



CLINICAL EVALUATION OF *BHRINGRAJ* CAPSULE AND OIL ALONG WITH *NASYA* IN THE MANAGEMENT OF *KHALITYA* W.S.R TO HAIR-FALL

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ABSTRACT

Hair shedding is part of a natural balance, where some hairs fall out while others grow in. When the balance between hair production and shedding is interrupted that is what we called, hair loss. It can be the result of heredity, hormonal changes, medical conditions or a normal part of ageing. Anyone can lose hair on their head, but it's more common in men. when we talk about Baldness, it typically refers to excessive hair loss from your scalp. Hereditary hair loss with age is the most common cause of baldness. As far as *Ayurveda* is considered, it is described there by the name of *Khalitya Roga* under the heading of *Kshudra Roga* or *Shiro Roga*. whensoever we talk about it, it is a completely progressing disorder which is found mostly in all those persons who are indulged in sedentary ways of life, stress-induced hectic schedules along with indiscriminate dietary habits which in turn can result in any disturbance in the body which in turn can directly reflect in the form of hair loss. In this article, we will see how We can reduce & manage this rising problem of hair fall through *Bhringraj* capsule and oil along with *Nasya*. For this study, 31 patients with diffuse hair loss were instructed to gently massage the *Bhringraj Taila* daily onto the entire area of the scalp. Response to the therapy was evaluated at the end of four weeks. Evaluation of efficacy was done on the basis of improvement in clinical symptoms like hair fall, dandruff, itching, dryness etc. The present study thus showed a significant reduction in hair fall, dandruff, itching etc. ($p < 0.001$). There were no adverse reactions, either reported or observed during the entire study period and overall compliance to the treatment was excellent. Finally at last, it was concluded that *Bhringraj Taila* was found to be effective in alleviating *Khalitya* along with a significant effect on associated

Keywords: *Khalitya*, *indralopa*, hair oil, *Nasya*, *Bhringraj*

INTRODUCTION

Hair fall has been described in almost all the Ayurvedic literature as *Khalitya*¹. It has been included in *Shiroroga* by *Acharya Charaka & Ashtanga hridayakar*. This inclusion has been done based on Shtana (location) of diseases and similarity of etiopathogenesis of diseases. It is mentioned in *Ashtanghridaya* that nine diseases occurring on the outer part of the head over the scalp should be called *shiroroga*. *Sushrut Samhita*, *Ashtanga Samgraha*, *Yoga Ratnakar* and *Madhav Nidan*, has included *Khalitya* diseases under *Kshudra Roga*. This inclusion in *Kshudra Roga* is due to the mildness of the disease. These diseases are not life-threatening and are of less severity in comparison to other major diseases. Pathogenesis of *Khalitya* stated by *Acharya Vagbhata* states that *pitta* present in hair follicles associated with *Vata* causes falling of hairs, afterwards *Kapha* and *Rakta Dosha* in that area block the hair follicle to prevent new hair growth². *Darunaka* is when the ground of hairs becomes hard, dry and rough due to aggravation of *Vata* and *Kapha Dosha* in scalp³. There is also falling of hairs, dryness itching and small cracks on the skin of scalp⁴.

MATERIAL AND METHODS

Ayurveda mentioned that the human body is made up of main seven *Dhatus* (body elements) viz. *Rasa*, *Rakta*, *Mansa*, *Meda*, *Asthi*, *Majja* and *Sukra*. The majority of *Acharyas* believe that the production of later *Dhatu* occurs from former *dhatu* by the function of their respective *Agni* i.e. the *Rasagni* turns the *Ahara Rasa* into *Rasa Dhatu* then *Raktagni* converts part of *Rasa Dhatu* in *Rakta* and so on. Along with the production of later *Dhatu*, there is side by side production of *Upadhatu & Mala* of former *Dhatu*. During this process of production of *Dhatus* when the metabolism of *Asthi Dhatu* occur by its *Agni & Majja Dhatu* emerges from the *Sara* part and at the same time hair of scalp & body and nails form as *Mala*. Gradual falling of hair is known as *Khalitya*. When *pitta* combines with *vata or kapha dosha* to destroy the hair, it is called *khalitya*. According to *acharya Sharngadhar*, Scalp and body hair are the *updhatu* of *Majja dhatu*⁵. Among all the *garbhaj bhava* (factors

for the development of foetus), hair is *pitraj bhava* means structure, colour and quantity of progeny are dependent on the paternal side⁶. Hair is made up of mainly *parthiva mahabhoota* (earth element). Hair formation starts during the sixth month of intrauterine life⁷. According to modern science, Hair can be defined as a modified epithelial structure formed as a result of keratinisation of germination cell⁸. Hair is an epidermal appendage that lies with the dermis. Every hair emerges from the hair follicles which resembles a slim pocket insides epidermis. Hair is present in every discipline of the epidermis beside the palm, sole and lips. Hair development undergoes a repetitive cycle. In the scalp, the hair growth cycle has three essential phases: Anagen, Catagen and Telogen. The anagen segment is a progress phase that most commonly lasts 3-5 years. One a healthy scalp, there are roughly 100000 hair & 90% of the follicles are consistently in the anagen segment of hair development. The Catagen stage follows this phase when the follicles begin to end up dormant which lasts for 2-3 weeks. The telogen stage is a dormant stage or resting interval that lasts 3-4 months. When this stage ends, hair falls out. That hair follicle then returns to the anagen stage & new hair begins to develop. In this way, the hair growth cycle continues. 50-60 hairs are lost per day in the normal hair growth cycle.

Causes of *Khalitya Roga*⁹- Due to *usna guna of pitta dosha* individual of *pitta Prakriti* starts hair fall and greying of hair earlier than individuals of other *doshas Prakriti*.

Approach to Patient of *Khalitya* - Hair fall can be manifested as a primary disease (as an independent disease) as well as secondary to other disorders or can be present as a symptom of many diseases. Because of its variable etiopathogenesis, we need a careful approach to the patients for proper diagnosis and treatment of hair fall (*khalitya*). Proper history should be taken including all the criteria like past medical history, family history and personal history along with other general & systemic examinations. The scalp & body should be carefully examined to detect any abnormality in the skin.

The total duration of the study was 28 days

Ingredient of bhringraj taila (Siddha Yoga Sangraha- S.Y.S)

Ingredient	Latin name/English name	Form used	Ratio
Bhringaraja	Eclipta alba	Expressed	4 Parts
Amla juice	Linn. Hassk.	Juice (whole plant)	1 Part
Brahmi juice			1 part
BASE OIL- Til Taila	sesame oil		2 parts
HERBS FOR KALKA (Paste)			
Haritki	Terminalia Chebula		0.4 part
Bibhitaki	Terminalia Bellirica		0.4 part
Amla	Emblica Officinalis		0.4 part
Nagarmotha	Cyprus Rotundus		0.4 part
Kachur	Curcuma zedoaria		0.4 part
Lodhra	Symplocos Racemosa		0.4 part
Manjistha	Rubia Cordifolia		0.4 part
Babchi	Psoralea Corylifolia		0.4 part
Lal chandan	Pterocarpus santalinus		0.4 part
Padmak	Prunus cerasoides		0.4 part
Anantamul	hemidesmus indicus		0.4 part
Mehndi	lawsonia inermis		0.4 part
Priyangu	callicarpa macrophylla		0.4 part
Mulethi	glycyrrhiza glabra		0.4 part
Jatamansi	nardostachys jatamansi		0.4 part
Kuth	saussurea lappa		0.4 part
Mandur	-		0.4 part

Medication Intervention

Bhringraj Taila was provided to each of the patients and instructed to apply every alternate day on the scalp [6 ml/application]. Instructions were also given to massage the scalp gently for 10 min after the application of hair oil. The patients were advised to use the oil in the morning. On the day of hair wash, they were advised to apply the oil after the bath. The total quantity of the oil was left to the usage practice of each patient. The total duration of the study was 28 days. Each patient was reviewed in the OPD once a week over the study period of 28 days. All patients were followed for 2 weeks to check their compliance with the treatment. Clinical assessment of scalp lesions was done objectively (by a doctor) and also subjectively (by the patient). Thorough scalp examination was done after completion of 1 week and at the end of the study.

The severity of the dandruff symptoms, itching, white scales and hair fall was recorded.

Assessment of Chief Complaints: -

Subjective assessment for the improvement in the severity of symptoms viz. dandruff, itching, dryness, stiffness of hair, perspiration and burning sensation in scalp was scored as,

- 1) Absent – 0,
- 2) Mild – 1,
- 3) Moderate - 2 and
- 4) Severe – 3.

For the presence of hair fall, the assessment criteria were,

- 1) No Hair Fall – 0,
- 2) Hair fall during combing the wet hair or after oiling the hair & combing – 1,
- 3) Hair fall during washing the hair and normal combing – 2 and

4) Hair falls without combing – 3.

Srotodushti was assessed as per the signs and symptoms mentioned by *Acharya Charaka* and incorporated in the clinical proforma. The predefined primary efficacy endpoints were a rapid clinical improvement and symptomatic control of the clinical condition. The predefined secondary safety endpoints for short- and long-term were assessed by incidence of adverse events and patient compliance to the therapy.

Statistical Analysis: - Statistical analysis was done according to intention-to-treat principles. The changes in various parameters from baseline values and the values after 4 weeks were evaluated by "Paired 't' Test". The minimum level of significance was fixed at a 99% confidence limit and a 2-sided p-value of several females was seen. This may be due to the short sample size. But the gravity of the problem in both the sexes cannot be denied.

- 1) More number of patients enrolled for the present trial were between the age group of 15 – 30 yrs (64.52 %).
- 2) Malnutrition, faulty dietary habits and stress are the main problems faced by this particular age group. These factors directly contribute to the *Rasavaha Sroto Dushti* leading to hair fall.
- 3) Further, *Lavana* and *Katu Rasa* dominated the dietary habits of maximum patients. Premature greying of hair and hair fall is attributed to excess consumption of *Lavana Rasa* (*Charaka Samhita*).
- 4) *Acharya Charaka* has mentioned that people of *Saurashtra* are habituated to excessive consumption of salty diet and suffer from *Khalitya, Palitya, Vali etc.* (*Charaka Samhita*)
- 5) As far as the vitiation of *Srotas* is concerned, *Rasavaha Dushti* was predominant followed by *Asthivaha* and *Swedovaha*. It is easily reflected from the pattern of lifestyle followed in the particular area (*Saurashtra*).
- 6) Hair is said to be the *Upadhatu* (*Sharangadhara Samhita*) as well as *Mala* (*Charaka Samhita*) of

Asthi Dhatu. Hair fall is mentioned as one of the symptoms of *Asthi Kshaya* (*Charaka Samhita*).

- 7) Therefore, these findings support the involvement of particular *Srotas* in the aetiology of hair fall. Hair fall was found in all patients followed by dryness and stiffness.
 - 8) Dandruff and itching were also found in 83.87 % of patients.
 - 9) Epidemiological data shows that dandruff is the leading cause of itching and hair fall (Diana DZ. et al.).
 - 10) Dandruff mostly occurs after puberty (between the ages of 20 and 30 years) and affects males more than females (Shimer A. et al.)
 - 11) In the present study maximum patients were from a particular age group and were males. Dandruff or Pityriasis simplex/ovale is often associated with other types of fungal infections (Gemmer CM. et al.).
 - 12) Associated complaints like local fungal infection (near neck, behind ears etc.), migraine, depression, diabetes and allergic conjunctivitis were also found in few patients. Migraine and depression indicate "*Chintyanaam Atichintanaata*". This is the mental etiological factor responsible for *Rasavaha Sroto Dushti* (*Charaka Samhita*).
- As far as the effect of hair oil is concerned on chief complaints, maximum relief was found in itching followed by dryness, stiffness, and hair fall. On applying student's 't' test for the results obtained, highly significant result on all cardinal symptoms was seen. Understanding the mode of action of Bhringraj Taila is a complex phenomenon. It may be due to the synergistic action of its constituent ingredients. Therefore, they are analyzed individually for the reason of their inclusion in this particular formulation. *Bhringaraja* has antibacterial (Karthikumar S. et al.) [20] and hair stabilizing properties (Thorat R. et al.) [31] I

Effect of Bhringraj Taila on the chief and associated complaints.

Symptom	Mean \pm SEM	% Change	't' value
Hair fall	2.19 \pm 0.13	87.17	17.37*
Dandruff	1.65 \pm 0.17	83.60	09.64*
Itching	1.58 \pm 0.18	98.00	08.58*
<i>Kesha Rukshatva</i> (dryness)	1.77 \pm 0.15	88.71	12.28*
<i>Kesha Kathinya</i> (hardness)	1.71 \pm 0.16	88.33	10.56*
<i>Keshabhomi Sweda</i> (sweating)	1.07 \pm 0.15	78.57	07.28*
<i>Keshabhomi Daha</i> (burning)	0.87 \pm 0.15	84.37	06.02

* P < 0.0801 (highly significant)

Effect of bhringraj Taila on hair fall:-

Terminalia chebula acts as a good source of antidandruff agents. *Terminalia bellerica* showed dose-dependent antidandruff activity. The aqueous extract of *Terminalia bellerica* exhibited a strong inhibition of 28 mm at 25 % concentration whereas the ethanolic extract showed a 25mm inhibition zone in the same concentration (Balakrishnan KP. et al.). Tannins present in *Triphala* possess the property of binding to proteins and even precipitating them. They even react with bacterial cell walls; counteract fungi by interfering with surface proteins. Due to slightly astringent taste, their use tightens the surface of the scalp and hair follicles, strengthening the follicles' grasp on each hair (Bele AA. et al.). Similarly, on phytochemical screening, antibacterial properties of leaves of *Pongamia pinnata* Linn. (Fabaceae) from India has been demonstrated (Arote SR. et al.). Petroleum ether extract of leaves and flowers of *Hibiscus rosa-sinensis* was evaluated for its potential on hair growth by in vivo and in vitro methods. In vivo, 1% extract of leaves and flowers in liquid paraffin was applied topically over the shaved skin of albino rats and monitored and assessed for 30 days. In vitro, the hair follicles from albino rat neonates were isolated and cultured in DMEM supplemented with 0.01 mg/ml petroleum ether extract of leaves and flowers. From the study, it was concluded that the leaf extract, when compared to flower extract, exhibits more potency on hair growth (Adhirajan N. et al.).

Nasya (nasal drop) – Everybody should take the nasal drop of "Anu tail" every year during the rainy, autumn and spring season when the sky is free from clouds.

Along with many other benefits, it prevents hair fall and also accelerates the growth of hair¹⁰. *Nasya* nourishes the srotas present above the clavicle including the hair follicles which strengthen the hair and reduce falling. *Snana* (taking bath) – *Acharya Sushruta* mention that the head and hair should not be washed with warm water or with very cold water¹¹. Pouring warm water overhead reduces the strength of hair & eyes.

DISCUSSION

Khalitya is a common but very challenging and capricious disease of the world population and can have a profound effect on physical and emotional state. *Viruddha Ahara*, *Pitta Vardhak Ahara Vihara*, *Abhishyandi Ahara*, a sedentary lifestyle increases *Pitta* and *Vata* which leads to *Khalitya*. *Ayurvedic* management for *Khalitya* is *Abhyang*, *Shodhan*, *Lepan*, *Nasya*, *Rasayana* therapies. *Abhyang Chikitsa*, especially with oil is best for *Vata Dosha Shaman*. *Abhyang* of oil, which is prepared by *Kapha*, *Pitta* and *Vatahar Dravyas* helps in *Vata Shaman* along with *Pitta* and *Kapha Shaman*. *Shirolepan Karma*, which is performed by *Vatahar*, *Pittahar* and *Kaphahar Dravyas* normalize *Vata*, *Pitta* and *Kapha Dosha* accordingly. *Shodhana* and *Nasya Karma* is a specialised therapy of *Ayurveda*. *Shodhana* is a procedure that takes out the *doshas* from the nearest route of its vitiation. *Rasayana* therapy has immune-modulators, antioxidant properties and rejuvenating action which is very beneficial for the hair fall caused by any chronic illness, premature ageing or nutrition deficiency.

CONCLUSION

Khalitya is a wicked disease that needs proper management. Some minor changes in lifestyle and dietary habits can prevent hair fall. Proper hair care life oiling, washing, protection from external factors like environment, chemicals, heating etc is important for preventing hair fall and keeping them healthy. Before starting treatment of hair fall, the physician should identify the cause and the first treatment should be *Nidanparivarjana* or management of that cause. Then after other therapies like *Abhyang*, *Lepana*, *Shodhan*, *Nasya*, *Rasayana* should be prescribed accordingly. In this way, we can treat the *Khalitya Roga* or hair fall effectively.

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