

# Role of Nasya in Treating Khalitya

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## Abstract

Hair fall is one of the commonly faced problems in individuals today. It can be due to various reasons like improper diet, lifestyle, mental stress, hormonal imbalance and also lack of knowledge or ignorance towards hair care techniques like Shirobhyanga, Ushnisha Dharan, Kshaurakarma, Snana (proper temperature of water and frequency) etc. Hair is a very crucial part of one's attire as it defines the appearance of the person and also adds on to the beauty of face. Though Khalitya is not a life-threatening disease, it can lead to stressful situations as less amount of hair on scalp leads to ugly appearance leading to loss of self-confidence. Initially the problem is ignored, many home remedies including using different branded shampoos, hair conditioners, hair oils, hair serum etc. are tried and later when there is no relief an expert is approached. Different Tailas are mentioned in Ayurveda Classics for treatment of Khalitya for Shirobhyanga and Nasya. Many treatment modalities like Shodhan, Shirobhyanga, Shirolepa, etc. are explained out of which Pratimarsha Nasya can be more acceptable by the society today as it is less time consuming, less stringent rules to follow, easily accepted and a simple procedure which can be performed by any individual even at home. Research available on this topic is scarce and therefore I am making a humble effort to contribute to this sphere.

## Keywords

Khalitya, Nasya, Pratimarsha, Taila

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## 1. Introduction

Beauty has been valued by society since time immemorial. The concept of beauty comprises of many factors and one of them is Kesha i.e. hair. Today, the world is full of glamour and glory. The concept of beauty is gaining more and more attention globally. In this competitive era, a smart personality is a need and there is a positive impact of good hair on personality. Hair is the mirror of healthy and unhealthy state of body. Good hair boosts oneself confidence and hair loss affect it negatively. And this problem has been given an industrial form by social media. After trying all sorts of different soaps, shampoos, oils, serums, branded salons, spas, a number of panicked people came to an Ayurvedic physician with a complaint of hair fall. Hair fall has become a burning issue, and all this is because of changing lifestyle, food, environment, stress, not taking proper care of hair etc.

In Ancient Ayurveda texts different hair care techniques are mentioned thus explaining the importance of hair even in that era. Though the description about the disease Khalitya i.e. falling of hair, is very short, it is mentioned in almost all the Ayurveda classics. Different treatment modalities like Shiroabhyanga, lepa, Nasya etc. are mentioned. In today's hasty life, A time-consuming procedure becomes very difficult. Looking at the present situation in society Pratimarsha Nasya would be a treatment choice for Khalitya. The procedure is easy to perform, less time-consuming and also inexpensive.

## 2. Literary Review

In the Chikitsa Sthan Adhyaya Trimarmiya Chikitsa, Charaka has described the aetiopathogenesis, line of treatment and various modalities for the treatment of disease Khalitya [1, 2]. Acharya Sushruta has elucidated Khalitya as a synonym of Indralupta and has described it under Kshudra Roga along with its pathogenesis in the Nidanasthana [3] and treatment in the Chikitsasthana [4]. In Ashtanga Samgraha, Maharishi Vriddha Vagbhata mentioned Khalitya under the heading of Kapalagata Roga and has also described its pathogenesis. Vriddha Vagbhata clearly mentions the difference between Khalitya and Indralupta for the first time. Especially the types of Khalitya along with symptoms and prognosis have been stated elaborately [5, 6].

Ashtanga Hridaya described Khalitya in Shirorog Vigyaniya Adhyay [7] and its Chikitsa in Shiroroga Pratisheda [8]. In Sharangadhara Samhita, Khalitya has been described under the heading of Shira Kapalagata Roga [9]. Bhavaprakasha has explained pathogenesis and treatment of Khalitya in Khsudraroga adhikara [10]. Acharya Chakradutta has described the disease Khalitya as Indralupta and its treatment has been given under the caption of Kshudraroga [11].

## 3. Discussion

### 3.1. Khalitya Hetu

According to Ashtang Hridaya [12] & Ashtang Samgraha [13] Smoke, Excessive exposure to Sun, Frost, Water sports, Excessive sleeping or awakening, taking steam in head region, exposure to eastern wind, controlling urge of cry or controlling tears, excessive crying, excessive intake of water and alcohol, worm infestations or infections, controlling natural urges, not using pillow, not following body detox procedures, hatred towards daily oil massage and head massage, watching or seeing down-

wards continuously, improper smell, poisonous food etc. Vatavardhak and srotorodhak Aahara and Vihara leads to shirorogas.

Charaka in Vimana Sthana has said that excessive use of Kshara leads to Khalitya or Kesha Upaghata. Khalitya, Palitya etc. are generally found in the region where Kshara are used in excessive quantity or on daily basis [14]. It has been mentioned that Viruddha Aahara like simultaneous intake of Lavana (salt) with milk in the diet, induces Khalitya. Thus, it can be said that a person habitual to excessive Lavana or Kshara intake and taking Viruddha Aahara in routine is prone to have Khalitya [15].

Savisha Shirobhyanga i.e. head massage, using oil having poisonous contents leads to Keshachyuti [16]. Head bath using hot water i.e. Ushnambu Snana leads to Hair fall [17]. Improper hair maintenance like improper hairstyle, combing, haircut etc. can lead to Keshapatan. Proper hair grooming is told to have nutritive properties for hair [18].

**Table 1.** Types of Khalitya [19].

Types of Khalitya	Kesha Bhumi Appearance
Vataja	Aganidagdhasaman (Appear like burn skin), Shyava, Aruna Varna (blackish in colour)
Pittaja	Neela Harita verna, Siravyapta (surrounded by veins), Swedukta (sweat all over the scalp)
Kaphaja	Ghana(thickened), Swetabha (whitish in colour), Snigdha(oily)
Sannipataja	Nakhaprabha (scalp looks like bears nail), Daha (burning sensation), Kesharahita

### 3.2. Khalitya samprapti

According to Acharya Charaka, Teja with help of Vatadi Dosha's scorches the scalp and produces Khalati in a person [20]. Chakrapani interprets the word Teja in two ways, while commenting on this topic, one is Dehoshma (body temperature) or Dehagni - Pachaka Pitta and the other is Pitta situated in scalp. Thus, according to Acharya Charaka Dehoshma along with Vatadi (Vata, Pitta, and Kapha) Dosha causes Khalitya.

Acharya Sushruta reads Samprapti of Khalitya as above "The Pitta, provoked by its own factors penetrates into the Romakooopa and there it unites with the Vata and disturbs the hair growing process. Then the Shleshma along with the Shonita creates an obstruction in the Romakooopa, so as to prevent the growth of new hair from that place [21]. Thus, Acharya Sushruta has considered the involvement of all the three Dosha's viz. Vata, Pitta and Kapha along with Shonita in the occurrence of Khalitya.

The line of treatment of Khalitya mentioned by different Acharya is as under:

Acharya Charaka says that after adequate Samshodhana patient of Khalitya should be subjected to Nasya, massage of oil and Shirolepa [22]. Ashtanga Samgrahakara advises to adopt regimens of Indralupta and Palitya in Khalitya along with administration of Samshodhana as per Dosha. He adds further that the Sira nearer the site of disease should be opened successively and different Pralepa should be applied. He suggests another method for the Raktamokshana by scratching of the scalp either by Suchi, Kurchika or by rough leaves before application of Lepa.

The common management can be divided as following

- Abhyanga
- Lepa
- Shodhan
- Nasya
- Rasayan and Keshya Dravya Abhyantar Prayog



According to all prominent Acharya's Nasa is said to be the gateway of Shira. It does not mean that any anatomical channel connects nose directly to the brain, but they might be connected pharmaco-dynamically through blood vessels, lymphatics or through nervous system (olfactory nerve etc.).

Sushruta has clarified Shringataka Marma as a Sira Marma formed by the union of Siras (blood vessels) supplying to nose, ear, eye and tongue. It has been further pointed out that injury to this Marma may be fatal immediately. Commentator Indu of Ashtanga Samgraha opined Shringataka as the inner side of middle part of the head i.e. Shiraso Antarmadhyam.

Nasya is the method of administering medicine through the nose for either pacifying or cleansing or strengthening the structures of the upper part of the body especially above the shoulder. This procedure can be served with the variety of medicines used or by changing the dose of administrator.

Since four sense organs are confined to the head and functions of them are attributed to Vata, it is important to see that the head is kept healthier always. Healthy Kapha in another word means the structure remains sufficient unctuous (Snigdha). If it is decreased i.e. dryness is more dominant, it will result in restricted movement of Vayu leading to diseases. Hence it is imperative to see that we maintain the healthy Snigdha content especially in the head. Nose being an open Srotas connection with other three opening. Nasyam became important in inducing Snigdha medicine into the body. It can create clarity of structure (pure Snigdha) to ensure that the Vayu movement is smooth (Indriya Prasadana).

**Table 2.** Classification of Nasya.

Sr. No.	Acharya	Reference	Classification
1	Charaka	Cha. Si 9/52	According to mode of action: Rechana, Tarpana, Shamana
2	Charaka	Cha. Si. 9/89	According to the method of administration: Navana, Avapidana, Dhmapana, Dhuma, Pratimarsha
3	Charaka	Cha. Vi. 8/151	According to various parts of drugs utilized: Phala, Patra, Mula, Kanda, Pushpa, Niriyasa, Twak
4	Sushruta	Su.Chi.40/21	Shirovirechana, Pradhamana, Avapidana, Pratimarsha
5	Vagbhata	A.H.Su.20/2	Virechana, Brimhana, Shamana
6	Kashyapa	Ka.Si. Cha. 2 & 4	Brimhana, Karshana in chapter 2 and Shodana, Poorana in chapter 4
7	Sharangdhara	Sha. Utt. Kh, 8/2	Rechana, Snehana

### 3.3. Indication of Nasya [23]

Shirostambha, Gadgadatva, Ardhavabhedaka, Vakgraha, Shirah Shoola, Grivaroga, Akshishoola, Swarabheda, Shukra Roga, Netragata, Galashundika, Raji-Netra Roga, Galashaluka, Timira, Galaganda, Vartmaroga, Upajihvika, Pinasa, Manyastambha, Nasa Shoola, Ardita, Danta Stambha, Apatantraka, Danta Shoola, Apatanaka, Danta Harsha, Khalitya, Karnashoola, Danta Chala, Arbuda, Hanugraha, Skandharoga, Mukharoga, Ansa Shoola.

### 3.4. Mode of Action of Nasya

In Ashtanga Sangraha, Nasa being the gateway to Shira the drug administered through nostrils reaches Shringataka (a Sira Marma by Nasa Srotas) spreads in the Murdha (brain) taking Marma of Netra (eye), Shrotra (ear), Kantha (throat), Shiramukhas (opening of the vessels, etc.). It provides nutrition to the organs located in the Urdhwjatrugata region and expels the Doshas from Uttamanga [24].

Sushruta has clarified Shringataka Marma as a Sira Marma formed by the union of Siras (blood vessels) supplying to nose, ear, eye and tongue. It has been further pointed out that injury to this Marma may be fatal immediately [25].

It is an experimentally proven fact that where any type of irritation takes place in any part of the body, the local blood circulation is always increased. This is the result of the natural protection function of the body. So extra accumulated morbid Doshas are expelled out from small blood vessels and ultimately these morbid Doshas are thrown out by nasal discharge, tears and by salivation.

The nose is used as a route of drug administration for inhalation of anesthetic materials and certain decongestants for paranasal sinusitis. Anterior pituitary hormone nasal sprays are in practice with the modern medical system. Nasal administrations of luteinizing hormone (Fink G. et al 1973) and calcitonin (Pontrioli E.A. et al, 1983) are found to be equally effective as intravenous infusions in maintaining blood concentrations.

An LRH agonist nasal administration for 3-6 months was observed to be effective in inhibiting ovulation as a contraceptive measure (Beraust et al, 1979). The drugs are mostly believed in these cases to be absorbed through nasal and pharyngeal mucosa. Hypoglycemic effects of insulin and hyperglycemic effects of glucagons hormone are confirmed by intranasal administration in normal and in diabetic patients (Pontrioli E.A. et al, 1983).

Intranasal gonadotropin hormone releasing hormone has been therapeutically recommended in stimulating luteinizing hormone secretion in cryptorchid boys i.e. having undescended testis (Raifer J. et al, 1985). Scientist of the institute of medical sciences Delhi have proved after experiments that the drug administered through nose shows effective action on the brain, so it can be said that there is very close relation between Shirah and Nasa (nose).

Thus, to understand the pathways of Nasya drug (classical errhine) acting on the central nervous system, it is important to go in details of the modus operandi of Nasyakarma. On the basis of fractional stages of the Nasya Karma procedures, we can draw certain rational issue that is as follows:

#### 3.4.1. Effect on Neurovascular Junction

The lowering of the head, elevation of lower extremities and fomentation of face, seem to have an impact on blood circulation of the head and face. As the efferent vasodilator nerves are spread out on the superficial surface of the face, receive stimulation by fomentation and it may engender the increased blood flow to the brain, i.e. momentary hyperaemia. It has been approximately calculated that 22% of total dilatation of cerebral capillaries, caused by the facial efferent stimulation will lead to 150% blood in flow (Chatterjee 1980). It is also possible that the fall of arterial pressure due to vasodilation may have been encountered with Cushing's reaction. In which, when the ratio between the C.S.F. pressure and cerebral arterial pressure has reduced, the increased C.S.F. pressure tends to compress the arteries in brain causing a transient ischemia in the brain. By this, the aroused "ischemic response" will subsequently raise the arterial pressure (Cushing). This act convinces us more of "Slush" created in intracranial space, probably forcing more transfusion of fluids into the brain tissue. Probably this may be the explanation for the benzyl penicillin like drugs, which do not attain a therapeutic level in the brain in normal conditions, found to be effective during the inflammatory conditions of meninges (Gillman and Goodman 1980). In this ground, we can state the modus operandi of Nasya Karma has a definite impact on central neurovascular system and likely lower the blood brain barrier to enable certain drug absorption in the brain tissue.

#### 3.4.2. Effect at Neuro-Endocrinal Level

The peripheral olfactory nerves are chemoreceptors in nature. This olfactory nerve differs from other cranial nerves, except optic nerve, in its nature. It is phylogenetically closely related to the brain. Rather it should be considered as the fiber tracts of brain itself. (Brobeck 1980). There are adjacent nerves called terminal nerves that run along the olfactory nerves and their functions are unknown. (Hamilton 1966). However, it is known that these nerves are connected with limbic system of the brain including hypothalamus. This limbic system and hypothalamus have control over endocrine secretions. Moreover, hy-

hypothalamus is considered to be responsible for integrating the function of the endocrine system and the nervous system. It is known to have direct nervous connections with the posterior part of pituitary. In addition, hypothalamus is indirectly having connections with anterior lobe of pituitary through portal vessels which supplies blood to the gland, having previously ramified in the corpora mammillaria of the hypothalamus in animals is capable of inducing secretion in the anterior pituitary, and it is believed that the products of such hypothalamic are drained by the portal vessels into the anterior lobe. The experimental stimulation of olfactory nerves caused stimulation in certain cells of hypothalamus and amygdaloid complex, but the nature of the effects is not properly understood (Tonabe 1975). It is understood that just like primitive mammals, man also responds to the language of smell in the environments (B.S.M. 1980). Abraham and colleagues (1979) on their experimental studies have noticed that a more exposure to the smell of the Jasmine flower reduces the activity of mammary gland. If the fragrance could have the effect, it may be acting through impulses travelling via the olfactory pathways influencing hypothalamus which in turn, causes the inhibition effect through the pituitary (Abraham et al, 1979).

At this juncture we can grasp the humor behind the recommendation of Nasya by Ayurvedic Scholars in Pumsavana for changing the sex of the foetus. These drugs used for Pumsavana may be acting through the olfactory hypothalamo pituitary pathway.

### 3.4.3. Effect at Neuro-Psychological Levels

The adjacent nerves called terminal nerves that run along the olfactory are connected with limbic system of the brain including hypothalamus (Hamilton 1966). This limbic system is also concerned with behavioural aspect of human beings, besides control over endocrine secretions. Thus, certain drugs administered through nose may have an impact on immediate psychological functions by acting on limbic system through olfactory nerves. Such phenomena have been revealed in the work of Cowley et al, 1975. The work has been carried out on the effect of exposing people for a short period of time, to a known phenomenon. The investigations showed subjects reacting differently, in assessing men and women, in comparison with the Control State. People can also be influenced in their judgment by exposure to androsterone and a mixture of short chain fatty acids. These things certainly support the recommendation of Nasya made mentioned by Ayurvedic scholars for mental disorders like Apasmara and Unmada.

### 3.4.4. Effect on Drug Absorption and Transportation

Keeping the head in lowered position and retention of medicine in nasopharynx help in providing sufficient time for local drug absorption. Any liquid soluble substance has a greater chance for passive absorption directly through the cell of lining membrane. On other hand, massage and focal fomentation also enhances drug absorption (Fingl. 1980). The later course of drug transversion can occur in two ways. (I) by systemic circulation (II) Direct pooling into the intracranial region. The second way is more of interest in our present study. This direct transportation can be assumed again in two paths, viz. (a) By vascular path, (b) Lymphatic path. Vascular path transportation is possible through the pooling of nasal venal blood to the facial vein, which naturally occurs. Just at the opposite entrance the inferior ophthalmic veins also pool into the facial vein. Interestingly, both facial and ophthalmic veins have no venal valves in between. So that, blood may drain on either side, that is to say the blood from facial vein can enter cavernous venous sinus of the brain in reverse direction. Thus, such a pooling of blood from nasal veins to venous sinuses of the brain is more likely in the head-lowered position due to gravity. On this line, the absorption of drug materials into meninges and related parts of intracranial organs is worth considering point. Moreover, modern scholars have noted that the infective thrombosis of the facial vein may lead to infection of the meninges easily through this path (Williams et al, 1971). Pooling of blood from paranasal sinuses is also possible in the same manner. Vagbhatta's notation of Shringataka Srotas (anterior cranial fossa) seems to be related to the above explanation.



Drug transportation by lymphatic path can reach direct into the C.S.F. it is known that the arachnoid matter sleeve is extended to the submucosal area of the nose along with olfactory nerve. Experiments have shown that the dye injected to arachnoid matter has caused coloration of nasal mucosa within seconds and vice versa also (Hamilton 1971).

Preliminary studies reported from AIM's Laboratories clearly showed that steroids enter the C.S.F. rapidly following their administration as a nasal spray. Surprisingly their level in the C.S.F. was found to be much higher as compared with systemic injections (Kumar et al, 1979). Here it may be worthy to recall Sushruta's quotation that the excessive administration of Virechana Nasya (eliminative errhine) may cause oozing of Mastulunga (C.S.F.) into the nose. On this basis, we may say that ancient scholars of Ayurveda were aware of the lymphatic path in direct absorption into the brain from nose.

#### 4. Conclusion

In present era hair fall is one of the common complaints in population including young men and women. Due to an increase in awareness of harmful effects of chemicals used in cosmetic products most of the population is turning towards herbal and natural cures for hair fall. Nasya is a simple procedure of instilling a few drops of oil in the nostrils, it is not time consuming and can be performed easily in today's hectic lifestyle. Research available on this topic is also scarce.

For the Nasya karma remedies Taila preparations with various drugs are described: When tail is prepared by the Taila Paka Vidhi according to "Sanskaro Hi Gunantaradhanam" their individual properties emerges into each other. Whereas this Tail when administered as Nasya would act as a Shirovyadhishamaka, which is the Prabhava of Nasya as described in the effects of Nasya. Moreover, Nasya would help in the internal correction of the Dosha working locally by their position in the scalp and nutrition to the roots of the hair would avert hairfall. The obstruction of Srotas will clear by the Sukshma Guna, which affects the growth of new hair. Regarding this, many references have been found for the use of Taila in daily routine.

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