

## A CLINICAL STUDY OF *BHRINGARAJADI VATI* (A HERBOMINERAL AYURVEDIC FORMULATION) IN THE MANAGEMENT OF *KHALITYA* (HAIR FALL) – A PILOT STUDY

Dr. Vivek Salvi<sup>\*1</sup>, Dr. Murari Girare<sup>2</sup>, Dr. Nikita Mishra<sup>3</sup>, Dr. Vandana Saraf<sup>4</sup>,  
Dr. Niranjana Saraf<sup>5</sup> and Dr. Prakash Joshi<sup>6</sup>

<sup>1,2,3</sup>P.G. Scholar, Dept. of Kayachikitsa, Govt. Dhanwantari Ayurveda college and Hospital  
Ujjain, M.P. India.

<sup>4</sup>Guide - Associate professor Dept. of Kayachikitsa, Govt. Dhanwantari Ayurveda College  
and Hospital Ujjain, M.P. India.

<sup>5</sup>Assistant professor Dept. of Swasthavritta, Govt. Dhanwantari Ayurveda College and  
Hospital Ujjain, M.P. India.

<sup>6</sup>Assistant professor Dept. of Rachana Shareer, Govt. Dhanwantari Ayurveda College and  
Hospital Ujjain, M.P. India.

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### \*Corresponding Author

Dr. Vivek Salvi

P.G. Scholar, Dept. of  
Kayachikitsa, Govt.  
Dhanwantari Ayurveda  
college and Hospital Ujjain,  
M.P. India.

### 1. ABSTRACT

*Khalitya* is a clinical condition related to hairloss that can significantly affect both male and female adults quality of life. Despite the high market demand, only few drugs are currently approved for *khalitya* treatment. The appearance of hair plays an important role in peoples overall self –perception and physical appearance. In Ayurveda, it is termed as *Khalitya*. According to concept of *Ayurveda*, hair loss occur due to an imbalance of *Pitta Dosha* in the body. There are a number of other causes for hair loss like Nutritional deficiency, high stress, Increase of DHT Hormone, Dermatitis, certain drugs etc. are main causes of *Khalitya*. According to survey up to 40% of men and 25% Of women in India are victims of hair fall.<sup>[1]</sup> Hair fall is commonly seen in

the age group of 18-40 years. More common in males than in females. *Acharya Charak* considered hair as *Mala* of *Asthi Dhatu*.<sup>[2]</sup> It is a primarily a *pitta* dominant *Tridoshajanya* *Vyadhi* i.e. *Vata*, *Kapha* with *Rakta Dosha*. However hair fall considered a minor disease but its Impact in mental health much bigger than we think, that why we formulated Herbo-mineral formulation called “*Bhringarajadi vati*”. **Objective:** A pilot study was conducted to

evaluate the safety and efficacy of “*Bhringarajadi Vati*” in clinically diagnosed patients of *Khalitya* (Hair fall). **Material & Method:** A randomized, single group, pilot study was conducted at govt. Dhanwantari Ayurved medical College & Hospital Ujjain between July 2020 and August 2020. **Result:** The statistical analysis show that the efficacy of “*Bhringarajadi Vati*” is highly significant. No adverse effect were observed during the study. **Conclusion:** “*Bhringarajadi Vati*” along with generalized in *Khalitya* (Hair fall) is safe and efficacious.

**KEYWORDS:** Pilot Study, *Khalitya*, *Bhringarajadi Vati*.

## 2. INTRODUCTION

Ayurveda is one of the most ancient medical science of the world. Beautiful, long, healthy, and attractive hairs add charm to the personality. Hair is also known a mirror of healthy state of the personality. *Khalitya* or hair fall is one of the most common problems worldwide. Hair fall has been described in almost all the Ayurvedic literatures as *Khalitya*, According to *Acharya Sushrut*, *Vridhha Vagbhatta*, *Yogratnakar* and *Madhav Nidan* *Khalitya* included as *Kshudra Roga* or minor skin disorder. On a daily basis, the hair fall out of the head, specifically throughout washing and brushing 70 -100 hairs loss a day is a very common. Male is more susceptible than female in the case of *Khalitya* (Hair fall). *Khalitya* or hair fall is an important *Kshudraroga*, which is demanding increased attention. Gradual falling of hair is known as *Khalitya*, when pitta combines with *Vata* or *Kapha Dosha* to destroy the hairs, it is called *Khalitya*.<sup>[3]</sup> *Acharya Charak* described that the *Tejas Dathu* (Heat of body) is associated with *Vata* and other *Dosha*, scorches up the hair root (scalp) giving instantaneous rise to *Khalitya* (Hair fall) in men. The etiological factors like *Atilavansevan*, *Atiksharsevan*, *Viruddhahara*, *Atiatapsevan* etc. are responsible for *Khalitya*.<sup>[4]</sup> in the *Samprapti* the *Agnimandhya*, *Shrotorodha*, *Pitta*, *Vata*, *Kapha* and *Rakta Prakopa* are important factors.

According to modern the causes of hair fall are generally poor nutritional, high stress, hormonal imbalance, pollution etc. and one of the most important cause is to increase DHT hormone so to solve this problem or to reduce the DHT hormone as well as provide to nutritional value we design this *Vati* called *Bhringarajadi Vati*. It can be able to counter almost all causes of hair fall, and after did the study all 20 patients for one month. The assessment of result was done on the basis of subjective parameters we found the result was encouraging and highly significant.

### 3. AIMS AND OBJECTIVES

To analyze the safety and efficacy of Ayurvedic formulation '*Bhringarajadi Vati*.' In the management of *Khalitya* (Hair fall).

### 4. MATERIAL AND METHOD

#### Clinical study

A Randomized, single group, pilot study was conducted at govt. Dhanwantari Ayurved Medical College & Hospital Ujjain between July 2020 and August 2020, A Total of 20 patients of clinically diagnosed *Khalitya* (Hair fall) were studied with an One month treatment of "*Bhringarajadi Vati*" in a dose of 500 mg/BD.

## 5. DRUG REVIEW

Table No. 1: Ingredients of *Bhringarajadi vati*.

S.N.	Drug	Botanical Name	Family	Rasa	Guna	Virya	Vipak	Doshkarma	Part
1	Bhringaraja	<i>Eclipta alba</i>	Compositae	Katu (pungency) Tikta (Bitter)	Ruksha, Laghu	Ushna	Katu	Kaphavata shamaka	Panchanga
2	Aamalki	<i>Emblica officinalis</i>	Euphorbiaceae	Pancharasa, Lavanrahit	Guru, Ruksha, Sheeta	Sheeta	Madhur	Tridosahar	Phala
3	Haritaki	<i>Terminalia chebula</i>	Combretaceae	Pancharasa, Lavanrahit	Laghu, Ruksha	Ushna	Madhur	Tridosahar	Phala
4	Vibhitaki	<i>Terminalia bellirica</i>	Combretaceae	Kashaya (Astringent)	Laghu, Ruksha	Ushna	Madhur	Tridosahar	Phala
5	Yashtimadhu	<i>Glycyrrhiza glabra</i>	Leguminosae	Madhur (Sweet)	Guru, Snigdha	Sheeta	Madhur	Vatapitta shamaka	Mula
6	Shankhapushpi	<i>Convolvulus pluricaulis</i>	Convolvulaceae	Tikta (Bitter)	Snigdha, Picchila	Sheeta	Madhur	Tridosahar	Panchanga
7	Kushmand	<i>Benincasa hispida</i>	Cucurbitaceae	Madhur (Sweet)	Laghu, Snigdha	Sheeta	Madhur	Vatapitta shamaka	Beeja
8	Krishna tila	<i>Sesamum indicum</i>	Pedaliaceae	Madhur (Sweet)	Guru, Snigdha	Ushna	Madhur	Tridoshashamaka	Beeja
9	Kukkutanda twak bhasma			Kashaya (Astringent)	Snigdha	Ushna		Vatashamaka	Twaka
10	Loha bhasm	<i>Ferrum</i>		Tikta, Madhur, Kashaya (Bitter) (Sweet) (Astringent)	Sara, Guru, Ruksha	Sheeta	Madhur	Tridoshashamaka	

## METHOD

### The preparation of *Bhringarajadi Vati*

It has 10 ingredients First we take *Bhringaraja Panchanga*, *Triphala*, (*Aamalki*, *Haritaki*, *Vibhitaki*), *Yashtimadhu* and *Shankhapushpi Churna* (powder) in equal amount (100gm each).

Then we take *Kushmand beej* (*Churna* /powder) 50gm, *Loha Bhasma* 50 gm, *Krishna Tila* (*Churna* /powder) 50gm, and *Kukkutanda Twak Bhasma* 50gm. we take all in powder form and mixed together & than add 3 *Bhavana* (adding juice by mortar pestle for 8 hours) of *Bhringaraja Swaras* (again mixed with juice of *Bhringaraja* raw herb) and 3 *Bhavana* (decoction in mortar pestle for 8 hours) of *Triphala* and *Yashtimadhu Kwath* in this *Churna* and prepared *Bhringarajadi Vati* (tab.) of 250 mg.

## 5. INVESTIGATION

- CBC
- ESR
- CRP
- S. Calcium

## 6. SUBJECTIVE PARAMETERS

TABLE NO. 2.

Kesh patanum (Hair fall)	Observation	Grade
	No hairfall	0
	Mild hairfall (hairfall on washing)	1
	Moderate hairfall (hairfall on combing)	2
	Severe hairfall (hairfall on simple strengthening)	3

Darunak (Dandruff)	Observation	Grade
	No dandruff	0
	Dandruff seen on scalp only	1
	Dandruff seen on hairs only	2
	Dandruff seen on scalp & hairs	3

Kesh Rukshatvam ( Dryness of hair/ Roughness)	Observation	Grade
	No dryness of hairs	0
	Mild dryness of hairs	1
	Moderate dryness of hairs	2
	Severe dryness of hairs	3

<b>Shirah Kandu (Itching on scalp)</b>	<b>Observation</b>	<b>Grade</b>
	No Itching	0
	Mild Itching	1
	Moderate Itching	2
	Severe Itching	3

<b>Kesha Kathinya (Harshness of Hair)</b>	<b>Observation</b>	<b>Grade</b>
	No harshness of hairs	0
	Mild harshness of hairs	1
	Moderate harshness of hairs	2
	Severe harshness of hairs	3

<b>Kesha Tanutva (Thinness of Hair)</b>	<b>Observation</b>	<b>Grade</b>
	No thinness of hairs	0
	Mild thinness of hairs	1
	Moderate thinness of hairs	2
	Severe thinness of hairs	3

<b>Keshabhoomi Daha (Burning sensation in scalp)</b>	<b>Observation</b>	<b>Grade</b>
	No burning sensation in scalp	0
	Mild burning sensation in scalp	1
	Moderate burning sensation in scalp	2
	Severe burning sensation in scalp	3

## 7. ASSESMENT OF RESULT

Table No. 3: Assesment of subjective parameters Before & After treatment.

<b>Pt. S. No.</b>	<b>Kesh patanam</b>		<b>Darunak</b>		<b>Rukshatvam</b>		<b>Kandu</b>		<b>Kesh kathinya</b>		<b>Kesh tanutva</b>		<b>Keshbhoomi daha</b>	
	<b>BT</b>	<b>AT</b>	<b>BT</b>	<b>AT</b>	<b>BT</b>	<b>AT</b>	<b>BT</b>	<b>AT</b>	<b>BT</b>	<b>AT</b>	<b>BT</b>	<b>AT</b>	<b>BT</b>	<b>AT</b>
1.	2	0	1	0	3	1	2	1	2	1	1	0	2	1
2.	3	1	2	1	2	1	2	0	3	2	2	1	1	0
3.	3	1	2	0	2	1	2	1	2	0	1	0	2	1
4.	3	1	1	0	2	1	2	0	2	1	2	1	1	0
5.	2	1	2	1	2	1	2	1	3	1	2	0	3	1
6.	2	1	0	0	3	1	3	1	2	1	2	1	1	0
7.	1	0	2	1	3	0	0	0	1	0	1	0	2	1
8.	2	1	3	1	2	1	1	0	2	1	2	1	1	0
9.	2	1	2	1	2	1	2	0	2	0	1	0	2	1
10.	3	1	0	0	2	1	0	0	1	0	2	1	0	0
11.	2	0	1	0	3	1	0	0	2	1	2	1	1	1
12.	2	1	2	1	3	1	1	1	3	1	1	0	2	1
13.	3	1	1	0	1	0	1	0	2	1	1	1	2	1
14.	3	1	0	0	1	0	1	1	2	0	2	1	1	0
15.	2	1	2	1	2	0	1	0	2	1	1	0	2	1
16.	2	1	1	0	2	1	2	1	3	1	2	1	1	0
17.	2	1	2	1	3	1	0	0	2	1	1	0	2	1
18.	3	1	2	1	2	1	1	0	1	0	2	1	2	1

19.	1	0	1	0	3	1	2	0	2	1	3	1	1	1
20.	2	1	2	1	2	1	1	0	1	0	2	1	1	0

### ASSESSMENT OF RESULT IN %

**Table No. 4.**

S. No.	Symptoms/Subjective Parameter	Result
1.	<i>Kesh Patanam</i> (Hair fall)	75%
2.	<i>Darunak</i> (Dandruff)	84%
3.	<i>Kesh Rukshatvam</i> (Dryness/ Roughness)	85%
4.	<i>Shirah Kandu</i> (Itching on scalp)	77%
5.	<i>Keshkathinya</i> (Harshness of hair)	72%
6.	<i>Kesh Tanutwa</i> (Thinness of hair)	65%
7.	<i>Keshobhoomi Daha</i> (Burning sensation in scalp)	68%

Sum of result assessment is – 75 % which is more significant.

## 8. OBSERVATIONS AND RESULT

The Statistical Analysis of the Data to Study the Efficacy of Treatment it as below.

**Table No. 5.**

Mean		Mean Diff.	S.E.	't' Value	'P' Value
BT	AT				
12.4	4.4	8	1.999	7.149	> 0.001

- The statistical analysis of the data in trial group with *Bhringrajadi Vati* showed 't' value is 7.149. 'P' value is  $P > 0.001$ , signifying that the efficacy of treatment is highly significant.
- Patients got significant relief in all sign and symptoms. A very good result seen in *Darunak* (Dandruff) and *Kesh Rukshatwam* (Dryness/Roughness) with 84-85% relief which is highly significant.

## 9. DISSCUSION

Hairfall is an extremely common condition that affects almost all individuals. it can occur at any stage from teenage to old age. Hairloss can have significant negative psychosocial consequences for affected individuals, including reduced self streaming social withdrawal due to imbrarrasment and depression. it could be possible that essential neutrients may be missing from our diet such as iron, copper, zinc and protein, the deficiency of calcium, vitamin c and vitamin D is another cause of hairloss. stress and DHT hormone are also responsible for hairloss. to solve these problem we have prepaired and conduct a pilot study in *khalitya* (Hairfall). that we made a herbomineral *ayurvedic* formulation called *Bhringarajadi vati*. *Bhringarajadi vati* has 10 ingrediants, like *Bhringaraja*, *Aamalki*,

*Haritaki, Vibhitaki, Yashtimadhu, Shankhpushpi, Kushmanda beej, Krishna tila, Kukkutanda twak bhasma and loha bhasm.* In all ingrediants *Bhringaraja* and *Krishna tila* both are *keshya* properties. *Aamalki* is main source of vitamine c, *yashtimadhu* and *shankhpushpi* both are *medhya* properties, also they are antistress properties, *loha bhasma* is main source of iron and is in important ingredient for its absorption in intestine. *kukkutanda twak bhasma* is main source of vitamin k and calcium and its causes increase in bone density and easily absorbable compound of calcium. *kushmanda beej* works as a DHT Reducer property. DHT (Di hydroxy testosterone) is a male sex hormone and that is main cause of *khalitya* (Hairfall).

## 10. CONCLUSION

Hair fall is a slowly progressing disorder now a days, hair fall is common in youngsters too. Hair plays a vital role in enhancing the personality of a human as the hair is the first noticeable part of beauty for women as well as men. In Ayurveda *Khalitya* has mentioned in *Kshudrarog*. Acharya Vagbhatta classified *Kalitya* under *Shiroroga*. Acharya Sushrut explained that when the *Vata* along with *Pitta* reaches *Romakoopa* causes hair loss and after that *Shleshma* interrupts *Romakoopa* with *Rakta* which inhibits hair regeneration and this condition is known as *Khalitya / Indralupta*. In Ayurvedic management of *Khalitya* has a strong possibility to breakdown the pathogenesis of this diseases. Natural product that is *Bhringarajadi Vati* have been shown to be possible alternative treatment for hair loss.

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