

ROLE OF *JALAUKAVACHARANA* (LEECH THERAPY) IN COSMETOLOGY

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ABSTRACT

Jalaukavacharana is a boon to Ayurveda. It is one of the type of *Raktamokshana* (blood- letting) which is a procedure of *Panchakarma*. It is also known as Hirudotherapy or Leech therapy. Since ancient days, therapeutic use of *Jalaukavacharana* is practiced. In *Sushruta Samhita* there is separate chapter described on *Jalaukavacharana*. It is a simple and para surgical process. Cosmetological use of herbs is well defined in Ayurveda. The use of Leech therapy is also emphasized in various dermatological conditions in Ayurved texts. According to Ayurveda vitiated *Dosha* causes the disease. Leech therapy is useful to remove vitiated *Dosha*, mostly *Pitta Dosha* and cure the various diseases such as *Mukhadushika*, *Indralupta*, *Twak vikara*, *Sandhigatavata*, *Netraroga*, *Shiraroga* etc. During *Jalaukavacharana jalauka* imbibe the blood through the body and secrete various bioactive substance such as hirudin, antimicrobial, vasodilators, platelet aggregation inhibitors and anti-inflammatory agents; which provides nutrients and eliminate toxins. This therapy increases the blood circulation of that place and purifies the blood. Thus the current article illustrates the role of *Jalaukavacharana* in Cosmetology.

KEYWORDS: *Jalaukavacharana*, Leech therapy, *Raktamokshana*, Cosmetology, *Indralupta*, *Mukhadushika*.

INTRODUCTION

In *Ayurveda* Leech therapy is known as *Jalaukavacharana*. At the time of *Samudra Manthana* Lord *Dhanvantari* evolved in this world with *Jalauka*. Thus we can recognise the medicinal use of *Jalauka*. Everyone wants to be beautiful but it is not possible due to some barrier. This barrier may include skin problem such as *Mukhadushikha* (Acne Vulgaris), *Vali*

(wrinkles), Dry and itchy skin, Age spot, Sagging skin, Eczema, Psoriasis, etc. and hair problems such as *Indralupta* (Alopecia), *Palitya* (Greying of hair) etc.

In *Sushruta Samhita* various skin disease were explained under “*Kshudra Rogas*”, such as *Mukhadushika* (Acne Vulgaris), *Indralupta* (Alopecia) etc. This *Rogas* (diseases) are responsible for declined the beauty of ones face. *Mukhadushikha* (Acne Vulgaris) most commonly occurs in Adolescent age group. It influences the appearance as well as personality of that person. It doesn't cause any danger to life but can cause severe psychological condition as frustration, depression, anxiety, anger, low confidence etc. Approximately 80% of individual suffers from Acne Vulgaris.^[1] Alopecia most commonly occurs in people above the 20 years of age.^[2] Cosmetically everyone is more concern about their skin and hair so they try to obliterate these problems and invest their money in various expensive cosmetics. But unable to get probable result. We can easily overcome these with the help of *Jalaukavacharana*, a type of *Raktamokhana*.

Raktamokshana (bloodletting) has its own importance in *Ayurveda* to treat the disease and prevent the disease. It can be done by *Shringa*, *Alabu*, *Jalauka* and *Siravedha*.^[3] Out of this *Jalukavacharana* (Leech Therapy) is easy, secure and mild therapy of *Raktamokshana*. Leech sucks the blood and injects number of bioactive substance into the body which plays important role in curing disease. According to *Vagbhat Jalauka* is a *Anushashtra*.^[4] Thus Ayurvedic physicians using the Leech Therapy in numerous clinical and Para surgical condition to conquer cosmetological issue.

AIM AND OBJECTIVE

To Study the Role of *Jalaukavacharana* in Cosmetology.

MATERIALS AND METHOD

Data collected from various Ayurvedic text book, literature and Articles.

Sushruta has explained Collection, Storage, Feeding, Types and Application of *Jalauka* which is described in *Jalaukavacharana* Chapter.

Classification of *Jalauka*

On the basic of their nature *Jalauka* are divided into two groups i.e. *Savisha* (Poisonous) and *Nirvisha* (Non-poisonous) then each group has six subtypes.^[5]

Savisha Jalauka

- 1) *Krushna*
- 2) *Karbura*
- 3) *Alagarda*
- 4) *Indrayudha*
- 5) *Samudrika*
- 6) *Gochandana*^[6]

Nirvisha Jalauka

- 1) *Kapila*
- 2) *Pingala*
- 3) *Shankamukhi*
- 4) *Mushika*
- 5) *Pundarikamukhi*
- 6) *Savarika*^[7]

Guna of Jalauka – Madhura and Pittaghna^[8]

Time of collection – *Sharad Rutu*

Indication – *Jalaukavacharana* can be used in Following condition

Vidradhi (Abscess), *Gulma* (Abdominal swelling), *krostuka shirsha* (Infective Arthritis), *Netrarog* (eye disease), *Vidarika* (Crackle), *Kushta* (Skin disease), *Arsha* (Piles), *Vatarakta* (Gout), *Sandhigata roga* (Arthritis), *Kantharoga* (Goiter), *Granthi* (Nodular Swelling), *Vishadamashtra* (Insect bite), *Visharpa* (Erysipelas), *Arbuda* (Cancer), *Shiroroga* (Disease of scalp), *Shlipada* (Filaria).^[9]

Contraindication

Jalaukavacharana should be restricted in following condition

- *Sarvangashopha* (Generalised oedema)
- *ksheena* (Emaciation)
- *Pandu* (Anemia)
- *Garbhini* (Pregnancy)
- *Shosa* (Tuberculosis)
- *Udarroga* (Abdominal disease)^[10]

Components of Leech saliva and their action

Saliva of Leech contains various bioactive components

Hirudin – Prevents blood clotting by binding with thrombin

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

Collagenase – Smooth the way for tissue penetration

Acetylcholine–Vasodilator

Apyrase – Prevent platelet aggregation by inhibition of adenosine triphosphate.

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

Tryptase inhibitor – Inhibits Proteolytic Enzymes of Host Mass Cells.

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

Destabilize – Dissolves the fibrin

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

Hyaluronidase – Increase Interstitial Viscosity, Antibiotic

Factor Xa inhibitor – Inhibit the activity of Coagulation factor Xa – conversion of prothrombin to thrombin.^[11]

Mukhadushika – According to *Sushruta* vitiated *Kapha*, *Vata* and *Rakta* are responsible for *Mukhadushika* (Acne Vulgaris). These are *Shalmali* Thorn like eruption on face.^[12] Thus, deteriorating the beauty of one's face. Harmeet Kour et al. in their study proved that *Jalaukavacharana* helps in purification of blood and also maintains flow of blood in ones face, plays the cardinal role in minimising the sign and symptoms of *Mukhadushikha*.^[13]

Acharya Charaka, *Sushruta* and *Vagbhata* has explained the “*Kushta Vyadhi*”. *Kushta* world broadly used for almost all skin disease. The *Alpa Kushta* which is *Sthira*, *Kathina* and *Mandala*, at that time *Charakacharya* has explained the use of *Jalauka* for *Raktamokshana*.^[14]

Indralupta – Vitiated *Tridosha* i.e. *Vata*, *Pitta*, *Kapha* along with *Rakta* leads to *Indralupta* (Alopecia). It is also called *Khalitya*. Alopecia means Hair loss. Vitiated *Vata* along with *Pitta Dosha* causes the hair fall, after that vitiated *Rakta* and *Kapha Dosha* Blocks the *Romakupa* (opening of hair follicle) which stop the production of new hair.^[15] According to

modern science any destructive or inflammatory condition of scalp of skin may cause damage to hair follicle. Immune system mistakenly affects the hair follicle. Acharya *Sushruta* suggested the *Raktamokshana* (bloodletting) in *Indralupta* (Alopecia).^[16]

Palitya – *Pitta Dosha* vitiated due to *Krodha* (Anger), *Shoka* (Stress), *Shrama* (exercise) and moves towards *Shira Pradesh* (Head) thus causes *Palitya* (greying of hair).^[17]

In Modern Medicine number of Steroids and Antibiotics used to treat above problem which may cause serious side effect on body. *Raktamokshana* (bloodletting) is significant therapy available in *Ayurveda* to avoid this problem. It is a type of *Panchakarma*. It is one of the best treatments for vitiated *Pitta* and *Rakta*. Acharya *Sushruta* has told that a person who performs the *Raktamokshana* (bloodletting) periodically, unable to suffer with *Raktapradoshaja Rogas* (Blood disease) like *Twachavikar* (Skin disease), *Shopha* etc.^[18] *Jalaukavacharana* (Leech therapy) is mild and safe therapy of *Raktamokshana* (bloodletting). *Jalauka* imbibe the impure blood into affected area of body and inject some bioactive components at that place. Leech saliva contains *Hirudin* which inhibits the blood coagulation by binding to *Thrombin*, *Anti-inflammatory B-dellins*, and *Vasodilator Acetylcholine*, thus increases the blood flow of that place. *Jalaukavacharana* not only assist in elimination of *Pitta* and *Rakta Dosha* but also remove the obstruction cause by *vata* and *Kapha Dosha*. *Yadav et al.* in their study shows that *Jalaukavacharana* is the best therapy which can used to treat *Khalitya* (Alopecia).^[19] *Vasundhara R. Borakade et al.* in their study Reported the local application of *Jalaukavacharana* along with *Gunja Beeja Lepa*, prevent hair fall and help to regrowth.^[20]

In majority of skin disease, more than one *Dosha* participated. At that time, *Pitta Dosha* should be treated first following the *Dosha* that is comparatively more vitiated. *Rakta* and *Pitta* have *Ashraya Ashrayibhava*, the relation between them is inseparable. *Raktamokshana* helps to the eliminate vitiated *Pitta*. When vitiated *Rakta* is eliminated, skin gets nourished by *shudha Rakta* and free from disease.^[21]

According to Modern Medical Science hormonal imbalance especially androgen is one of the causative factor, which lead to stimulation of sebaceous gland to produced sebum abundantly.

Leads to Acne Formation. Acharya *Vagbhata* has explained the vitiated *Meda Dhatu* get participated in formation of *Mukhadushika*.^[22]

B.K. Das et al. Explained the application of Leech in venous congestion and skin flap transplantation. During skin graft leech attaches to the skin flap and its saliva release Hirudin and Xa factor, which in turn inhibit the blood coagulation and platelet aggregation. Thus inhibits the venous congestion and healing of skin flap occurs rapidly. Vasodilator component in Leech saliva reduce venous congestion, increase the good flow into the skin flap. Due to continuous use of Leech therapy skin flap becomes warm and pinkish.^[23] Hence we can say that *Jalaukavacharana* plays chief role in plastic surgery. Like that in most of the skin and hair disease which makes the barrier in one's beauty, role of *Jalaukavacharana* is useful.

Mode of action of *Jalaukavacharana*

Leech Saliva 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 the skin in such way that these biologically active components can penetrate into the deep tissue. Enzyme collagenase smooth the way for tissue penetration. 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 inflow of blood.^[24]

DISCUSSION

Now a days life style disorder are increasing day by day and its control as cosmetic point of view gaining the much important. According to Ayurveda vitiated *Dosha* and *Dhatu* are responsible for disease. It believes in the detoxification of body not only internally but also externally to cure the disease. *Jalaukavacharana* is a *Shodhana Karma* mostly for vitiated *Pitta* and *Rakta*, which helps in purifying the blood by eliminating intensely situated toxins in the blood. Biologically active substances of Leech saliva plays significant role in it. Leech imbibes the blood from affected area of body and injects bioactive substance deep into the tissues. Hirudine like anticoagulant inhibit the blood coagulation, anti-inflammatory agent reduces the inflammatory condition, and Vasodilator enhances the inflow of blood and purifies the blood by absorbing the toxic substances from bloodstream.

Skin disease like *Mukhadushika*, *Indralupta* may significantly hamper the beauty of one's face. In modern medicine there is no best treatment for it, but Ayurveda has

Jalaukavacharana. *Jalauka* eliminate vitiated *Dosha* and remove blockage which helps to provide nutrient at that site. Yadav et al. in their study shows, *Jalaukavacharana* have significant result on Alopecia. Vasundhara R. Borakade et al has explained the local application of *Jalauka* in *Indralupta*. Harmmet Kour et al. in their study explained significant role of *Jalaukavacharana* in *Mukhadushika*. Now a day's *jalaukavacharana* playing the important role in skin grafting and venous congestion. Thus gaining more important for cosmetic purpose.

CONCLUSION

Jalaukavacharana is convenient and easy Para surgical therapy. It eliminates the toxins from blood stream and purifies the blood. Treat the various diseases which hampered beauty. It is best alternative therapy in venous congestion and inflammatory condition. We can conclude that mode of action of *Jalaukavacharana* is mostly same in all disease condition. As the use of *Jalaukavacharana* increasing in skin graft we can say that this therapy is great boon to plastic surgery and Cosmetology.

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