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## *Jalaukavacharana* Boon for *Khalitya* with special reference to Alopecia - An Outlook

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### ABSTRACT:

Face is an important and first attracting part of our body. Any flaws related to face or appearance can create physical as well as psychological problems in an individual. In recent years there has been increase in the incidence of hair problems in the tropical and developing countries like India due to various factors like pollution, stress, chemical treatments and medications etc. Hair loss is often distressing and can have a significant effect on one's confidence. Hairfall termed as *khalitya* in *Ayurveda*. In *Ayurveda* it is mentioned under *Shiroroga* and *Kshudraroga*. *Khalitya* is commonly seen in the age group of 18- 40 years and most common in males than females. *Khalitya* is a slowly progressing disorder and it hampers the social life of an individual to a great extent. Now a days, *Khalitya* is mostly observed in youngsters due to their changing lifestyle, sleeping habits, unhealthy diets, stress and high use of chemicals on hairs. In *Ayurveda* there are number of medicines and oils which are beneficial for hair loss but it has been observed that medicine alone not able to give the visible results for hair fall. So to provide promising result application of *Panchakarma* like *Virechan*, *Raktamokshan* are helpful. Here special efforts have been made to show the beneficial sites of *Jalaukavacharana* in the form of *Raktamokshan*. Number of patients in kayachikitsa OPD of Sir Sundal Hospital, B.H.U were treated with *Jalauka* and got promising results in controlling hair fall. Thus the current article illustrates the role of *Jalaukavacharana* in hair fall.

**Keywords:** *Khalitya*, *Shiroroga*, *Panchakarma*, *Jalaukavacharana*.

### INTRODUCTION

Face is the mirror of our personality as we initially judge something by its appearance rather than its quantity and hair is an integral part of one's personality. In today's developing world there is lots of changes in lifestyle due to busy schedules including indifferent dietary habits and

sleeping habits, medication, stress along with constant uses of chemical added oils, shampoo and hair perfume causes severe damage to hair growth leads to hair fall. Hair fall is physiological phenomenon occurs after the mid-forties but if it's occur before the actual time period than it will be considered as major problem. Worldwide, millions of



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people suffering from hair loss nowadays among which 40% of men and 25% of women in India are sufferer from hair fall<sup>1</sup>. Infact due to bad lifestyle hair fall recently seen in youngsters as well<sup>2</sup>. On daily basis 70-100 hair loss is common<sup>3</sup> due to brushing and hair wash however more than 100 hair fall per day for longer time indicates alarming issue. Male is more susceptible than female for hair fall due to presence of an excessive quantity of androgenic hormone testosterone. In *Ayurveda* hair fall termed as *Khalitya*. According to *Acharya Charaka* and *Ashtanga hridaya*, it is included under *Shiroroga*<sup>4</sup> on the basis of location of disease while in *Susruta samhita*, *Ashtanga sangraha* and *Madav nidan* mentioned *khalitya* under *Kshudra roga*<sup>5</sup> because of not life threatening and less severity in comparison to other major diseases. In *Ayurvedic* literature, it has been mentioned that nail and hair are the *malas* of the *asthi dhatu* means nail & hair developed from *asthi dhatu*<sup>6</sup>. According *Susruta samhita*, *Pitta* along with *Vata* by involving the roots of hair (*Romakoopa*) causes fall of hairs and thereafter *Kapha* along with *Rakta* obstructs the channel of *Romakoopa* leading to the stoppage of the regeneration of the hair and this condition is known as *Indralupta*, *Khalitya* or *Ruhya*<sup>7</sup>. While *Acharya Charak* mentions that *Tejas* by involving *Vatadi Dosha* when scorches up the scalp, it results in *Khalati*. According to *Chakrapani* word *Tejas* here denotes *Dehoshma* as well as *Pitta Dosha*<sup>8</sup>. The etiological factors like *Atilavansevaen*, *Atiksharasevan*, *Viruddhahara*, *Avsaad*, *Atiatapsevan* etc are responsible for vitiation of *Doshas* which leads to hair fall. *Khalitya* mainly cause due to excess of *pitta dosha* in the body which increase with triggering factors like alcohol, smoking, tea, coffee, spicy and acid food and beverages. *Acharya Susruta* mention *Siravedhan* for *khalitya* as a procedure of *Raktamokshan*<sup>9</sup>. Out of the various *Raktamokshan* procedures, *Jalaukavacharana* is the safest and it is cold in nature so commonly used in *Raktaja* and *Pittaja* predominant *rogas*. *Khalitya* can be compared with Alopecia in modern terminology. Alopecia areata is a condition where there is hair fall in small patches, which can be unnoticeable for time being. These patches may connect, however, and then become noticeable. The condition develops when the immune system attacks the hair follicles, resulting in hair loss. Sudden hair loss may occur on the scalp and in some cases the eyebrows eyelashes and face as well as other parts of the body. The condition can result in total hair loss, called alopecia universalis and it can prevent hair from growing back. The most common form of alopecia areata treatment is the use of corticosteroids, powerful anti-

inflammatory drugs that can suppress the immune system. These are mostly commonly administered through local injections, topical ointment application, or orally. Other medications that can be prescribed that either promote hair growth or affect the immune system include Minoxidil, Anthralin, SADBE, and DPCP. These medications has serious side effects in long run while in *Ayurveda* there are number drugs, procedures mentioned for *khalitya* which are safe and cost effective to healthy hair and to cure hair loss problem.

## AIMS & OBJECTIVES

To analyze about *Khalitya* with special reference to Alopecia. To show the importance of *Jalaukavacharana* in the management of *Khalitya*.

## MATERIALS & METHODS:

**Material-** Relevant literature is referred in *samhitas*, *sangraha granthas* and contemporary literature along with personal experience from OPD and IPD.

**Methodology-** Rapid review study

Literature related to the title is explored from all reliable *Ayurvedic* and *Modern journals* from internet.

Conclusion has been drawn from systemic analysis, comparison and rationale.

## DISCUSSION

*Jalaukavacharana* is an *Ayurvedic* para surgical procedure mentioned in *Susruta samhita* practiced since 2 BC<sup>10</sup>. In *Susruta samhita*, a whole chapter has been dedicated to *Jalaukavacharana*<sup>11</sup>. It is a painless minimal invasive technique of *Raktamokshan* (controlled bloodletting). *Jalauka* is mainly collected during *Sharad Ritu* and it has divided into two groups of each 6 in number on the basis of the nature i.e. *Savisha* (poisonous) and *Nirvisha* (Non – poisonous)<sup>12</sup>. *Jalauka* is mostly *pittaghna* and *madhura*<sup>13</sup> in nature. Globally, *Jalaukavacharan* gained popularity due to its therapeutic benefits. *Saliva of Leech* contains various biologically active compounds such as analgesic, anti-inflammatory, anaesthetic and antioxidative properties. It is estimated that approximately 100 therapeutic substances are present in leech saliva<sup>14</sup>.

### Components of Leech saliva and their action-

*Saliva of Leech* contains various bioactive components<sup>15</sup> such as

*Hirudin* – Prevents blood clotting by binding with thrombin.

Calin – Inhibits blood clotting by blocking the binding of Von Willebrand factor to collagen and also inhibits collagen –mediated platelet aggregation.

Apyrase – Prevent platelet aggregation by inhibition of adenosine triphosphate.

Tryptase inhibitor – Inhibits Proteolytic Enzymes of Host Mass Cells.

Destabilize – Dissolves the fibrin.

CarboxypeptidaseA Inhibitors: Increases At the bite site, the inflow of blood.

Hirustasin – Responsible for normal level of blood pressure by inhibiting the kallikrein.

Eglins – Anti- inflammatory substance, inhibits the activity of subtilisin, chymotrypsin, cathepsin, elastase, chymase.

Bdellins – Anti- inflammatory and inhibit acrosin, trypsin, plasmin.

Histamine-like substance – Vasodilator, increase the inflow of blood at the bite site.

Hyaluronidase – Increase Interstitial Viscosity, Antibiotic.

Collagenase – Smooth the way for tissue penetration.

Acetylcholine–Vasodilator.

Factor Xa inhibitor – Inhibit the activity of Coagulation factor Xa – conversion of prothrombin to thrombin.

#### **Method of Jalaukavacharan-**

Every *Panchakarma* treatment including *Raktamokshan* involves three stages: *Purva Karma* (pre-treatment), *Pradhana Karma* (main-treatment) and *Paschat Karma* (post-treatment).

#### **Purva Karma (Pre-Procedure Protocols) —**

1) *Snehana* (oleation) and *Swedana* (sudation) to the patient prior to *Jalaukavacharan*.

2) To clean the leech with mixture of mustard and turmeric paste in water.

3) Patient preparation- Cleaning of the body part on which the leech is to be applied.

#### **Pradhana Karma (Main Procedure Protocols) –**

After cleaning the body parts, apply some *ghrita* or milk on the site to stick the *jalauka*, if they do not stick then blood may be applied or scratching may be done. The Leech is applied through its front end and wet white fine cloth covers the leech except for their mouth.

#### **Observation of leech during blood sucking -**

Middle portion of the body in leech appears elevated assuming the shape of a horseshoe<sup>16</sup> indicating that it sucks well. The sense of burning and tingling sensation at the bite spot. Pulsation can be noticeable on the body of the leech. Leech should be removed after 30-45 minutes, the leech may be removed by sprinkling common salt or by

adding turmeric powder into the leech mouth.

#### **Paschata Karma (Post Procedure Protocols) -**

Treatment of the wound, there is a triangular shaped wound caused by the mouth of the leech. Bleeding from the wound is checked with the help of *Yastimadhu churna* or turmeric powder by applying tight bandaging or *Satadhauta ghrita* can be applied to prevent bleeding and scarring.

In OPD and IPD of *kayachikta*, IMS BHU, there are number of patients mostly men around 20-32 years are coming with hair fall along with dandruff. Some were took modern medication as well but couldn't see visible benefits. *Jalauka* were applied for 4 times in consecutive weeks. After application of *Jalauka* in first seating patient felt lightness of head and sounds sleep at night while after second seating they get relief from dandruff with no itching and disappearance of white flakes. After third and fourth seating new tiny hair growths were seen and density of hair looks more than previous. Photographs were showing the last stage of blood sucking where leeches almost suck the blood and white cloth fell down due to the extension growth of the leech due to blood sucking. After *raktamokshan keshya* drugs like *bhringaraj churna*, *amlaki churna* and *til(sesamum) churna* is given with jaggery at a dose of 5gram together every morning after breakfast. *Pathya apathya* is advised to the patients for complete nutritional supports to hairs.

#### **Pathya- apathy for Khalitya-**

There is no clear cut description of *Pathyapathy* of *Khalitya* in *Samhitas*, but on the basis that the disease *Khalitya* is related to *Rakta Vikara* and predominance of *pitta dosha*, *Pathya* advised which are as follows : -

#### **Pathya Ahara :**

*Dhanya: Godhuma, Yava, Shali, Mudga*

*Shaka Varga: Jivanti, Kushmanda, Patol, Karavellaka, Tomato, onion, and Lauki etc.*

*Taila Varga: Tila Taila* and coconut oil for external and internal use.

Fruits: *Amlaki, Dadima, Narikel, Kadaliphala, Draksha* etc.

Others: Milk, sugar, honey etc. are advised.

#### **Pathya Vihara:**

*Shirasanana, Sarvangasana* and *Shirobhyanga* are good care for hair

#### **Apathya Ahara:**

Excess intake of *Lavana, Amla* and *Katu Rasa* and *Ksharasevana*.

Continuous use of fry diet, junk food, packed foods and beverages like tea, coffee and cold drinks.

Smoking and alcohol to be avoided.

**Apathya Vihara:**

Exposure to excessive sun light.

Night awakens.

Day sleep.

Altered sleep pattern.

Avoid tap water for hair wash.

**Mode of action of Jalaukavacharana-**

*Khalitya* is mainly caused by vitiated *pitta dosha* and *Jalaukavacharana* is done for removal of vitiated *pitta dosha* and impurities, toxins from the body through blood. It increases blood circulation around the area result in growth of new hairs. Because saliva of leech contains number of biologically active component like Hirudine, inhibitors of kallikrein, hyaluronidase, histamins like vasodilators, anti-inflammatory and anaesthetic agent. Leech sucks the blood by piercing into the skin and invade their biologically active components into the deep tissue. For tissue penetration Enzyme collagenase helps by smoothen the pathway. Hyaluronidase helps the penetration as well as diffusion of these pharmacologically active components into the tissues. So anti-inflammatory component like Bdelins, Eglins can easily penetrate to give significant effect on intra-articular and periarticular myofascial structures also on inflammatory condition of skin. Vasodilators increases in flow of blood<sup>17</sup>.

**CONCLUSION**

*Jalaukavacharana* is more convenient and easy para surgical procedure which eliminates the toxins from the blood stream. It is the best alternative therapy which can be apply for the treatment of *Khalitya*. It is relatively easy to learn and reduce the complication arising from the excessive use of synthetic drugs. *Jalaukavacharan* along with *keshya* drugs and proper diets showing promising results in hair loss. It is economical and cost effective therapy with no side effects. It has the potential to stop hair fall significantly. So we can say that it is great boon for patients of *Khalitya* (alopecia).

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Fig A



Fig B

**Fig 1- Application of *Jalaukavacharana* in *Khalitya***