

SAUNDARYA VARDHANAM THROUGH: EYEBROW HAIR GROWTH

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INTRODUCTION

Eyebrows are the single most important feature on every one's face. *Eyebrows bring dramatic attention to eyes, nose, lips, chin, and forehead whether they are perfectly shaped or not.* Having eyebrows that perfectly frame facial profile and structures, can vividly improve the appearance. Thick eyebrows have always in demand in modern era. Many people end up with eye brows that are too thin just because of – prolonged use of chemical containing cosmetics, nutritional deficiency, harmful beauty procedures, some medical conditions and normal aging process. But with the help of our Ayurvedic system of medicine, we can easily overcome on this problem; These type of cases are very frequently come in our practise and also this subject may give very golden opportunity to present pharmaceutical industries or even research scholars to develop some latest *inventory products*. In present study i am trying to deal with the whole aspect which are related to eyebrows.

ANATOMY OF EYEBROWS

The eyebrows are two-arched eminences of skin situated above the orbital regions¹. The hairs of the eyebrows are short, thick and stiff and are set obliquely². The diameter of eyebrow hair is normally thinner than scalp hair in Asians, and the scalp hair is thinner in Caucasians³. The eyebrows can be roughly divided into three parts. The medial third is usually below the orbital margin with the hairs in this region oriented vertically. The middle third lies along the orbital margin with hairs oriented obliquely or horizontally. The lateral third usually lies above the orbital margin¹. Eyebrow hair normally tends to be less dense laterally than medially; thus, hair loss from any cause is apt to be more obvious in the lateral portion⁴.

The fibers of the orbicularis oculi, corrugators, and frontal part of the occipito frontalis are inserted into the dermis of the skin underlying the eyebrows. This helps in changing the contour of the eyebrows and consequently facial expression⁵.

FUNCTIONS OF EYEBROWS

Recent research, however, suggests that eyebrows in humans developed as a means of communication and that this is their primary function. Humans developed a smooth forehead with visible, hairy eyebrows capable of a wide range of movement which are able to express a wide range of subtle emotions – including recognition and sympathy^{6,7}.

Eyebrows protect the eyes from sweat that trickles down the forehead. They also protect the bony ridges above the eyes. In addition to the above, the eyebrows play a very important function in facial expression and body language. Eyelashes protect the eyeball from small foreign bodies and irritants and stimulate the closing reflex. Both eyebrows and eyelashes play a very important cosmetic function, and thus contribute greatly to the self esteem of an individual.

COSMETICALLY MODIFICATION OF EYEBROWS

These methods have been invented to alter the look of one's eyebrows, whether the goal is to add or remove hair, change the colour, or change the position of the eyebrow. Fashion in eyebrow shape has regularly changed throughout the ages but eyebrows have always featured heavily in female fashion⁸. Brushes, shaders, pencils are oftenly used to make it better appearance. For extra darkening ,permanent dye, colour, eye shadows are used. To achieve beautiful shape, there is multiple option

like,threading,waxing,tweezing and now a days eyebrow transplant,tattooing is also invented.

An eyebrow lift is a cosmetic surgery to raise the eyebrow, usually to create a more feminine or youthful appearance. It is not a new phenomenon, with the earliest description of brow lifting published in medical literature in 1919 by French surgeon Dr Raymond Passot⁹. Brows can be affected during a face lift or an eye lift. In the seventies, doctors started injecting patients' eyebrows with botox or similar toxins to temporarily paralyse the muscles to raise the eyebrow¹⁰.

CAUSES OF EYEBROW HAIR FALL

Women dream of dark, thick eyebrows that give them enigmatic and mysterious damsel look. For some, eyebrow hair is scarce and thin that makes them look a little less attractive. It must be understood that hair growth rate is different in each person and depends on the genetics and hormonal levels in the body. Eye brow hair loss, i.e. eyebrow hypotrichosis/eyebrow madarosis (Madarosis is a term which was originally coined to denote loss of eyelashes due to destruction of hair follicles, but now encompasses the loss of cilia of both eyelashes and eyebrows¹¹; can cause a person to notice thinning hair or missing patches of hair in their eyebrows). In this section I'll discuss about these causes of eyebrow hair loss-

1. HORMONAL IMBALANCE-

Hair follicle activity is affected in pathologic states such as hypothyroidism or hyperthyroidism. Changes of hair growth and hair structure may be the first clinical sign of thyroid hormone disturbance, as a result of influence on the cell cycle kinetics of the hair follicle cells. In hyperthyroidism hair changes include thinning, breaking, shortening of hair and patchy area of hair loss.

2. AUTOIMMUNE CONDITIONS-

It can occur in association with Alopecia areata, DLE (Discoid lupus erythematosus) etc.

3. DERMATOLOGICAL CONDITIONS-

- Eczema-atopic dermatitis, contact dermatitis
- Keratinising conditions – ichthyosis
- Psoriasis
- Lichen planus, pemphigus, acne etc.

4. NUTRITIONAL DEFICIENCY-

- Hypoproteinemia
- Iron deficiency
- Zinc deficiency
- Biotin deficiency

5. INFECTIONS-

- Leprosy
- Syphilis
- Herpes
- HIV

6. DRUGS-

Chemotherapy, valproic acid, barbiturates, antithyroid medications, anticoagulants etc

7. NORMAL AGING PROCESS

IN OUR AYURVEDIC ASPECT-

- ✓ Ayurveda explains falling out of hair from its surface due to vitiation of vata mainly. Eyebrow hairfall may come under the condition known as *PAKSHMASHATA*; which has been explained by acharya Vagbhata¹². Because

PAKSHMA –roma/hair *SHATA*- to falls down

In this condition, eyelid and eyelashes are afflicted by vitiated pitta consequentially leading to the loss of falling down of eye lashes from eyelids. So like this condition eyebrow hair fall also comes under this condition.

- ✓ *KHALITYA* another disease explained by legends acharyas of ayurveda.

Romakupagata / keshmulagata vitiated pitta (bhrajaka pitta) along with vitiated vata leads to dislodgement or withering of the hair from the hair roots. Further to this, vitiated shleshma / kapha along with rakta will cover and causes obstruction to the hair root, which results in no further hair growth from that place¹³.

Khalitya is primarily a Pitta predominant tridoshajanya vyadhi (all three doshas vitiated disease). But based on the predominance of dosha, is divided into following types.

1. Vataja Khalitya : In this type, Keshbhoomi or scalp appears as if it is Agnidagdha and it becomes Shyava and Aruna.
2. Pittaja Khalitya : In this type the colour of scalp appears as Peeta, Neela and Harita. The scalp is surrounded by the Siras (veins). Sweat may be found all over scalp.
3. Kaphaja Khalitya : In this type, the colour of the scalp is more or less same as the colour of skin but here it is Ghana and Snigdha in appearance and the colour tends towards whitish tinge.
4. Sannipataja or Tridoshaja Khalitya : In this type of Khalitya, characteristic of all the three Doshas are observed. The scalp looks like burnt and it bears nail like appearance.



DIAGNOSIS

We can use a range of tests to determine why a person is experiencing eyebrow hair loss. We will first ask about symptoms, symptom duration, and any family history of hair loss conditions. They may also ask about diet and additional factors. (*darshana, sparshana, prashna*)¹⁴. The doctor

examines the patient physically and checks the scalp, eyebrows and eyelids as well as facial skin. The tests done for the same include skin, skin scrapping for fungal infection diagnosis, skin swab for bacterial infections diagnosis, dermoscopy for skin examination with the help of a magnifier as well as blood tests.

MANAGEMENT

1. WHAT OUR AYURVEDA CAN BE DONE-

- ✓ Rom koop vikuttana (using sterile needle the pore of hair follicle should be deep dug into and the blood should be let out). Jalauka avcharana, vamana, nasya, lepam; these are given in the text of vagbhata utara tantra for the treatment of pakhmashata¹⁵.
- ✓ Ayurveda seeks to cure hair loss in a more holistic manner. The therapy is based on addressing the causes behind hair loss directly. So, metabolic disturbances among various bio-chemicals, including hormones, which lead to hair loss, are corrected. Treatment for hair loss is aimed at pacification of Pitta through a customized diet and lifestyle regime, along with medication. A combination of diet, herbs, oil massage, meditation, some processes, local applicator agents, breathing and yoga can be beneficial in addressing the problem of hair loss. In this section I will discuss about following points which are directly proportionate to growth of hair-
- **ABHYANGAM-** Massaging of the eyebrows is an effective way to nourish you hair. Rub lukewarm oil into your eyebrow daily at night to restore the moisture of your hair. This will also replenish the hair roots and provide them intense nourishment. You can massage with castor oil, almond, amla or olive oil. This process must be done with siro abhyangam/head massage to prevent dry scalp or dandruff, as dandruff is also responsible for eyebrow hair loss.
- **Nasya:** Nasya is the application of Ayurvedic medication through the nostrils.

It is regarded to have the most immediate effects on scalp and hair conditions. Nasya involves pouring Ayurvedic medicated oil through one nostril and letting it flow out of the other. In its travel through the nostrils, the oil reaches the membrane at the entrance of the brain and alerts the nerves that connect the brain to the hair follicle.

- **Shirodhara:** Shirodhara involves pouring a gentle yet continuous stream of warm, medicated Ayurvedic oil on the forehead. A typical shirodhara session lasts for half an hour. In some cases, the oil may also be replaced with herbal liquids. This rejuvenates hair follicles, here we may use sthanik dhara which is localised for eyebrows.
- **JALAUKA AVCHARAN-** Acharya Sushruta has already mentioned in his text that jalauka avcharana is keshya, i.e. from leech therapy; local affected pathology is subsided or decreased which directly helps to regeneration of new hair. Now a days many physician runs specially hair clinic with the help of jalauka therapy.
- **STHANIK LEPA-** Uses of many drugs like keshya, balya, jeevniya, rakta shodhak like neem, tulsi, mulethi, manjishtha, mulethi, bhrun graja etc also solve the problem.
- **Tail purana-** Soaking of oil like castor, almond, coconut, pyaz swarasa in a cotton and then apply over affected part; guna like sukshmatva, vikashi, anutva may give excellent response.
- **PATHYA VYAVASTHA-**
 - According to Ayurveda, hair is a bi-product of bone tissue formation. Since iron, calcium is essential for healthy bones, it is thus, also essential for healthy hair. Along with this, tonics and food that strengthen the liver and purify blood can also help treat scalp and hair conditions.
 - Strictly avoidance of constipation because as per our text every disease may start from udar.
 - The intake of greasy, oily and fried foods that are heat-generating,

acidic and tend to aggravate the *Pitta*, should be avoided. Thus, ayurveda physician recommend including cooling foods like asparagus, mint (*pudina*), coriander (*dhaniya*) leaves, cucumbers, sweet potatoes, bitter gourd (*karela*), green leafy vegetables, pineapple, cherries, yogurt and warm milk.

- Include protein-rich food like wheat, oats, barley, maize and brown rice in your diet. Kidney beans, black beans, chickpeas and green peas are other great sources of protein. Also, drink a lot of water as it not just keeps your skin healthy but also makes hair roots strong.
- **Manage Stress :** Stress is a major factor that leads to hair fall. It is advised to try meditation, yoga and breathing exercises.

➤ EYE BROWS CARE-

- Over plucking, waxing, excessive threading should be avoided.
- Continue use of eye makeup must be restricted.
- Limited use of brow pencil because it contains high chemical agents.
- Tattooing, piercing because they carry a lot of infections which may lead to weakness of hair follicle.

- **Healthy living :** For healthy living we all must follow the *ritucharya*, *dincharya* mentioned in our texts.

- Ensure that you get ample sleep as insufficient sleep may aggravate the problem.
- Refrain from smoking and alcohol as they aggravate the problem of hair loss.
- We must recommend that bowel movement should be regular to ensure that toxins are not retained within the body. These toxins are responsible for aggravating hair

loss. Thus, bowel cleansers are commonly recommended. Among these, *triphala* is the most recommended of all ayurvedic herbs.

- **AS PER MODERN SCIENCE-**
 - Minoxidil^{16,17} may be used in the topical treatment of eyebrow loss due to alopecia areata in the form of a 5% solution applied twice daily. Hair growth usually starts by 12 weeks, and it reaches its peak by about 12 months. Some times surgical procedure is done.



DISCUSSION

Eyebrows are the focal point of your face, that's why everyone wants a look with abundant of confidence, smart, attractive personality; to fulfill this purpose eyebrows play like foundation work. This may become latest innovative topic for research for all either scholar or industry. As SUSURUTA has mentioned *romsanjanana churna*¹⁸ in chikitsa sthana in which Hastidant masi and rasanjana both are mixed together and this compound having capacity to growth of hair even in palmer surface or in sole too. Also mentioned the mixture of ash of skin, nails, bones, hair, horn of quadruped animals having power to regeneration of hair; this type of formulas¹⁹ should have topic of interest for reaserch.

This subject has also topic of research for pharmaceutical industry to develop a kind of new innovative products like cream, serum, ointment, packs, oils, mask etc. for this aspect including use of NANOTECHNOLOGY for them. Tiny particles of any compound being insoluble can enter into the blood stream and are more biocompatible as compared to any chemically produced entity, a property similar to biologically

produced nano particles²⁰. Nano materials are finding there way in the form of drug carriers because of large surface area of materials & small size by which easily transported in to cells and nuclei and specificity to the target can be achieved as desired²¹. Nanotechnology may become a burning subject in emerging era for research, with the help of it we can develop a lot of innovative medicines.

CONCLUSION

Eyebrow is very important for human being specially for female, these are like mirror of their personality, that's why we may prevent from loss. Eyebrow hair fall is a clinical sign that has become pathognomonic of leprosy in countries like India. However, this apparently benign clinical sign has wider ramifications in many systemic and dermatological disorders. Hence, establishing a proper diagnosis and appropriate management is mandatory. Though management of the primary disease results in regrowth of eyebrows, which may require proper management.

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