



CASE REPORT

A CASE STUDY ON AYURVEDIC MANAGEMENT OF ALOPECIA AREATA- THROUGH EXTERNAL TREATMENT

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Abstract

Alopecia areata otherwise known as spot baldness, is an autoimmune disorder characterized by sudden and patchy hair loss, which can affect any hair-bearing area of the body. Psychological stress as well as illness are possible triggering factors of alopecia areata in individuals at risk. Clinical evidence suggests that younger generations are more susceptible to Alopecia areata. The present case report is about the management of alopecia areata with *Pracchana* and external application of *Indraluptha mashi* and *Malathyadi kera*. An 18 year old male patient presented with patches of hair loss on the scalp. The patient took conventional medicine but didn't get a satisfactory result. The patient had undergone 6 sittings of *Pracchana* at OP level on every week for a duration of one and half month. During the course of treatment, regrowth of hair from hair follicles was evident within 15 days. The case report suggest that this simple mode of *lekhana*, *rakthmokshana* (*Pracchana*) and *lepana* can provide significant results in *Indraluptha* (Alopecia areata).

Introduction

The body's self-image is completed by scalp hair. Patients who have alopecia suffer from overt disfiguration, which may lead to psychosocial embarrassment and low self-esteem¹. Alopecia is a medical condition that causes partial or complete hair loss. Scarring and non-scarring are the two major types of alopecia. The reversible nature of nonscarring alopecia is explained by the absence or miniaturization of hair shafts but preservation of hair follicles.²

Alopecia areata, an autoimmune disorder, is characterized by sudden and patchy hair loss, which can affect any hair-bearing area of the body, without any clinical inflammatory signs³. This condition results from the immune system mistakenly attacking hair follicles, leading to hair loss without permanent damage to the follicles. It can occur naturally or can be caused by various factors, including disease, hormonal changes, heredity, or aging. The lifetime incidence of Alopecia areata is approximately 2% worldwide. Formal population studies found that, there is no sex predominance⁴. Clinical features include well-circumscribed circular areas of hair loss, 2-5 cm in diameter. In extensive cases, there will be coalescence of lesions and/or

involvement of other hair-bearing surfaces of the body. It may accompany with pitting or sandpapered appearance of the nails. This may be occasionally associated with hyperthyroidism, hypothyroidism, vitiligo or Down syndrome.⁵

CASE REPORT

PRESENTING COMPLAINTS WITH HISTORY

An 18year old male patient, lean built, student by profession, came to OPD at Government Ayurveda college, Tripunithura on 18/08/2023. He presented with complaint of multiple patches of hair loss on frontal, occipital and right parietal region of scalp in the past two months. There was no reddish discolouration over these patches. There was no cicatrization but scaling and dandruff were present in the lesion. The hairs in the vicinity are fragmented and thinned, and there is no greying or fading of the original colour of the hair. Occasional itching was present over the scalp. There was no history of injury of scalp.

There is no medical history of autoimmune disorders like psoriasis, vitiligo, asthma, rheumatoid arthritis, thyroiditis or systemic lupus erythematosus. Lack of a history of hormonal disorders such as hypopituitarism, hyperthyroidism, or hypothyroidism. No first-degree relatives have a history of the aforementioned illnesses. He had undergone allopathic medicine for 1 month, including oral medications as well as external applications of which details are unavailable. As there was no improvement in hair growth, he approached the OPD of Government ayurveda hospital, Tripunithura for further treatment. He was not under any of the medication like heparin, warfarin, propylthiouracil, isotretinoin, carbimazole, acitretin, beta blockers, lithium, interferons, amphetamines or colchicine.

Table 01: GENERAL EXAMINATION

Pulse	70/min
Heart rate	70/min
BP	100/70 mm of Hg
R.R	18/min
Temperature	98.2 degree F
Height	157 cm
Weight	40 kg
Appetite	Good
Bowel	Once/day, satisfied, semisolid consistency
Micturition	4-5 times/diurnal 1-2 times/nocturnal
Sleep	Sound
Tongue	Normal colour
Addiction	Nil

Table 02: DISEASE SPECIFIC EXAMINATION

Site	Frontal, occipital and Right parietal region.
Dimension	5*7 cm, 5*6cm, 6*6cm
Dryness	Present
Hair colour	No colour change
Spot colour	No colour change
Scaling	Present
Dandruff	Present
Cicatrization	Absent
Tumor	Absent
Abnormalities of hair in adjacent area	Broken hairs
Itchy scalp	Present
Hair loss on any area other than scalp	No
Thinning of hair	Present
Pigmentation	Absent

Table 03: ASHTA VIDHA PAREEKSHA

<i>Nadi</i>	<i>Drutha gati</i>
<i>Mutra</i>	<i>Anavilam</i>
<i>Mala</i>	<i>Abadham</i>
<i>Jihwa</i>	<i>Anupalepathwam</i>
<i>Shabda</i>	<i>Vyaktham</i>
<i>Sparsha</i>	<i>Anushnasheetham</i>
<i>Druk</i>	<i>Vyaktham</i>
<i>Akruti</i>	<i>Krisham</i>

MANAGEMENT OF THE CONDITION

In this case, the main treatment adopted was *Pracchana*, a *sasatra rakthamokshana* (a type of bloodletting with sharp instruments). As a *purvakarma*(pre operative) of this procedure, sterile cotton swab was used to clean the area of the lesion, and then *Lekhana*(scrapping procedure) was performed using the leaves of *Kharapathra*(*Ficus hispida* Linn. f). Soon after *Lekhana*, the affected area was smeared with fresh Shallot juice. Following this, *Pracchana* was performed using a lancet (0,6 mm thick and 1.8 mm long). Then wipe the area gently using a cotton swab, and the *lepana* (external application of medicated paste) prepared with *Malathyadi kera* and *Indralupthadi mashi* was applied.

Table: 04 PROCEDURE

		<i>Pramarjana</i>	The areas of lesions were cleaned thoroughly using sterile cotton swab.
1	<i>Purva karma</i>	<i>Lekhanam</i>	Ventral surface of cleaned leaves of Kharapathra (<i>Ficus hispida</i> Linn.f.) is used for rubbing on the lesions until blood dots appear on the area.
		<i>Lepanam</i>	Fresh Shallot juice (<i>Allium cepa</i> Linn.) is applied over the area of lesion just after the <i>lekhanam</i>
2	<i>Pradhana karma</i>	<i>Pracchanam</i>	After doing the above mentioned <i>purvakarma</i> , the area was pricked using lancets, with a gap of 1 mm, starting from the lower part of the lesion and then moving upwards and there by covering the entire lesion. After bleeding stops, blood oozed out from the pricked area is wiped using sterile cotton swab.
3	<i>Paschat karma</i>	<i>Lepanam</i>	After thorough cleaning of blood using cotton swabs, paste of <i>Indraluptha mashi</i> mixed with <i>Malathyadi kera</i> is applied over the site of lesion.



Image: 01 Materials used for treatment

The patient was advised to apply the paste made from *Malathyadi kera* and *Indraluptha mashi* over these patches, every day. And he was instructed to use Lukewarm *Triphala Kashaya* for head bath on the fourth and seventh day following *Pracchana*. He was suggested to visit the OPD on the eighth day for subsequent *Pracchana* session. Likewise, patient underwent six *Pracchana* sessions, once in every week, consecutively. Throughout the course of this treatment, no internal medications were administered.

Follow-up:

Follow-up was done once in every 15 days for a period of 6 months.

Observation and Results



Image:02- Condition of patient on First visit - 18/08/2023

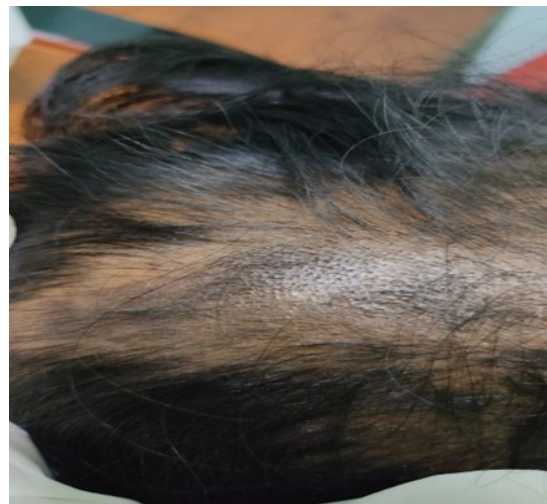


Image:03- Condition of patient on Second visit -26/08/2023



Image: 04 - Condition of patient on Third visit - 02/09/2023



Image: 05- Condition of patient on Fourth visit - 09/09/2023



Image: 06- Condition of patient on Fifth visit -16/09/2023



Image: 07 - Condition of patient on Sixth visit - 23/09/2023



Image: 08 a,b during follow up period - on 23/03/2024



Image: 09- During follow up period on 07/05/2024

In the first week, a slight increase in hair loss was noticed in the adjacent area of the lesion. After 2 sittings of Pracchana, dull, and blackish thin hairs appeared in some parts of the bald patches. Gradually, noticed new hair growth, and the area was slowly covered with thin hair, which turned into normal hair texture and colour.

DISCUSSION

Acharya Charaka has mentioned that *Tejas* along with *Vatadi dosha* when enter at the scalp, results in *Khalitya* or *Indraluptha*(hairloss)⁶. According to *Acharya Sushruta*, aggravated *Pitta* along with *Vata* affect the *romakoopa*(hair roots) and results in hair fall and thereafter *Sleshma* along with *Shonita* occluded the channel of *romakoopa* leading to the stoppage of the production of hair and this condition is known as *Indraluptha*, *Khalitya* or *Ruchya*.⁷ Thus *Tridosha* and *Rakta dhathu* are involved in the pathology of *Indraluptha*. As per the opinion of *Acharya Charaka*, over indulgence in *kshara*(alkali) results in *kesha dushti* and *lavana*(salt) contribute to the occurrence of *Indraluptha*. Thus, it is clear that a person habituated to excessive intake of *lavana* or *kshara* is prone to have *Indraluptha*⁸. *Mithya ahara* and *vihara*, and *manoabhighata* factors like mental stress, anger, shock, fright etc. may increase the *Pitta* and *Vata dosha*. In the first stage of pathology, the *tikshna* and *ushna* properties of *Pitta* residing in the skin (*Bhrajaka pitta*) is aggravated by the associated *Vata* due to its *yogavahi* property, which makes the hair to fall off from the scalp. The vitiated *Vata* also results in the constriction of *Raktha damani*. In the second phase, the *snigdhavta* and the

pichilatva of the *Kapha dosha* along with *Raktha* clog the pores in the scalp.

Current evidence emphasizes that the cause of the condition is autoimmune, with a genetic contribution, which is further impacted by unknown environmental factors. Triggers include emotional or physical stress, viral infections, vaccinations and some medications. These triggers inhibit the secretion of 2 anti-inflammatory cytokines which are transforming growth factor-beta (TGF- β) and alpha-melanocyte-stimulating hormone (α -MSH). consequently, natural killer cells become activated, leading to the production of interferon-gamma (IFN- γ) and interleukin (IL)-15. This is followed by inflammatory cells attacking the hair follicle matrix epithelium undergoing the early anagen phase, prematurely forcing them to enter the catagen or telogen phase. In areas of acute active hair loss, the histological studies show a characteristic "bee-swarm pattern" of thick lymphocytic infiltrates encircling the bulbar region of anagen hair follicles.⁹

The treatment of *Indraluptha* includes *siravyadha*, *Pracchanam* and *lepanam* with *upavisha dravyas*¹⁰. In this case, *Lekhana* was done with the leaves of *Kharapathra* (*Ficus hispida* Linn f). This tree is also known as sand paper tree. According to *Susrutha* the parasurgical procedure *lekhana* can be performed using leaves having rough surface (*karkashani pathrani*) like *gojihva*, *sephalika* or *saka pathra*¹¹. *Lekhana* with this rough surfaced leaves make abrasions on the site thus improving the local blood circulation and it might disturb the accumulation of lymphocytic infiltrates around hair follicles and thereby reducing the inflammation of hair follicles which may correct the *srothorodha* caused by the *kapha* and *raktha*. Shallots is a traditional medicine used for hair loss. *Lepana* with fresh juice of shallots (*Allium cepa*), rich in sulphur is healthy for hair as it promotes the production of collagen tissues that support hair growth. It stimulates hair follicles thereby reducing hair thinning and loss.¹² The major constituents of shallot extract were phenolic compounds, like quercetin, rosmarinic acid and p-coumaric acid which reduce inflammation by inhibiting inflammatory pathways.¹³

Pracchanam is a type of *sastrakritha rakthamokshanam* (bloodletting with sharp instruments) indicated in *ekadesasthitha* (localised) *raktha dushhti*¹⁴. In this

process the bloodletting is done by means of scarification using lancet. In this procedure, the pricks should be straight, even and should not be very near to each other. It should neither be very deep nor very superficial and should be away from the vulnerable areas (*Marma*), blood vessels, bones, nerves, tendons and joints¹⁵. As per *Sharangadhara*, it can drain *dushita rakta* up to 1 *Angula* (1.7cm) around the site of Procedure¹⁶.

The skin has evolved rapid and efficient mechanisms to seal off breaches at its barrier though a process collectively known as the wound healing response. The four main stages of wound repair are haemostasis, inflammation, proliferation and dermal remodelling.¹⁷ The most abundant protein found in the body is collagen. In the healing wound, these collagens are produced by fibroblasts. Collagen also provides structural support to the hair follicle. By maintaining the health and integrity of the hair follicle, collagen ensures optimal conditions for hair growth. Researchers found collagen significantly improves hair follicle health, leading to increased hair growth and less hair loss.¹⁸ Collagen also supports the scalp's thickness. This is significant since a healthy scalp is the base for healthy hair as well as hair growth. This promotes hair follicles by assisting them in re-entering the anagen phase and then continuing in the hair growth cycle. Through *Lekhana* procedure, abrasions are made on scalp which turns on the production of collagen secretion as apart of wound healing mechanism. It may also disturb the accumulation of lymphocytic infiltrates around hair follicles and thereby reducing the inflammation of hair follicles. *Pracchana* increases the blood flow to scalp and might swipe away the lymphatic infiltrates around the follicle.

The only ingredient in the *indraluptha mashi* is *Devadaru*; it possesses *ushna veerya*. The ingredients of *Malathyadhi kera taila* are *Malathi*, *Citraka*, *Karanja*, and *Aswaghna*, which have *ushna* and *tikshna guna*. Benzyl benzoate, plumbagin, and pongamol are the chemical constituents of *Malati*, *Chitraka*, and *Karanja*, respectively. *Aswaghna* is a *visha dravya*; it possesses *vyavayi* and *vikashi* qualities. All these *gunas* help in removing the *srothorodha* (obstruction) of *Kapha dosha* at the level of *roma koopa*. Hence, it probably contributed to the reversal of *Indraluptha samprapti*.

TABLE: 05 CONTENTS OF *INDRALUPHTA MASHI* (Ayurvedic proprietary medicine)

Ingredients	Botanical name	Properties	Dosa samana	Kalpna
<i>Devadaru</i>	<i>Cedrus deodara</i>	<i>Ushna, Snigda</i>	<i>Kapha vata</i>	<i>Mashi</i> prepared out of <i>samputa</i> of <i>Devadaru</i> done in furnace until black powder obtained.

TABLE: 06 CONTENTS OF MALATHYADHI KERA¹⁹

Ingredients	Botanical name	Properties	Dosa samana	Kalpana
Malathi	<i>Jasminum grandiflorum</i> Linn	Ushna	Vata, Raktha	
Citraka	<i>Plumbago indica</i> Linn	Ruksha, Ushna	Vata, Kapha	Taila prepared according to Sneha kalpana with coconut oil is used as base.
Aswghna	<i>Nerium oleander</i> Linn	Ushna, (included under Moola Visha)	Vata, Kapha	
Nakthamala	<i>Pongamia pinnata</i> Linn	Tikshna, Ushna	Kapha, Vata	

Conclusion

Alopecia areata is an autoimmune disease in which the immune privilege of the hair follicles is impaired. Here pathology of alopecia resides locally at the scalp. The patient had undergone *sthanika chikitsa* and strictly no internal medication was given during the entire treatment course and follow up period. Thus, this case report emphasises the importance of *lekhana*, *Pracchana* and external application in the management of auto immune disorder like alopecia areata (*Indraluptha*). The *Ayurveda* treatment procedure, *rakthamokshana* done for this patient was beneficial and helps in the initiation of regrowth of hair considerably within 15 days. The results obtained from this treatment show that Alopecia areata can be treated successfully with *sthanika chikitsa* alone within in a short duration.

References

- Dogra.S, Sarangal R, Whats new in cicatrical alopecia, Indian J Dermatol venereal Leprol, 2018;79, page no:576-590.
- Jameson et.al, Harrison's principles of internal medicine, 20th edition, volume 1, page no: 340
- Rahul Shingadiya et.al,Alopecia areata (Indraluptha): A case successfully treated with ayurvedic management, Journal of ayurvedic and herbal medicine2017;3(3), page no:111-115
- Alexandra C Villasant and MariyaMitera, Epidemiology and burden of alopecia areata; a systemic review, Clinica Cosmetology and Investigational Dermatology. 2015; 8: page no: 397-403.
- Jameson et.al, Harrison's principles of internal medicine, 20th edition, volume 1, page no: 341
- Agnivesa, Caraka Samhita by agnivesa with the ayurveda-Deepika commentary, chaukambha publications, reprint 2014, chikitsa sthana, chapter 26,versus 132 page no:606.
- Dalhana, Susrutha Samhita of susrutha with the nibandhasangraha commentary, chaukamba Sanskrit sansthan, reprint 2015, nidana sthana, chapter 13,versus-33, page no:322
- Agnivesa, Caraka Samhita by agnivesa with the ayurveda-Deepika commentary, chaukambha publications, reprint 2014 vimana sthana, chapter-1, versus 17- 18 page no: 234
- Kenia et.al, Alopecia areata, continuing educational activity, National library of medicine, national center for biotechnology information
- Vagbhata, Ashtanga hrudaya of vagbhata with the commentaries of sarvangasundara of arunadatta and ayurveda rasayana of hemadri, Uttara sthana, chapter-24, versus28-31, page no:862
- Dalhana, susrutha Samhita of susrutha with the nibandhasangraha commentary, chaukamba Sanskrit sansthan, reprint 2015, cikitsa sthana, chapter 1, versus- 40, page no:400.
- Ravi Teja Tadimalla, 13 Amazing Benefits Of Shallots For Skin, Hair, And Health, style craze, march 15, 2024.
- Warintoin Ruksiriwanich et.al, Phytochemical constitution, Anti-inflammation, Anti-androgen and hair growth promoting potential of shallot (*Allium ascalonicum* L) extract, Plants 2022, 11(11), 1499.
- Gupta K.A, Astanga haridya, Vidyotini Hindi commentary, Sutra Sthana, Chaukhamba Prakashan, Varanasi, Reprint edition 2012, Chapter-26, Verse 51-53, page no. 135.
- Shastri K.A, Sushruta Samhita, Ayurveda Tattva Sandipika hindi commentary, Sutra Sthana, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint edition 2015, Chapter -14, Verse 26, Page. No. 70
- Tripathi B., Sharandhar Samhita, Dipika hindi commentary, Uttar khand, Chaukhamba Surbharti Prakashan, Varanasi, edition 2016, Chapter-12,Verse 25-26, page no.- 274.
- Broughton GI et.al, wound healing; an overview, plastic and reconstructive surgery, 117, 1e-s-32e-s
- Wu M, Cronin K, Crane JS. Biochemistry, Collagen Synthesis. [Updated 2023 Sep 4]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK507709/>
- Vagbhata, Ashtanga hrudaya of vagbhata with the commentaries of sarvangasundara of arunadatta and ayurveda rasayana of hemadri, Uttara sthana, chapter 24, versus-24, page no :862.

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