

Case Report:

Leech Application in Refractory Alopecia Areata (Indralupta): A Case Report and Short Review

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ABSTRACT

Alopecia areata is an autoimmune disorder characterized by hair and comparable to *Indralupta* mentioned in Ayurveda. Modern science has extensively studied the etiology of alopecia with a few medications, none with significant benefit. *Indralupta* explained under *kapalgata roga*, where *vata dosha*, *pitta dosha* and *Rakta dhatu* are affected the most. The present case is successfully treated case of Alopecia with Leech therapy supplemented by oral medicine.

INTRODUCTION

Alopecia Areata (AA) is a transient autoimmune disorder, non-cicatricial alopecia with preservation of hair follicles. Patchy hair fall is the commoner pattern. Immunologic damage is considered to be the basic cause in AA but recent studies shows a complex genetic involvement in the pathogenesis. [1] Systemic glucocorticoid like methylprednisolone [2], Azathioprine [3], combination of steroids and methotrexate [4] are of limited help due to its early or late side effects, relapse in hair loss and resistance to medicine were noted when the medicine was withdrawn. [5] *Vagabhata* mention *Indralupta* under *kapalgata roga* (scalp disease) characterised by hair loss. *Pitta dosha* with *vata dosha* lodge in the *Romakupa* (hair follicles) causes loss of hair later *kapha dosha* associated with *Rakta* obstruct regrowth of hair by obstruction. [6] the aetiology is either depletion of *Asthi dhatu* due to vitiation of *vata* [7] which can be taken care by *Rasayana* or obstruction pathology due to *kapha* and *Rakta* where Leech therapy can be utilised. These will be more cost and time effective in comparison to medicine alone.

CASE REPORT

A 37-year male patient came in opd of panchakarma department of Smt KG Mittal Ayurveda hospital on 27th January 2020 complaining with bald patch multiple in number on scalp (frontoparietal, right temporal and occipital) for last one month. No major medical or surgical history noted. History reveals that the same problem occurred 3 months back but hair regrow after treated with local application of steroid based ointment. The present patch reoccurred around a month ago hence visited the hospital for treatment. Patient was examined thoroughly and general observation were noted as mentioned in Table no. 1.

Table 1: General observation of the patient

General examination		Ashtavidha Pariksha	
Pulse	96/min	Nadi	Vatapradhan pitta
Blood pressure	130/80 mmHg	Mala	Malavasthambha (occasional)
Height	178cm	Mutra	Samyakpravrutti
Weight	62Kg	Jivha	Sama
Temperature	Normal	Shabda	Spashta
Respiratory rate	19/min	Sparsha	Ushana
CVS	S1S2 Normal	Drukka	Panduta
CNS	conscious oriented	Akruti	Madhyam

Assessment criteria :

1. Number of Patches: Before treatment 5, After treatment 0.
2. Location and measurement: Frontoparietal 3 patches with 5×5cm, occipital 1 patch with 6×6cm and Right temporal 1 patch 4×6cm.
3. Appearance of Patches: Before Treatment- Baldness. (Image 1a,1b) After treatment – Regrowth of Hair. (Image 1c)
4. Nature of patches: Non-scarring, dry, scaling observed with no skin lesion/tumor.

Table 2 : Prescribed Medicines

No	Medicines	Dose with Anupan	Pharmacological action	Therapeutic Indication
1	Tab <i>Aarogyavardhini</i>	250mg TDS before meal with honey	Antihyperlipidemic, hepatoprotective [8]	<i>JirnaJwara, Medodosha, Kushtha, Yakrutvikara</i>
	Tab <i>Gandhakrasayan</i>	250mg TDS before meal with honey	Skin disease, Antirheumatic	<i>Raktashuddhi, Dhatugat malashodhan</i>
	Tab <i>Kaishor guggul</i>	250mg TDS before meal with honey	Anti-allergic, Antibacterial [9]	<i>Raktashodhak, vatrakta (Gout)</i>
	Tab <i>Krumikuthar rasa</i>	250mg TDS before meal with honey	Anthelminthic, urticaria	<i>Kesha-Krumighna, Twachavikar</i>
2	<i>Manjishthadi churna</i>	250mg TDS before meal with lukewarm water	<i>Raktashodhak</i> (Blood purifier)	<i>Vartarakta, Pama, Kapalika, Kushtha, Rakta mandala</i>
	<i>HaridraKhanda</i>	250mg TDS before meal with lukewarm water	Anti-inflammatory, Antioxidant	Allergies, urticaria, Eczema
3	<i>Mahamanjishthadi kwath</i>	20ml BD Empty stomach with lukewarm water	<i>Raktashodhak</i> (Blood purifier)	<i>Vartarakta, Pama, Kapalika, Kushtha, Rakta mandala</i>
4	<i>Avipattikar churna</i>	250mg HS after food with lukewarm water	Antisecretory, Antiulcerogenic effect [10]	<i>Mrudu Anulomak, Koshtashodhak</i>

Method: After examining the patient, for the first week only oral medicines (Table no. 2) was advised for *dosha pachan*. On the 7th day 1st Leech was applied on all the patches at a time. For the next 15 days' patient was advised oral medicine. On 21st day the second setting of Leech Application was advised. Oral medicine was advised for next 7 days. Patient was examined on 28th day with maximum regrowth of hair on all the 5 patches. During the treatment patient was advised for Regular house cooked diet, Low salt in diet, to use lukewarm water to drunk, to avoid day time sleep, to sleep by 10pm.



Image 1(a) Before Treatment Image 1(b) During Treatment Image 1(c) After Treatment

DISCUSSION

Alopecia Areata is the most common type of Alopecia which affects both genders at cosmetic and psychological level. Modern science has in-depth understanding of the disease which is of little help due to the recurrence nature of the disease and side effects of the potent medicine shadowing its effect. Minoxidil used as monotherapy and in combination showed significant result unless found to cause sodium and water retention, facial hypertrichosis, headache and palpitation. [11] Intralesional glucocorticoids is the most significant treatment but pain, atrophy of skin and hair follicle were major side effects noted. [12] Azathioprine being the cost-effective drug is preferred over newer molecules have refractory effect. [13] Methotrexate in low dose was found to be effective in recurring cases but Hepatotoxic and reactivation of pulmonary tuberculosis were the major side effects found. [14] The drugs belong to Antimetabolite group have wide range of dermatological indication but the range of side effect compel for looking into other modalities.

In Ayurveda *Rasayan*, *Raktashodhan*, *Krimighna* and *pachan* are the class of medicine require in the treatment where the selection is done on the basis of pathology and its effect. These treatments require oral medication as *Shaman*. Oral medicine prescribed in (Table no. 2) were selected according to etiopathology. *Shodhan* like *Raktamokshan* in the form of Leech application when utilized with shaman increases the efficiency of the treatment in terms of non-recurrence and reduce time required in treatment. *Raktamokshan* causes reduction in pitta *dosha* resides with *Rakta dhatu* which is the main cause of *Indralupta* (AA) pathogenesis cascade. It secretes *Hirudin*, an anticoagulant found to be more effective than heparin. [15] It helps in resolving the mechanical blockage caused by either *Rakta* or *kapha*, hence protecting from any ischemic event. According to Ayurveda Leech only sucks impure form of blood present locally which might affect the *Rakta dhatu* related disease like *indralupta* (AA). It leaves as soon as all the impure blood is sucked out, leaving oral medicine to take its course.

CONCLUSION

The present case study suggests that the Leech therapy with other oral medication is effective in treating *indralupta* (AA). Further, molecular studies of *hirudin* is recommended for its role in alopecia. The mechanism of Leech searching the impure blood needs to be explored, which might help in other haematological disorders. Efficacy of this study protocol should be clinically evaluated on larger sample and longer duration follow up trials.

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