

“Randomized open controlled clinical study of therapeutic effect of *snuhyadya tail* externally as *shiroabhyanga* with comparison to *bhrungaraj tail* externally as *shiroabhyanga* in *khalitya* patients having an age group 15-60 years with special reference to alopecia.”

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ABSTRACT

Introduction - Healthy, beautiful, long and attractive hairs add charm of personality. According to *Acharya charak, Ashtanga Hridayakar, Sharangdhar khalitya* is under *shirorogas*. As per *Acharya Sushruta, Ashtang Sangraha, Yoga Ratnakara and Madhavnidana Khalitya* is under heading of *kshudraroga*. According to *Acharya Sushruta Khalitya* occurs when *vata dosha* get vitiated along with *pitta dosha* it enters the *romkupam* or hair follicle and which result in hair fall. *Snuhyadya tail* is taken from *Bhaishyajya ratnavali kshudrarogadhikar*.

Aim and objective- To study the therapeutic effect of external use of *snuhyadya tail* as *shiroabhyanga* with compare to external application of *bhrungaraj tail* as *shiroabhyanga* in the

management of *khalitya* having an age group 15-60 years.

Material and method –

Method- 60 clinically dignosed patient of *khalitya* selected from opd / ipd unit of pg department of *kayachikitsa*, L.K. Ayurvedic hospital, yavatmal

Material – *snuhyadya taila* and *bhrungaraj taila*

Result and conclusion- *Snuhyadya taila* and *bhrungaraj tail* both are effective in the management of *khalitya* to reduce the sign, symptoms i.e. *khalitya*. On the basis of overall percent relief, *snuhyadya tail* external application as *shiroabhyanga* has found more effective than that of *bhrungaraj tail* external application as *shiroabhyanga* in the management of *khalitya*.

Keywords- *khalitya*, alopecia, *snuhyadya taila*, *kshudraroga*, *keshchyutti*, *bhrungraj tail*, *shirorogas*.

INTRODUCTION

Healthy, beautiful, long and attractive hairs add charm of personality. It offers a lot of aesthetic value and is a person's crowning glory. According to *Acharya charak*, *Ashtanga Hridayakar*, *Sharangdhar khalitya* is under *Shirorogas*. As per *Acharya Sushrut*, *Ashtang Sangraha*, *Yoga Ratnakara* and *Madhavnidana Khalitya* is under heading of *kshudraroga*.

तेजोऽनिलाद्यैः सह केशभूमिं दग्ध्वाऽऽशु कुर्यात् खलति नरस्य । किञ्चित्तु दग्ध्वा पलितानि कुर्याद्धरिप्रभत्वं च शिरोरुहाणाम् (च.चि. 26/132)

Tejas, when combined with *aniladi doshas*, reaches the *shira-kapala* and causes hair fall through the *dahana* of *roma kooapa*, according to *Acharya Charaka*. This is referred to as *khalitya*. *Chakrapani* while commenting on this status the word *Tejas* here denotes *deha ushma* as well as *pitta dosha*.

रोमकूपानुगं पित्तं वातेन सहमूर्च्छितं ॥ प्रच्यावयति रोमाणि ततः श्लेष्मा सशोणितः ।

रुणद्धि रोम कूपांस्तु ततोऽन्येषामसंभवः ॥ तर्दिद्रलुप्तं खालित्यं रुज्येति च विभाव्यते ॥ (सु.नि.13/32-33).

According to *Acharya Sushruta vrudha pitta* in combine with *vata*, reaches *Romakoopa* and causes hair fall whereas *kapha* combine with *rakta dosha* causes *avarodha* to the *Romakoopa* which prevent hair regeneration and this disease is known as *Indralupta*, *Khalitya*, or *Ruhya*. *Acharya Vagbhat* says *khalitya*

and *indralupta* are same but in *khalitya* the process of hair fall is slower when hair loss in patches it called as *indralupta*.

According to modern medicine *khalitya* is known as alopecia which refer to partial or complete loss of hair especially from the scalp. *Khalitya* is remarkable problem in the society in modern era, so it has a high cosmetic importance, which is affecting approximately 60.3% of the population. Hair fall is more in male than females. According to survey up to 40% of men and 25% of women in India are victims of hair fall. It is progressive disorder, people who lead sedentary lifestyles experience stress, which causes hectic schedule, this combined with indiscriminate dietary habits causes many disturbances and inefficiencies in the body which are reflected in the hairs.

In Ayurveda also *Aharaj*, *Viharaj*, *Manas hetu* play important role in *samprapti of khalitya* and also not following *dinacharya*, *ritucharya* may collectively increases *pitta*, *vata* which lead to hairfall. In ayurveda various *bahya* and *abhyantar chikitsa* is described for *khalitya* such as *lepa*, *nasya*, *abhyanga*, *shirodhara*, *shiropichu*, *parishek* etc. among these *abhyanga* is best for *khalitya*, so in this study *snuhyadya taila* (group A -30 patient) and *bhrungaraj taila* (group B-30 patient) for *khalitya* was given for *shiroabhyanga* up to 30 days and after that 30days follow up taken.

Aims and Objectives-

1.Primary objectives-

To study the therapeutic effect of external use of *snuhyadya tail* as

shiroabhyanga with compare to external application of *bhrungaraj tail* as *shiroabhyanga* in the management of *khalitya* having an age group 15-60 years.

2.Secondary objectives-

- 1.To study details about *snuhyadya taila* and classical view of *khalitya*.
- 2.To evaluate the efficacy of *bhrungaraj taila* as *shiroabhyanga* in the management of *khalitya*.
- 3.To compare the effects of *shiroabhyanga* with *snuhyadya taila* and *bhrungaraj taila* in the management of *khalitya*.

MATERIAL AND METHODS-

STUDY DESIGN: Prospective, randomized, controlled, open labelled clinical study.

Place – PG Department of *kayachikitsa* *Laxmanrao Kalasapurakar* Ayurved College *Yavatmal*, affiliated with D.M.M, Ayurved, College, *Yavatmal*

Duration –One month drug intervention and after that one month follow up.

SELECTION OF PATIENT –

INCLUSIVE CRITERIA

*Patients of both sexes with an age group between 15 to 60yrs.

*Cases with classical sign & symptoms of *khalitya* were considered

*Hair fall (*keshchyuti*)

*Hair pull test

*Patients willing for clinical trial.

*Patients belonging to any socio-economic class irrespective of cast, religion, occupation.

*Patient who will fulfill criteria and take regular medicines with Regular follow up.

B- EXCLUSIVE CRITERIA

*Patients not willing for clinical trial.

*patient whole age is less than 15 & above 60 yrs.

*Allergic disorders (*Tinea capitalis*), scalp psoriasis

*Patient is known case of any autoimmune disorder like thyroid & rheumatoid disease.

C- WITHDRAWAL FROM THE STUDY

*Patients not following regular follow up.

*Allergic to trial medicine.

*Progressive worsening of disease & development of complication during trial.

*Non-co-operative behavior of the patients.

TREATMENT DETAIL

Group	Group A	Group B
No. of Patients	30	30
Treatment	<i>Snuhyadya taila</i>	<i>Bhrungaraj taila</i>
Dose	5 ml	5 ml
Kalpna	Tail (oil)	Tail (oil)
Duration	30 days therapy and post therapy 30 days follow up	30 days therapy and post therapy 30 days follow up
Time of Administration	Once in night (before one hour of bed time)	Once in night (before one hour of bed time)
Route	Local (<i>shiroabhyanga</i>)	Local (<i>shiroabhyanga</i>)

SNUHYADYA TAILA CONTENT-

snhuhipaya, arkapay, bhrungraj, langali, vatsnabh, ajamutra, gomutra, gunja, indravaruni, sarshap, jyotishmati and sarshap taila.

BHRUNGRAJ TAILA CONTENT-

Brungraj, Lohkitta, (triphala) Haritaki, Bibhitaki, Amalaki, Sariva, Til taila.

ASSESSMENT CRITERIA-**1)Keshochyutti (Hair Fall)**

GRADATION	SEVERITY	NO. OF HAIR FALL PER DAY
Grade 0	NORMAL	0-30
Grade 1	MILD	30-60
Grade 2	MODERATE	60-100
Grade 3	SEVERE	100-160
Grade 4	MORE SEVERE	>160

2)Hair pull test(objective)

GRADATION	SEVERITY	NO. OF HAIR PULL AT TIME
Grade 0	Normal	0-1
Grade 1	Mild	2-3
Grade 2	Moderate	3-6
Grade 3	Severe	MORE THAN 6

OBSERVATION AND RESULT**1.Keshchyuti: -**

Group	Mean score			Median diff.	IQR of diff. Q ₃ – Q ₁	Sample size	Wilcoxon signed rank test (T+)	P Value
	B.T	A.T	Diff					
Group A	1.13	0.2	0.93	1.00	0.0 (1.0 – 1.0)	30	378.00	< 0.05
Group	1.26	0.4	0.86	1.00	0.0	30	300.00	<0.05

B					(1.0 –1.0)			
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For group A and group B, the median reduction in *Keshchyuti* score after treatment is significant (P-value < 0.05) at 5% level of significance. **i.e. it can be said that there is significant reduction**

in *Keshchyuti* for group A and group B.

Comparative Analysis of Groups:

Using Mann-Whitney U test, to test the hypothesis –

Group	Median difference (bef-aft)	Mean of difference (bef-aft)	S.D. of difference (bef-aft)	Mann-Whitney U statistic	P- Value
Group A	1.00	0.9333	0.3651	480.00	0.531
Group B	1.00	0.8666	0.5074		

Reductions in *Keshchyuti* score group A and group B were not significantly Different (p –value=0.531) at 5% level of significance.

Thus, treatment A and treatment B can be considered as equal efficacious in reducing *Keshchyuti*.

Keshchyuti		Grade 0		Grade 1		Grade 2		Grade 3	
		No.	%	No.	%	No	%	No	%
Group A	BT	0	0%	27	90%	2	7%	1	3%
	AT	24	80%	6	20%	0	0%	0	0%
Group B	BT	0	0%	23	77%	6	20%	1	3%
	AT	18	60%	12	40%	0	0%	0	0%

2.Hair Pull Test:-(Objective parameter)

Group	Mean score			Median diff.	IQR of diff.	Sample size	Wilcoxon signed rank test	P Value
	B.T	A.T	Diff					

					Q ₃ – Q ₁		(T ⁺)	
Group A	2.00	0.333	1.667	2.0	1.0 (2.0 – 1.0)	30	465.00	< 0.05
Group B	2.33	0.3	2.03	2.0	0.0 (2.0 – 2.0)	30	465.00	< 0.05

For group A and group B, the median reduction in Hair Pull Test after treatment is significant (P-value < 0.05) at 5% level of significance. **i.e. it can be**

said that there is significant reduction in Hair Pull Test for group A and group B.

Comparative Analysis of Groups:

Using Mann-Whitney U test, to test the hypothesis –

Group	Median difference (bef-aft)	Mean of difference (bef-aft)	S.D. of difference (bef-aft)	Mann-Whitney U statistic	P- Value
Group A	2.00	1.6667	0.5466	315.50	0.9896
Group B	2.00	2.0333	0.6149		

Reductions in Hair Pull Test score for group A and group B were not significantly Different (p –value = 0.9896) at 5% level of significance.

Thus, treatment A and treatment B can be considered as equal efficacious in reducing Hair Pull Test.

Hair Pull Test		Grade 0		Grade 1		Grade 2		Grade 3	
		No.	%	No.	%	No	%	No	%
Group A	BT	0	0%	7	23%	16	53%	7	23%
	AT	20	67%	10	33%	0	0%	0	0%
Group B	BT	0	0%	3	10%	14	47%	13	43%

	AT	21	70%	9	30%	0	0%	0	0%
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Parameter	Group A	Group B	Comparative efficacy
<i>Keshchyuti</i>	Significant	Significant	Equally Effective
Hair Pull Test	Significant	Significant	Equally Effective

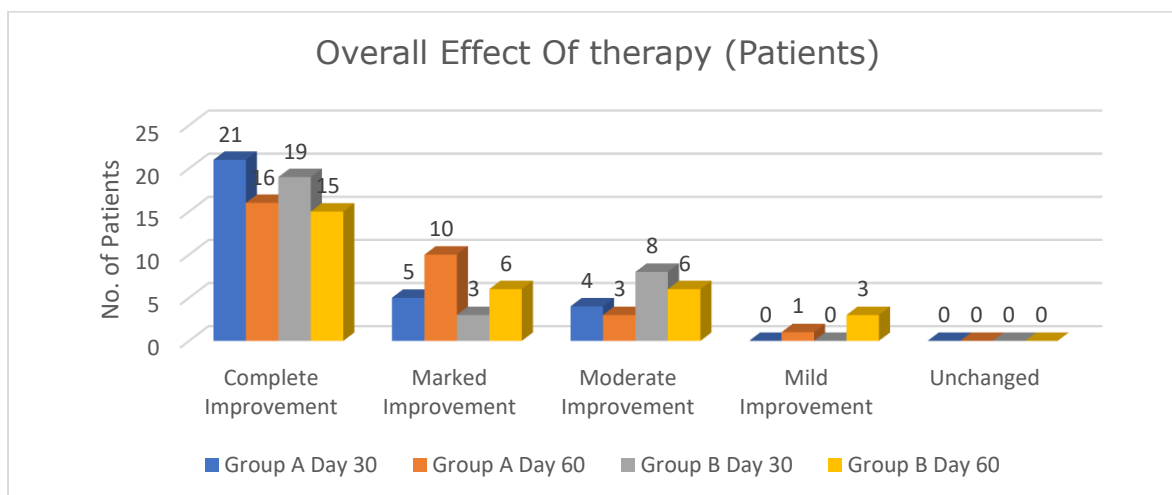
According to % Relief In Symptoms

Sr. No.	Parameter	Group A		Group B	
		day 30	day 60	day 30	day 60
1	<i>Keshchyutii</i>	90.55%	85.55%	78.88%	70.56%
2	Hair Pull Test	89.44%	86.66%	90.55%	88.88%
% Improvement		90.00%	86.11%	84.72%	79.72%
Associated Variable					
1	<i>Darunak</i>	78.94%	78.94%	86.20%	72.41%
2	<i>Kandu</i>	85.71%	71.42%	50%	45.33%
3	<i>Keshrukshtwa</i>	90%	82.75%	93.10%	72.41%
4	<i>Kesh Bhumi Daha</i>	100%	100%	100%	100%
5	<i>Kesh Bhumi Dourgn dhya</i>	100%	100%	100%	100%
% Improvement		90.86%	86.62%	85.86%	78.03%
% Improvement		90.61%	86.47%	85.53%	78.51%

% Improvement According to Patients: -

PATIENTS	Group A		Group B	
	Day 30	Day 60	Day 30	Day 60
Complete Improvement	21	16	19	15

Marked Improvement	5	10	3	6
Moderate Improvement	4	3	8	6
Mild Improvement	0	1	0	3
Unchanged	0	0	0	0
	30	30	30	30



DISCUSSION-

In Trial Group and In Control Group (By Wilcoxon Signed Ranks Test)-

Wilcoxon Signed Ranks test was applied to both groups separately to observe whether the difference between Before and after treatment significant or not. From tables we can observe that P-Values for Group A and Group B are less than 0.05 in both groups. The test has shown significant difference between D-0 and D-60 symptom scores. It is hence concluded that *snuhyadya taila* externally as *shiroabhyanga* (Trial Group) and *bhrungraja taila* externally as *shiroabhyanga* (Control Group) has significantly reduced *keshchyuti* (hair fall), hair pull test (objective).

Statistical Analysis:- Comparison Group A and Group B (By Mann Whitney's U Test)-

Both groups were compared and analyzed statistically by Mann-Whitney's U test.-

In the case of symptoms *keshchyuti* (hair fall), hair pull test (objective). Reductions in *Keshchyuti* score group A and group B were not significantly Different (p -value=0.531) at 5% level of significance. Mean diff. of group A is 0.933 and group B is 0.866 and it is neatly equal, thus P value is greater than 0.05 hence H_0 is reject and H_2 is accepted. Thus, treatment A and treatment B can be considered as equal efficacious in reducing *Keshchyuti*. Reductions in Hair Pull Test score for group A and group B were not

significantly Different (p -value = 0.9896) at 5% level of significance. Mean diff. of group A is 1.666 and group B is 2.033 and it is nearly equal, thus P value is greater than 0.05 hence H_0 is reject and H_2 is accepted.

Thus, treatment A and treatment B can be considered as equal efficacious in reducing Hair Pull Test. So, the *snuhyadi taila* external application as *shiroabyanga* and *bhrungaraj taila* external application as *shiroabhyang* is equal effective in the management of *khalitya*.

BEFORE TREATMENT



AFTER TREATMENT



CONCLUSION-

- In group A 90% at day 30 and 86.11% at day 60.
- In Group B 84.72% at day 30 and 79.72% at day 60.
- Thus according to mean percent relieve it can conclude that the group A i.e. *snuhyadya taila* is more effective than group B i.e. *bhrungaraja taila* to reduce the

sign and symptoms of *khalitya*.

Finally, we concluded,

***Snuhyadya taila* and *bhrungraja taila* both are effective in the management of *khalitya*.**

On the basis of overall percent relief, *snuhyadya taila* external application as *shiroabhyanga* has found more effective than that of *bhrungraja taila* external application as *shiroabhyanga* in the management of *khalitya*.

Both *Snuhyadya taila* and *bhrungraja taila* reduced the associated symptoms like *darunaka*, *kandu*, *keshrukshtwa*, *keshbhumi* *daha*, *keshbhumi* *dourgandhya*.

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