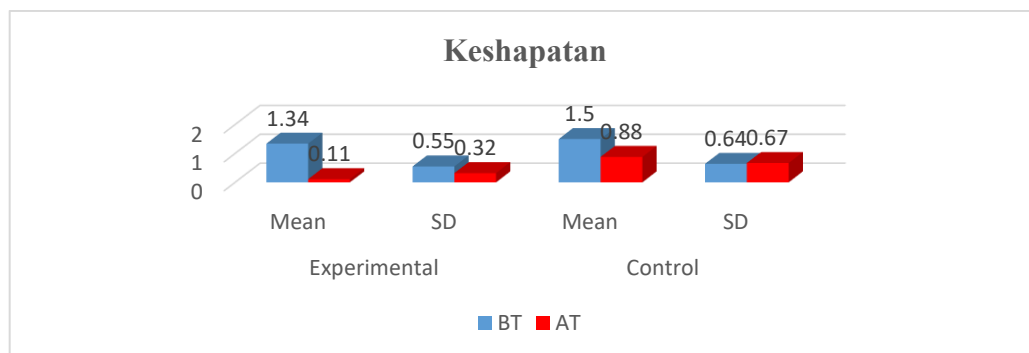
Inclusion Criteria

1. Female subjects aged 18 to 35 years.
2. Hair fall ranging from 70 to 100 strands/day for the past two months (average rate of hair loss is approximately 125 hairs/day).
3. Subjects willing to participate in the study.

Exclusion Criteria

1. ANC (Antenatal) and PNC (Postnatal) females.
2. Females suffering from chronic or acute illnesses, or those on medications such as for hyperthyroidism, chemotherapy, antipsychotics, etc.

EFFECT ON SUBJECTIVE PARAMETERS OF *KHALITYA*

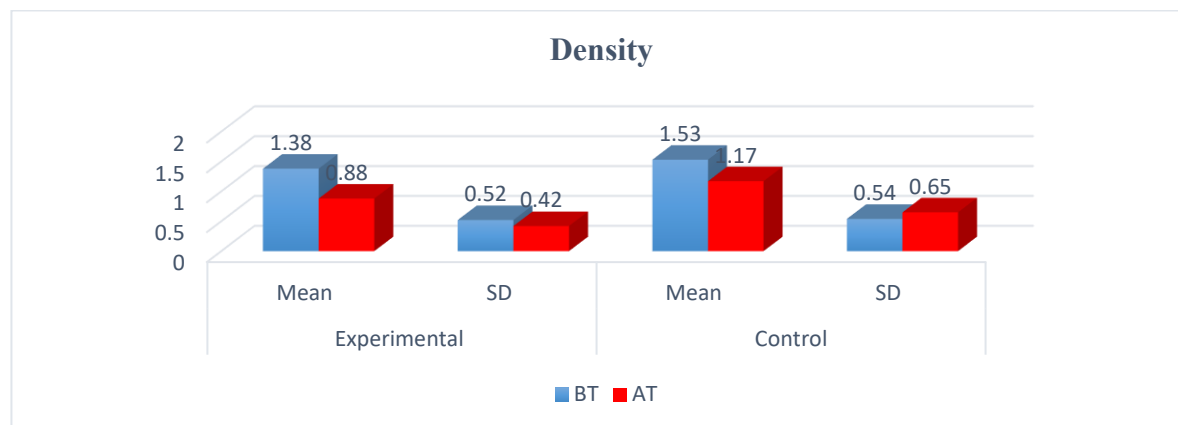


Graph 1

The table shows that the mean \pm SD of *Keshapatan* before study was 1.34 ± 0.55 and 1.5 ± 0.64 which was reduced to 0.11 ± 0.32 and 0.88 ± 0.67 after study in Experimental group and

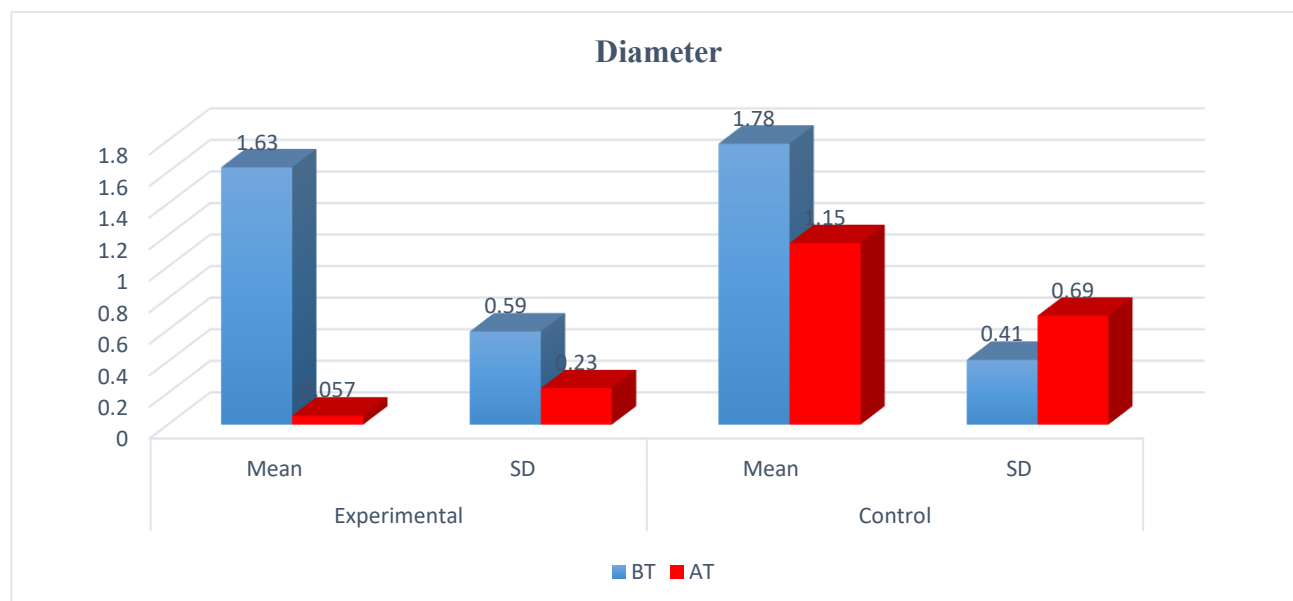
Tirankar M.P. et al. Evaluation of Bhringaraj & Yashtimadhuk Taila in Female Hair Fall control group respectively. There was highly significant effect in *Keshpatan* in Experimental group as the p-value <0. 0001.No any significant change observed in *keshpatan* in Control group after the treatment.

EFFECT ON OBJECTIVE DERMASCOPIC EXAMINATION PARAMETERS



Graph 2.

Density - The table shows that the mean \pm SD of Density before study was 1.38 ± 0.52 and 1.53 ± 0.54 which was reduced to 0.88 ± 0.42 and 1.17 ± 0.65 after study in Experimental and Control group respectively. There was highly significant effect Density in both groups as the p-value <0.0001.



Graph 3.

Diameter - The table shows that the mean \pm SD of Diameter before study was 1.63 ± 0.59 and 1.78 ± 0.41 which was reduced to 0.057 ± 0.23 and 1.15 ± 0.69 after study in Experimental and Control group respectively. There was highly significant effect Diameter in both groups as the p-value <0.0001.

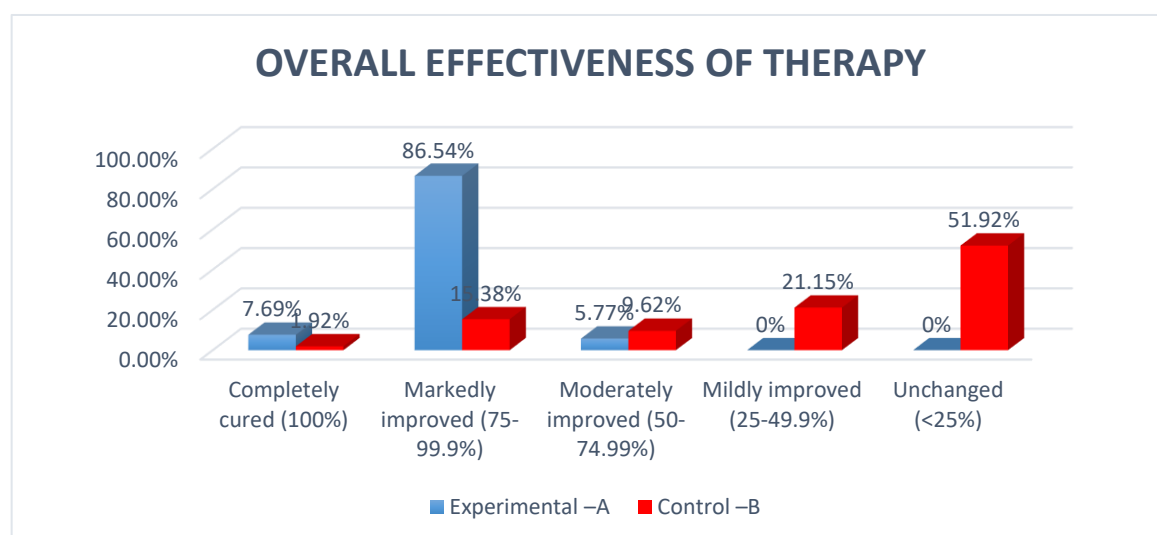
Tirankar M.P. et al. Evaluation of Bhringaraj & Yashtimadhuk Taila in Female Hair Fall
Table No.4 Comparison of Change in Mean of Subjective Parameters after Treatment between Expt-A and Control –B

	Group	Mean	SD	Median	%effects	Z-value	p-value
Keshapatan	Experimental – A	1.23	0.61	1	91.17	4.514	<0.0001, HS
	Control-B	0.61	0.82	0	36.53		

Table No.5 Comparison of Change of Dermoscopic Parameters after Treatment between Expt -A and Expt -B

	Group	Mean	SD	Median	% effects	Z-value	p-value
Density	Experimental - A	0.5	0.54	0	31.37	1.352	0.1765, NS
	Control-B	0.36	0.52	0	23.53		
Diameter	Experimental - A	1.57	0.60	2	96.94	5.815	<0.0001, HS
	Control-B	0.63	0.74	0	32.69		

OVERALL EFFECTIVENESS OF THERAPY



Graph 4.

Result

Data Presentation: Continuous variables: Mean \pm SD and Median & Range.

Categorical variables: Frequency and percentages.

Statistical Tests:

Tirankar M.P. et al. Evaluation of Bhringaraj & Yashtimadhuk Taila in Female Hair Fall Chi-square for demographic comparisons; Fisher's exact for small samples. Wilcoxon signed-rank test for subjective parameters. Wilcoxon rank-sum test for changes between Trial and Control groups.

Significance Level: $P < 0.05$.

Software Used: STATA version 14.0 for analysis.

Discussion

Bhringaraja Taila, enriched with *Keshya* and *Tridosha-shamaka* herbs, promotes hair growth by enhancing local blood circulation, nourishing hair follicles, and removing *Kapha*-induced blockages from scalp pores. The synergistic preparation through *Taila Paka Vidhi* enhances its therapeutic properties, making it effective in reducing hair fall and promoting pigmentation and strength.^[7] *Shiroabhyanga*, or head massage, improves scalp circulation, reduces tension, and enhances the absorption of medicinal oils. The warmth and pressure during massage also help cleanse sebaceous ducts and support healthy follicular activity, aiding in the prevention of hair loss. *Yastimadhuk Taila*, containing *Rasayana* herbs like *Yastimadhu* and *amalaki*, works by pacifying Pitta and *Vata dosha*. Its *Sheeta* and *Snigdha* properties reduce scalp dryness and prevent premature greying and thinning. *Nasya*, the nasal administration of medicated oil, allows direct access to the cranial region through the *Shrungataka Marma*.^[8] The lipid-soluble nature of *Taila* facilitates quick absorption through nasal mucosa, positively influencing the scalp via neurovascular pathways. It helps eliminate morbid *Doshas* and supports tissue regeneration at the hair

root level. Together, these interventions address both local and systemic causes of hair fall, making the treatment more comprehensive and sustainable.

Conclusion

Bhringaraj Tail Shiroabhyanga and *Yastimadhuk Tail Nasya* both therapies significantly improved hair rejuvenation, scalp density, and overall hair health. The ingredients are affordable and widely available. *Shiroabhyanga*, combined with *Nasya*, promotes better hair growth than *Nasya* alone. *Shiroabhyanga* opens pores and cleanses roots, enhancing long-term hair vitality. A balanced diet and routine are crucial for sustained scalp health. Both therapies are effective for hair health, with *Shiroabhyanga* offering additional growth benefits.

Limitation

As per the reference mentioned in *Gadanigraha Bringraj Tail Shiroabhyanga* has been mentioned to be beneficial on applied to female subjects only. That's why as per this reference it is the limitation to take male subjects in this study.

Only specific *Shiroabhyanga* & *Nasya* were selected for the study. *Shirodhara*, scalp, bloodletting, *Virechan* could not be include in this study because these needs a very long

Tirankar M.P. et al. Evaluation of Bhringaraj & Yashtimadhuk Taila in Female Hair Fall term study. This was also the limitation of the study.

Scope of The Study

In future researchers can do such type of the study by taking different modalities of procedures like *Shirodhara*, *Shirobasti*, scalping, bloodletting, *Virechan*, *Prachhan* etc. These two modalities *Shiroabhyang* & *Nasya* could also be studied and compared on other systems like nervous system. These two modalities *Shiroabhyanga* & *Nasya* could also be studied on brain waves and EEG.

Testing of Hypothesis

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Both the therapies *Bhringaraj Tail Shiroabhyanga* and *Yastimadhuk Tail Nasya* were combine more effective than *Yastimadhuk Tail Nasya* for assessing in *Khalitya* of Females by Dermoscopic reading was also accepted. i.e Alternative Hypothesis was accepted and Null Hypothesis that ‘*Bhringaraj Tail Shiroabhyanga* and *Yastimadhuk Tail Nasya* combined and only *Yastimadhuk Tail Nasya* are equally effective in *Khalitya* of Females by Dermoscopic reading’ was rejected.

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