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CLINICAL STUDY ON EFFECT OF DIFFERENT PROCEDURES OF NASYA WITH BHRINGARAJA TAILA IN KHALITYA

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ABSTRACT

Background: In Ayurvedic approach, falling of hair is coined out as in term of 'khalitya' under the broad heading of shiroroga. Susceptibility of hair fall is more in males than in females. khalitya is commonly seen in the age group of 18-40 years. According to survey up to 40% of men and 25% of women in India are victims of hair fall. It is a slowly progressing disorder. People living in sedentary ways of life, stress induced hectic and unhealthy schedules along with indiscriminate dietary habits result in malnutrition, Anemia, Hypocalcemia & low amino acid level causes many problems which directly reflect in loss of hair. For khalitya, nasya is one of the choices of management for its prime role in maintaining hair growth and preventing khalitya. **Objective of the study:** 1.To evaluate and compare the effect of Charakokta nasya vidhi and Vagbhatokta nasya vidhi with bhringaraja taila in khalitya 2. To standardize the bindu pramana of nasya. **Method:** A minimum of 30 patients fulfilling the diagnostic and inclusion criteria of either sex are selected for the study. Out of 30 patients, 15 will be administered nasya vidhi according to Charaka and remaining fifteen will be administered Vagbhatokta nasya vidhi. **Procedure:** Group V: Vagbhatokta nasya vidhi (continuous stream of pouring). Group C: Charakokta nasya vidhi (drop by drop pouring). Assessment was done before treatment, on 8th day after treatment and on 15th, 22nd and 30th day of follow up. **Results:** study showed that among the of 30 patients, 10 (33.33%) got good response > 61% relief, 18 (60 %) got moderate relief between 31% to 60%, 2 (06.66 %) poor response between 1% to 30% and 0% is in no response group **Conclusion:** Analysis of the results clinically showed that Charakokta nasya vidhi with bhringaraja taila provided a better relief in the signs and symptoms of khalitya mainly in hair fall and breaking of hair compared with Vagbhatokta nasya vidhi with bhringaraja taila in khalitya.

Keywords : khalitya, Charakokta nasya vidhi, Vagbhatokta nasya vidhi ,bhringaraja taila, bindu pramana standardization, hair fall, breaking of hair.

INTRODUCTION:

Healthy, beautiful, long and attractive hairs add charm to the personality. That's way the

cascade of beautiful and healthy hairs measured every person. Locks of hair envisage in itself an element vital for beauty on contrary withering hairs may totally turn the picture bizarre and unacceptable, especially when it starts at younger age. According to survey up to 40% of men and 25% of women in India are victims of hair fall¹. Therefore, to keep the healthy hairs in healthy state is entirely the duty of human beings, because just like face, hair is also a mirror of healthy state of the body. Even thousand years ago, in ayurvedic literature, so many types of daily regimens for hair care have been described in the chapter of dinacharya and ritucharya, which includes some procedures like moordhini taila, nasya, snana etc.

In this most advanced modernized era, the humans are gifted with lot of sophistication, luxuries but at the same time left with sedentary ways of life, stress induced hectic and unhealthy schedules. These along with indiscriminate dietary habits like excessive intake of salts, sweets, alkalis, starchy, fried foods, spicy irritant foods such as chilly, mustard, garlic etc. along with alcoholic drinks leads to hair fall. Psychological stressors like strong mental shock such as disappointed love, inharmonious marriage, failure in passing the entrance examination or in business, disease of family members or accident, terrible ecological environment, unaccustomed to the climate of a new place and the change of habitats also precipitate the cause. Regular uses of cosmetic soaps, synthetic shampoos, hair jellies & other chemicals also damage the luster of the hair. Exposure to sunlight & pollution further worsen the health of hair. Improper diet factors, sedentary life style, malnutrition, sleep disturbances, systemic diseases, local diseases of scalp, stress and pollution propping into one's life are adversely

influencing the homeostasis leading to hair fall. To solve the above query and to find out a promising remedy the present study has been undertaken.

For khalitya, nasya is one of the choices of management for its prime role in maintaining hair growth and preventing khalitya. If nasya is done with the taila which is medicated by hair growing drugs and vatapittahara then more efficacy can be desirable. So in this present study bhringaraja taila which is having vatapittahara and keshya property² is selected for nasya in khalitya. Dose is a very important factor in any of the panchakarma procedures to get optimum efficacy of the therapy. So the study has been planned with two mottos, firstly to know the efficacy of two different classical methods of nasya administration and secondly to do the standardization of bindu pramana of nasya.

Nasya karma can be considered as an interventional treatment in khalitya³. Charaka and Vagbhata have explained their unique views as drop by drop pouring and continuous stream of pouring respectively as method of administration. Many studies on the effect of nasya in khalitya have been done. But no study has been done on comparing the different procedure of nasya. So in this study, an effort is made to compare the method of nasya between charaka and vagbhata with bhringaraja taila in khalitya having special focus on hair fall. For this 8 bindu of bhringaraja taila is fixed where it used as drop by drop pouring in Charakokta nasya vidhi group and continuous stream of pouring in Vagbhatokta nasya vidhi group.

OBJECTIVES:

1. To evaluate and compare the effect of Charakokta nasya vidhi and Vagbhatokta nasya vidhi with bhringaraja taila in khalitya

2. To standardize the bindu pramana of nasya.

MATERIALS & METHODS

Research design : Interventional, single blinded randomized controlled efficacy trial

Drug source:

Bhringaraja taila will be prepared from the raw drugs selecting from Alva's Pharmacy, Karnataka and fresh *bhringaraja* from watery areas of Alappuzha, Kerala.

Method of preparation of bhringaraja taila⁴ : Take 1 part of *Glycyrrhiza glabra* powder ,4 parts of *Sesamum indicum* oil and 16 parts of *Eclipta alba* juice. Make processed *Sesamum indicum* oil. In that processed *Sesamum indicum* oil; *Eclipta alba* juice and prepared bolus of *Glycyrrhiza glabra* powder should be added. The oil was prepared by oil processing method as quoted by Sharangadhara.

Method of preparation of moorchitaila taila⁵ : Ingredients are – *Rubiocordifolia*1/16 part, *Terminalia chebula*, *Terminalia belerica*, *Emblica officinalis*1/64 part, *Curcuma longa* 1/64 part, *Symplocos racemosa* 1/64 part, *Pandanus tectorius* 1/64 part, *Cyperus rotundus*1/64 parts, *Sesamum indicum* oil 1 part, Water 4 parts.

Sesamum indicum oil is heated over slow fire till the foam and sound gets subsided and allowed to cool down. Above mentioned drugs are made into fine powder and bolus is prepared out of it. This bolus and mentioned quantity of water is added to *Sesamum indicum* oil and heated till proper oil processing qualities are attained. After that vessel was taken out from the fire and the oil thus prepared was filtered through a cloth and was collected in a clean air tight container.

Study Population: Patients were selected from OPD and IPD of PG studies in

Panchakarma of Alva's Ayurveda Medical College & Hospital, Moodbidri. Medical camps and other referrals.

Sample size: 33 patients.

Selection of Patients: Patients with increased hair fall and other clinical features like breaking of hair, thinning of hair and roughness of hair willingly participated in the study. Determination of sample size was based on the prevalence of hair fall.

Study setting: The study was carried out in Alva's Ayurveda Medical College & Hospital, Moodbidri, Karnataka, from January 2012- January 2013.

Diagnostic Criteria: The patient will be diagnosed based on the following clinical features are breaking of hair, roughness of hair, thinning of hair, hair fall.

Inclusion criteria: Patients between age group of 18-40 years. Patients fulfilling diagnostic criteria selected for nasya karma irrespective of sex, occupation. Patient fit for nasya karma.

Exclusion criteria: Patients below the age of 18 and above the age of 40 years. Patients having Alopecia Areata, Alopecia Totalis, TineaCapitis, Dandruff, Traction Alopecia Patient suffering from any systemic illness.

Grouping: Group V: Vagbhatokta nasya vidhi (continuous stream of pouring). **Group C:** Charakokta nasya vidhi (drop by drop pouring)

Criteria of withdrawal: Due to the complications of atiyogalakshanas- viz rhinitis, headache, heaviness of head immediately after the treatment and due to personal inconvenience.

Technique of Data Collection: Patients are selected on the basis of gradings of hair fall hair fall less than 50 scored as 0. Hair fall between 51-70 scored as 1. Hair fall between

71 -90 scored as 2. Hair fall between 91-110 scored as 3. Hair fall more than 111 scored as 4. They were thoroughly interrogated, history and facts were noted in a specialized structured clinical proforma based on Ayurveda classical frame work. General vital information about the patient and family, source of information, chief complaints to know manifestations of hair fall, history of hair fall, history of past illness that precipitated hair fall, family history, personal history to get information on diet, appetite, bladder habits, bowel habits, allergies, addictions if any, exposure to abuse along with treatment history. Examinations included anthropometry, general physical examinations, systemic examinations with sroto pareeksha and dasahavidha pareeksha. Mechanical devices such as height weight scale, measuring tape, and thermometer were used as aids in collection of data.

Interventions:

Group V:

Drug :Bhringaraja taila

Dose : 8 bindu

Method of pouring: continuous stream of pouring

Follow up: Follow up on 15th, 22nd and 30th day.

Group C

Drug :Bhringaraja taila

Dose : 8 bindu

Method of pouring: drop by drop pouring

Follow up :Follow up on 15th, 22nd and 30th day.

Procedure:

Group V (According to VriddhaVagbhata)⁶

The nasal therapy was administered after all the urges were voided. Abhyanga with

murchitha tila taila was done only to vertex for 5 minutes. Mridu Bashpa sweda for head was done for 5- 10 minutes. Followed by prayogika dhumapana. Patient was made to lie in supine position and the head should be pralambita. Patient's eyes were covered with cotton pad.

Then 8 bindu of lukewarm bhringaraja taila was taken in nasyapranadi and then instilled into each nostril in a continuous stream (anavacchinna).

After administration of nasya, patient was advised to lie on supine position for about 2 minutes. Then the region of the ears, forehead, skin of scalp, cheeks, nape of the neck, shoulder, palms and soles was massaged. Patient was instructed to spit out kaphadi dosha into the kidney tray placed right and left side of the patient. Prayogika dhumapana, ushnajala kavalagraha was followed.

Group C(According to Charaka)⁷

The patient after voiding all the urges was made to lie comfortably in supine position and head should be extended. MriduBashpa sweda for head was done for 5- 10 minutes.

Then 8 bindu of lukewarm bhringaraja taila was taken in nasyapranadi (dropper) and instilled in pause (avacchinna).

Bashpa sweda was given over the head for 2-5 minutes. Patient was advised to spit out kaphadi dosha into the kidney tray placed right and left sides of the patient. Dhumapana followed. Later ushnajala kavalagraha given.

Assessment criteria: All the groups were assessed before, during, after the study on the basis of subjective parameters are breaking of hair, hair fall and objective parameters are by Norwood/ Hamilton scale⁸ for men, Ludwig scale⁹ for women.

Data analysis: Statistical evaluation of the data assessed on the basis of subjective and

objective criteria. Both the individual effect (using paired t test) and the comparative effect of nasya according to Vagbhata and Charaka (using t test) in subjective and objective parameters on 8th 15th 22nd and 30th day in Group V and Group C were computed. Finally the overall effect of the treatment and also the comparative effect of treatment between Group V and Group C were computed.

RESULTS:

A total of 33 patients participated in the clinical trial. 3 patients dropped out in the course of the study. It was found that the incidence was highest in the age group of 18-25 years constituting 40% of total numbers of patients. In the sample taken for the study, 60 % were females and 40 % were males. Majority of patients belonged to the middle class at 80%, 10% were in poor class and in rich class. Majority of 80% were unmarried

and remaining 20% were married. 76.6% of patients had negative and 23.3% had positive family history. Majority of the patients were consuming mixed diet with 60 % and 40 % were vegetarian. A majority of patients belonged to vata pitta prakruti i.e. 56.66% and 26.66% belonged to pitta kaphaprakruti and remaining 16.66% belongs to vata kapha prakruti. Among the 30 patients in the study, educational stress was the cause for the psychological stress in maximum number 46.66% of patients. The other psychological stressors which were observed were home sickness (30%), stressors in family(16.66%) and business/ service which account for about 10%. 90% of patients had chronicity of 6 months-1 year and 10% had chronicity of 1-2 years. In 80 % of the patients were gradual in onset of hair fall.

Table No.1: Effect of treatments in signs and symptoms on 8th day in group V

SIGNS& SYMPTOMS	MEAN		SD	SE	“t” VALUE	“P” VALUE
	BT	AT				
HAIR FALL	3.2667	3.267	0	0.4582	0.118	1.000
BREAKING OF HAIR	1.0000	1.000	0	0.000	0.000	1.000
PATTERN OF HAIR LOSS	1.8	1.8	0	0	0	1.000

The signs and symptoms like hair fall (P=1.000), breaking of hair (P=1.000) and pattern

of hair loss(P=1.000) showed statistically insignificant value.

Table No.2: Effect of treatments in signs and symptoms on 15th day in group V

SIGNS & SYMPTOMS	MEAN		SD	SE	“t” VALUE	“P” VALUE
	BT	15 th day				
HAIR FALL	3.2667	2.20	32.65	0.25820	0.06667	16.000
BREAKING OF HAIR	1.0000	0.7333	26.67	0.45774	0.11819	2.256

PATTERN OF HAIR LOSS	1.8	1.8	0	0	0	0	1.000
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The signs and symptoms like hair fall (P<0.001) highly statistically significant value whereas breaking of hair (P<0.05) showed statistically significant value and Pattern of hair loss (P=1.000) showed statistically insignificant value.

Table No.3: Effect of treatment in signs and symptoms on 22nd day in group V

SIGNS & SYMPTOMS	MEAN		SD	SE	“t” VALUE	“P” VALUE	
	BT	22 nd Day					
HAIR FALL	3.266	1.466	55.1	0.45774	0.11819	6.205	<0.001
BREAKING OF HAIR	1.000	0.400	60	0.48795	0.12599	2.646	<0.05
PATTERN OF HAIR LOSS	1.8	1.8	0	0	0	0	1.000

There is highly statistically significant change in signs and symptoms like hair fall (<0.001) whereas breaking of hair(P<0.05) showed statistically significant value and pattern of hair loss(P=1.000) showed statistically insignificant value. The “t” and “p” values of signs and symptoms are shown in above table.

Table No.4: Effect of treatment in signs and symptoms on 30th day in group V

SIGNS & SYMPTOMS	MEAN		SD	SE	“t” VALUE	“P” VALUE	
	BT	30 th day					
HAIR FALL	3.2667	0.6000	81.63	0.51640	0.13333	6.5	<0.001
BREAKING OF HAIR	1.0000	0.2667	73.33	0.35187	0.09085	2.702	<0.05
PATTERN OF HAIR LOSS	1.8	1.8	0	0	0	0	1.000

The signs and symptoms like hair fall(<0.001) whereas breaking of hair(P<0.05) showed statistically significant value and pattern of hair loss(P=1.000) showed statistically insignificant value.

Table No.5: Effect of treatments in signs and symptoms on 8th day in group C

SIGNS & SYMPTOMS	MEAN		SD	SE	“t” VALUE	“P” VALUE	
	BT	AT					
HAIR FALL	3.4667	3.4667	0	0.5160	0.1333	0.000	1.000

BREAKING OF HAIR	0.8000	0.8000	0	0.4140	0.1070	0.000	1.000
PATTERN OF HAIR LOSS	1.4	1.4	0	0	0	0	1.000

The signs and symptoms like hair fall (P=1.000), breaking of hair (P=1.000) and pattern of hair loss (P=1.000) showed statistically insignificant value.

Table No.6: Effect of treatments in signs and symptoms on 15th day in group C

SIGNS & SYMPTOMS	MEAN		(%)	SD	SE	“t” VALUE	“P” VALUE
	BT	15 th day					
HAIR FALL	3.4667	2.4000	30.76	0.25820	0.06667	16.000	<0.001
BREAKING OF HAIR	0.8000	0.5333	33.33	0.45774	0.11819	2.256	<0.05
PATTERN OF HAIR LOSS	1.4	1.4	0	0	0	0	1.000

The signs and symptoms like hair fall (P<0.001) highly statistically significant value whereas breaking of hair (P<0.05) showed statistically significant value and pattern of hair loss (P=1.000) showed statistically insignificant value.

Table No.7: Effect of treatments in signs and symptoms on 22nd day in group C

SIGNS & SYMPTOMS	MEAN		(%)	SD	SE	“t” VALUE	“P” VALUE
	BT	22 nd day					
HAIR FALL	3.4667	1.2000	65.3	0.5606	0.14475	8.290	<0.001
BREAKING OF HAIR	0.8000	0.1333	83.3	0.50709	0.13093	3.055	<0.01
PATTERN OF HAIR LOSS	1.4	1.4	0	0	0	0	1.000

There is highly significant statistical changes in hair fall (P<0.001) whereas breaking of hair (P<0.01) showed statistically significant value and pattern of hair loss (P=1.000) showed statistically insignificant value.

Table No.8: Effect of treatments in signs and symptoms on 30th day in group C

SIGNS & SYMPTOMS	MEAN		(%)	SD	SE	“t” VALUE	“P” VALUE
	BT	30 th Day					
HAIR FALL	3.4667	0.5333	84.61	0.48795	0.12599	5.292	<0.001
BREAKING OF HAIR	0.8000	0.0667	91.66	0.25820	0.06667	3.105	<0.01

PATTERN OF HAIR LOSS	1.4	1.4	0	0	0	0	1.000
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There is highly significant statistical changes in hair fall ($P < 0.001$) whereas breaking of hair ($P < 0.01$) showed statistically significant value

and pattern of hair loss ($P = 1.000$) showed statistically insignificant value as per the above table.

Table No. 9: Comparative effect of procedures in signs and Symptoms in group V & group C

SIGNS & SYMPTOMS	MEAN DIFFERENCE		STANDARD DEVIATION		“t” value	“p” value
	Group V	Group C	Group V	Group C		
HAIR FALL	2.66	2.93	0.487	0.248	1.871	0.072
BREAKING OF HAIR	0.800	1.000	0.414	0.534	1.145	0.2617
PATTERN OF HAIR LOSS	0	0	0	0	0.000	1.000

The mean difference of hair fall in group V (2.66) is less than (2.93) in group C, with a statistically insignificant change with $P = 0.072$.

C, with a statistically insignificant change with $P = 0.2617$.

The mean difference of breaking of hair in group V (0.800) is less than (1.000) in group

The mean difference of pattern of hair loss in group V (0) is equal to (0) in group C, with a statistically insignificant change with $P = 1.000$.

Table No. 10: Comparative effect of procedures in % of relief on 8th, 15th, 22nd & 30th day

SIGNS & SYMPTOMS	% RELIEF – GROUP V				% RELIEF – GROUP C			
	8 th	15 th	22 nd	30 th	8 th	15 th	22 nd	30 th
HAIR FALL	13.33	31.1	53.3	82.2	13.33	31.1	67.2	86.11
BREAKING OF HAIR	0	26.6	60	73.3	0	26.6	66.6	73.3
PATTERN OF HAIR LOSS	0	0	0	0	0	0	0	0

Overall effect of the treatment

The effect of group C and V are classified into four as mentioned in the chapter Clinical Study. Out of 30 patients, 10 (33.33%) got

good response > 61% relief, 18 (60 %) got moderate relief between 31% to 60%, 2 (6.66 %) in poor response between 1% to 30% and 0% in no response group.

Table No. 11: Total effect of the treatment

Effect of Therapy	Total	(%)
Good response (> 61%)	10	33.33
Moderately response (31 - 60 % Relief)	18	60
Poor response (1 - 30 % Relief)	02	6.66
No response (0% Relief)	00	00.0

Comparative effect of the treatment

While comparing the effect of both groups 4 patients (26.66%) from group V and 6 patients (40%) from group C got good response. 9 patients (60%) from group V and 9 (60%) patients from group C got moderate response. 2 patients (13.33%) from group V got poor response and group C there was not seen any poor response. Group V and group C there was not seen any no relief.

Table no. 12: Comparative effect of the treatment

Effect of Therapy	Group V	(%)	Group C	(%)
Good response (> 61%)	4	26.66	6	40
Moderately response (31 - 60 % Relief)	9	60	9	60
Poor response (1 - 30 % Relief)	2	13.33	0	0
No response (0% Relief)	0	00.0	0	0

Comparative results of Group V and Group C

While comparing the results of both groups, hair fall showed percentage of relief (81.63%) from group V and (84.61%) from group C.

Breaking of hair showed percentage of relief (73.33%) from group V and (91.66%) from group C. In pattern of hair loss there is no percentage of relief showed by both of the groups.

Table No.13: Comparative results of Group V and Group C

Characteristics	Group V			Group C		
	Mean score		% of relief	Mean score		% of relief
	BT	30 th day		BT	30 th day	
Hair fall	3.2667	0.600	81.63	3.466	0.533	84.61
Breaking of hairs	1.000	0.266	73.33	0.800	0.066	91.66
Pattern of hair loss	1.8	1.8	0	1.4	1.4	0

DISCUSSION:

The study has been planned with two mottoes, firstly to know the efficacy of two different classical methods of nasya administration which considered as an interventional treatment in khalitya and secondly to do the

standardization of bindu pramana of nasya. Ayurveda stresses on the role of pitta and vata in the production of khalitya. This disease may occur either independently or as a symptom of morbid asthidhatu. In this study the nidana, samprapti, rupa of khalitya has been described,

based upon the symptoms as well as on the practical observation made during the course of study.

Discussion on Vagbhatokta nasya vidhi:

From the present study, it was observed that the quantity of the oil needed was 25- 30 ml per day and for 7 days 175-210 ml of oil was needed. The duration of procedure is fixed to 5 minutes.

Quantity of bhringaraja taila and method of pouring:

Bhringaraja taila made lukewarm by keeping the dropper in hot water tub for 2-3 seconds. Then 8 bindu of lukewarm bhringaraja taila was taken in nasyapranadi and then instilled into each nostril in a continuous stream (anavacchinna).

Discussion On Charakokta nasya vidhi:SnehanaandMriduBashpa sweda :

Face and neck of the patient is massaged with lukewarm moorchita tila taila for 15 -20 minutes. Then mriduBashpa sweda for face will be done for 5- 10 minutes. Bashpa sweda again done after giving nasya with bhringaraja taila by using towel dipped in hot water for 2- 5 minutes.

Quantity of bhringaraja taila and method of pouring :

Bhringaraja taila made lukewarm by keeping the dropper in hot water tub for 2-3 seconds. Then 8 bindu of lukewarm bhringaraja taila was taken in nasyapranadi and then instilled into each nostril in pause (avacchinna).

Discussion on the standardization of bindu pramana :

Dose is a very important factor in any of the panchakarma procedures to get optimum efficacy of the therapy. Change in dose can change the result and it can lead to side effects or no effects. Ayurveda is having its own standards such as prasruta pramana in case of basti. Anguli pramana for measurements of body parts, Anjalee pramana

for measuring the quantity of body fluids etc. Similar way, bindu is the unit of measurement defined for the dravadravya to be used in nasya. The term bindu was first coined by Sushruta in the context of dose of snehanasya Except Charaka all other aacharyas used the word bindu as the unit of measurement for any medicine in liquid form used for nasya.

Definition of bindu: Bindu¹⁰ is the unit of measurement and defined as the quantity of Drava (Sneha, Swarasa, Kashaya etc.) that dribbles down when the first two parts of index finger are dipped into it and taken out. Comment on this by Hemadri¹¹ proves beyond doubt that not just the first drop is one Bindu, but it is the total quantity dribbling down from the index finger when immersed in the liquid should be considered as one Bindu. The dosage of pratimarsha is two drops of oil, in each of the nostrils. Drops is the quantity which falls at one stretch from the index finger after dipping it upto its two ridges and taken out. 8 such drops are called 1 Shana (2.5 ml) which is the dose of marsa. Inpratimarsa it is of two drops. For all patients quantity of one bindu may not be the same and also according to the dravadravya it may vary because of difference in viscosity. A pilot study was conducted in 50 samples to assess the quantity of one bindu of oil (bhringaraja taila), between age group of 18-40 years, irrespective of sex, height, weight and dimensions of index finger

Probable mode of action of study drug: The ingredients of bhringaraja taila are having madhura, katu, tikta, and kashaya rasa; Guru, laghu, snigdha, ruksha and tikshna guna, whereas katu, madhura vipaka, tridosha-shamaka and kapha-pittashamaka property. The drugs are also having the other properties like keshya, rasayana and keshavardhana. The laghu and snigdha properties would act on the

vitiation of the kapha and vatadosha respectively whereas sheeta virya and madhura vipaka would act on pitta dosha. Ushnavirya would act on the vitiation of kapha and tikta rasa, sheetavirya and madhura vipaka would act on pitta dosha. The ushna virya and snigdhatva would aid in liquefying the dried kapha in the pores of the scalp locally clearing up the obstruction.

CONCLUSION:

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The study showed significant results and long term effects in the signs and symptoms of khalitya for both, Charakokta and Vagbhatokta nasya vidhi with bhringaraja taila. Statistically significant changes were observed in all the signs and symptoms like hair fall and breaking of hair while comparing both the groups (V and C). It was observed while doing the standardisation of bindu pramana that mean bindu is 0.23 ml.

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