A Case Study of Leech Therapy (*Jalaukavacharana*) in *Khalitya W.S.R. Alopecia*

Yadav CR* and Guguloth R

Department of Sharir Kriya, National Institute of Ayurveda, India

*Corresponding author: Yadav CR, National Institute of Ayurveda, Department of Sharir Kriya, National Institute of Ayurveda, Jaipur (Rajasthan)-302002, India, Tel: +919460866101; E-mail: dr.yadavcr@gmail.com

Abstract

Leech therapy is a treatment using medical leeches. Leeches remove blood from their host, and they release pain killing and blood thinning substances with their saliva. Indications for treatment with medical Leeches blood and skin diseases like neurodermatitis, psoriasis, eczema, acne vulgaries, hair loss (*Khalitya*) and etc. *Jalaukavacharana* is a type of *Raktamokshana* which is very much useful especially in *Pitta Dushti* conditions and *Rakta dushti roga*. Current treatment procedures which include surgery, hair transplant, hormonal replacement therapy, topical applications and may be treated by local steroid injections are associated with many side effects. But in *Ayurveda*, the treatment procedures mentioned like *Vamana*, *Nasya*, *Mukha & Shiro Abhyanga*, *Pradeha*, *Siravedha*, and *Raktamokhana* using with *Jalauka* can provide a simple, pain less, economical treatment for this common element. A female patient of 28 years old was presented in our OPD with the chief complaint of scalp hair fall, associated with dandruff, itching, and roughness since 6 years. For that *Jalaukavacharana* was planned and result was significant assessments were observed clinically and recorded with photography.

Keywords: *Jalaukavacharana*; *Raktamokshana*; Decongation technique; *Khalitya*; Alopecia; *Jaluka*

Introduction

*Jalaukavacharana* (leech therapy), is an *Ayurvedic* surgical procedure, practised and documented in the *Susruta samhita*, one of the primary text in *Ayurveda* dated 2 BC [1]. *Acharyya Susruta* has dedicated a whole chapter to this specialty in *Samhita* [2]. It is a painless minimal invasive technique of *Raktamokshana* (controlled bloodletting). Listing the preventive benefits of *Raktamokshana*, *Achrya Susruta* states that one who undergoes controlled bloodletting therapy periodically, doesn’t suffer with *Twak roga* (diseases of skin), *Granthis roga* (diseases presenting with nodules), *Sopha roga* (diseases presenting with swelling / oedema), *Rakta prodoshaja roga* like *khalitya*.

Loss of previously existing scalp hair is termed as alopecia. Alopecia is a type of hair loss that occurs when your immune system mistakenly attacks hair follicle, which is where hair growth begins. The damage to the follicle is usually not permanent. Alopecia is most common in people younger than 20, but children and adults of any age may be affected. Women and men are affected equally. In *Ayurveda* classic, symptoms of alopecia correlate with *Khalitya* [3].

In *Khalitya*, *Bhrayaka Pitta* sites in *Twak* (skin) and *Roma kupa* (opening of hair follicle) get vitiated and enter in skin through *Roma kupa* with vitiated *Vatadosha* due to which hair fall occurs, after that vitiated *Rakta* and *Kapha dosha* block the opening of hair follicle due to which production of new hair stop.
[4]. Overall in Khalitya, hair fall occurs and new hair does not appear that leads to baldness [5].

Khalitya is Tridoshaja vyadhi i.e. Vata, Pitta, Kapha with Rakta Dosha. All Doshas are vitiated but have predominance of Pitta and Rakta Dosha mainly. In Ayurveda classics, Jalaukavcharana is best treatment for Pitta and Rakta predominant disease. RaktaMokshana is one of karma of Panchkarma, Shodhana therapy. In this, impurity of body and toxic waste of the body is removed through blood. In Khalitya we used Jalauka (leech-Hirudo medicinalis) for bloodletting due to predominance of Pitta and Rakta. Application of leech is a method where impure blood is removed from body which is being sucked by leeches. Application of leech, bring out the impure blood caused by vitiated Dosha and balance Pitta, Rakta, and balance Dosha which in turns hold the hair on scalp and open the blocked hair follicle opening which helps in growing new hair follicle and hair. By providing oral mediation we give strength to hair to proliferate and retain their normal status. Oral medications which were prescribed to patient were Saptamrita Loha, Bhringaraja Churna, Nimbhadi Churna, Manjista Churna and Asthiposhaka Vati [6]. All this conservative medication was used for the pacification of Pitta and Rakta. As hair is described as mala of Asthi dhatu, to maintain the growth of hair supportive medication for Asthi dhatu is prescribed. Thus it was assumed that purification mechanism in combination with oral medication would helpful in the treatment of Khalitya.

Case Report

History of the Present Illness

A 28 yrs old female was presented in O.P.D number 3 of Sharira Kriya department with chief complaint of hair fall, thinning of hairs with recession of hairline in temporal and frontal region, dandruff, itching scalp, and roughness around about 6 yrs back the person was a in a healthy situation. Later, initial thinning of hair started and then hair started shedding off. Simultaneously she was suffering from symptoms of mental stress and disturbed sleep. She has taken treatment of allopathic medicine for 2 years but was not satisfied. When she visited to O.P.D, first of all we carried out her routine blood investigation as complete blood count, blood sugar level; liver function test, renal function test, routine urine examination and Thyroid function test to rule out any possible associated disorder but findings of these investigations were found within normal limit. There was no significant past history of any other chronic illness in patient. No history of any type of addiction was found.

Treatment Plan

Treatment included Samshodhana Karma that is Jalaukavcharana. Total five sittings of Jalaukavcharana were done on day 1, day 15, day 30, day 45, and day 60 with oral medication for 2 months regular. The composition of oral administration of drug was Saptamrita Loha, Manjista Churna, Bringaraja Churna, Nimbhadi Churna, Manjista Churna and Asthiposhaka Vati. Preparation and process of Jalaukavcharana is considered most unique and most effective method of bloodletting. It can be tried in all mankind including females, children, old and patient having poor threshold to pain. Two leeches are applied over to fronto-temporal region of both sides. When leeches left the site by their own (after sucking blood for approximately 30 min), dressing with Haridra (turmeric powder) and Jathyadi taila is done, it acts as antiseptic for small wound created by leech. Removed leeches were then stored after emesis of sucked blood and reused after 15 days. After 2 month the patient was examined for the presence of hair follicles and growth of hair over affected area. Criteria of assessment were done by digital photography and clinically by presence of hair on the affected site of scalp. Before and after treatment was recorded. Follow up period on day 75 and day 90 (Tables 1-6).
Table 1: Gradation of Hair Falling.

| S.No. | Symptoms                             | Gradation |
|-------|--------------------------------------|-----------|
| 1     | Absent                               | 0         |
| 2     | Mild (hair fall on washing)          | 1         |
| 3     | Moderate (hair fall on combing)      | 2         |
| 4     | Severe (hair fall on simple strengthening) | 3   |

Table 2: Gradation of microscopic examination of hair root and hair shaft Spore and hyphae.

| S.No | Symptoms                                      | Gradation |
|------|-----------------------------------------------|-----------|
| 1    | No spore or hyphae                           | 0         |
| 2    | Occasional fungal and bacterial spores or hyphae | 1        |
| 3    | Minimal fungal and bacterial spores or hyphae | 2        |
| 4    | Many fungal and bacterial spores or hyphae   | 3         |

Table 3: Roughness.

| S.No | Symptoms                  | Gradation |
|------|---------------------------|-----------|
| 1    | Absent                    | 0         |
| 2    | Slight rough hair surface | 2         |
| 3    | Rough hair surface        | 3         |

Table 4: Itching.

| S.No | Symptoms            | Gradation |
|------|---------------------|-----------|
| 1    | Absent              | 0         |
| 2    | Mild itching        | 1         |
| 3    | Moderate itching    | 2         |
| 4    | Severe itching      | 3         |

Table 5: Dandruff.

| Assessment criteria | Therapeutic period | Follow-up period |
|---------------------|--------------------|------------------|
| Gradation of hair fall | BT Day 1 Day 15 Day 30 Day 45 Day 60 Day 75 Day 90 |
| Hair shaft spore/hyphae | 1 1 1 1 1 1 1 0 |
| Roughness | 2 2 2 1 1 0 0 0 |
| Itching | 2 2 1 1 0 0 0 0 |
| Dandruff | 3 3 2 1 1 0 0 0 |

Table 6: Observations.

Discussion

After five sittings of leech application, patient had reported significant improvement in her symptoms, hair growth in affected area, and thickness of hair in scalp, hair shaft spore/hyphae, roughness, itching, and dandruff. The principal of the therapy (Jalaukavacharana) is removal of vitiated Pitta and Rakta, impurities, toxins from body through blood. Pitta and Rakta have ushna guna, leech described by Acharya Sushruta have sheeta guna because they live in cold water. Leech (Hirudo medicinalis) has property of discrimination of impure blood and pure blood; it sucks the impure one and left the site. Leech contains Hirudin in saliva which inhibits blood coagulation by binding to thrombin, Hyaluronidase which increases interstitial viscosity, B-ellin which is anti-inflammatory, Acetylcholine which is vasodilator [7]. In all leech increase the blood flow of the affected site, helps in infection and inflammation. In Khaliyta, mainly Pitta and Rakta dosha are vitiated with Vata dosha, Jalaukavcharana helps in removal of Pitta and Rakta dosha and obstruction caused by Vata and Kapha dosha due to which pure blood circulation over affected site is occurring.

Conclusion

Jalaukavcharana is best alternative therapy which can be used to treat Khaliyta with oral medication. Leeching can be learned relatively quickly and can reduce the complication arising from the excessive use of synthetic drugs. In addition it is economical and cost effective therapy for this common ailment with no short term side effects. The result of this case study has shown a potential for treating alopecia.

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