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Case Report

Effective management Alopecia totalis by Ayurveda – A case report

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ABSTRACT

Alopecia areata (AA) is a T-cell-mediated autoimmune illness characterized by intermittent, non-scarring hair loss, *Alopecia totalis(AT)* is a type of AA characterized by total hair loss on the face and scalp. Unfortunately, it is projected that 10–15 % of people with AA will advance to total hair loss on the scalp (AT) or hair loss on the scalp and body *Alopecia Universalis* (AU) only 10 % of patients with AT/AU recover completely. Treatment for severe AA is often unsatisfactory. The most popular AT/AU therapy techniques were topical steroid application and oral steroid administration. We present a case of *Alopecia totalis* that was treated with cupping therapy and ayurvedic treatments such as *Punarnava Mandoor, manjistadi Kashaya, asanadi gana Kashaya, purnachandrodaya rasa,* a *churna* combo, and *Malatyadi* and *Dhurdhurapatradi taila* for external application over scalp. The treatment's effectiveness is due to the synergistic action of all the herbs and the immunostimulant activity of cupping.

1. Introduction

Alopecia areata (AA) is a T-cell-mediated autoimmune illness characterized by intermittent, non-scarring hair loss and follicle preservation that mainly affects anagen hair follicles. Localized circumscribed patches of non-scarring hair loss are the most common clinical presentation of AA in humans [1]. The American Hair Loss Association acknowledges that individuals who suffer from hair loss are psychologically sensitive since it is such a very distressing condition [2].

There are two types of AA: *Alopecia totalis* (AT) and *Alopecia Universalis* (AU). AT is defined by the total hair loss on the face and scalp; AU is the other kind of AA, which is characterized by global hair loss. The prognosis for AT and AU is often worse than for AA [3]. Both men and women are at risk for AA, which may strike at any age. Alopecia areata affects around 2 % of the general population at some time in their life [4]. One to three per cent of people who frequent dermatological clinics fall into this category [5]. Unfortunately, it is projected that 10–15 % of people with AA will advance to total hair loss on the scalp (AT) or hair loss on the scalp and body (AU), and only 10 % of patients with AT/AU recover completely [5]. Other autoimmune illnesses, atopic dermatitis, and thyroid abnormalities are common comorbidities [5,6].

Treatment for severe AA is often unsatisfactory. The most popular AT/AU therapy techniques were topical steroid application and oral steroid administration [1]. No treatment has been shown to change the course of the illness or provide a substantial long-term benefit [3]. Acne aggravation is another recognized side effect of corticosteroid treatment, according to Alharthi S et al. [7].

In *Ayurveda, Acharya Sushruta* described the ailment as *Indralupta* (Hair Loss) in the context of *Kshudraroga* and recommended *Pracchanna karma* (local bloodletting) and application of Manashila (Arsenic Disulphide), *Kasisa* (Iron sulphate), *Tuttha* (Copper sulphate), and Maricha (Piper Nigrum), or *devadaru* (Cedrus Deodara). *Gunja kalka* is often used locally (Paste of *Abrus precatorius*) [8].

We outline an instance of *alopecia totalis* that responded well to Ayurvedic treatment.

2. Patient information and clinical findings

A female patient, aged 56 and working as a homemaker, visited our outpatient department (OPD) with concerns regarding her recent hair loss over the past six months. Initially, she noticed the presence of white hair covering approximately 50 % of her scalp (Image 1). Furthermore, she experienced patchy hair loss in specific areas of the scalp. However, over time, the condition worsened, leading to complete hair loss across the entire scalp (Images 2 and 3). The patient had previously sought treatment from various dermatologists who prescribed steroids, but

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unfortunately, her hair loss could not be controlled, resulting in the complete loss of all her hair. Dissatisfied with the previous outcomes, she sought assistance from our hospital.

2.1. Clinical findings

Upon examining the patient's scalp, it was observed that approximately 80 % of her scalp had white hair, accompanied by patches that appeared shiny, smooth, and caused irritation. Other than the scalp-related symptoms, the patient exhibited a healthy appetite, a clear tongue, and regular bowel movements, and did not present any additional symptoms. The condition was diagnosed as *Indralupta*, or *alopecia totalis (AT)*. The therapeutic intervention, observation and results are listed in Table 1.

2.2. Diagnostic assessments

We requested her regular bloodwork and thyroid profile. The reports, however, were all within acceptable ranges.

3. Therapeutic interventions

The mainstay of treatment for this patient was modified *Alabu Chikitsa* (Cupping Therapy), *Krimighna Chikitsa, Rakta prasadana, Keshya* (Hair Nourishing) and coupled with *Rasayana* medications. Modified *alabu* (cupping therapy (CT)) was scheduled for the second week. Before CT, local *lekhana karma* (scraping) was carried out using *parijata patra* (leaves of *Nyctanthes arbor-tristis*). Then, *Prachchana karma* was performed on three sites (Image 4). The cups were kept at the sites, and vacuum was produced using the pump. It was kept at the site for 10–15 min until it began to loosen. After that, the area was cleansed with an antiseptic solution. The therapeutic intervention, observation and results are listed in Table 1.

4. Follow-ups and outcome

She experienced extensive hair loss on her scalp after the CT scan, even after the next follow-up. The medications were continued for a month and later changes began to occur. The detailed findings are listed in Table 1. There was an inconsistent patient follow-up. She missed 7–8 months of visits because of the lockdown due to the COVID pandemic. (Images 5 & 6).

Tiny hair started to grow in the areas after 15 days of this therapy. But after 4 weeks 100 % hair was lost. The scalp was shiny, and local irritation was there. Cupping therapy was performed again. The medications were continued as mentioned in Table 1. Three weeks later, hair began to emerge and gradually grow.

5. Discussion

According to *Ayurveda*, the *Vata* and *pitta* doshas aggravate and reach the roots of the hair and destroy them, causing hair loss. Following that, the *Rakta* and *Kapha* will block the pores and inhibit further hair growth. This disorder is known as Indralupta or *Khalitya* [9–11].

Excessive indulgence in the consumption of *Kshara* (Alkaline), *Lavana* (Salt), *Katu* (Spicy) and *Viruddha Ahara* (Unwholesome food) have been mentioned as etiological factors for hair loss by *Acharya Charaka* [12]. Mental tension, anxiety, anger, and shock can enhance Pitta and Vata Dosha. While Vata has an aggravation in its *Ruksha, Khara,* and *Chala* qualities, Pitta's *Ushna* and *Tikshna* properties are increased. An exacerbated Pitta (*Bhrajaka Pitta*) assisted by vitiated *Dehoshma* destroys the *Keshabhoomi*, while an enhanced Vata causes more frequent and protracted *Sirasankocha* via its *Ruksha* and *Khara* Guna. Normal *Kapha Dosha's Snigdhatva* and *Pichchhilatva* maintain the skin smooth and moist. By intensifying the *Ushna, and Tikshna*, properties of pitta the kapha at the scalp gets liquified and fills the roma kupa (pores). *Ruksha*, and *Khara* qualities of Vata Dosha, the Sneha and *Pichchhilatva* of the *Kapha Dosha* are dried up inside the pores of the scalp skin, preventing the formation of new hair and producing *Indralupta* [13].

Many scholars have reported that cupping therapy improves blood circulation and removes toxins and waste from microcirculation [14]. This can be done by enhancing microcirculation, stimulating capillary endothelial cell healing, speeding granulation and angiogenesis in localized tissues, and gradually relaxing the patient's muscles [15].

Table 1
Treatment Schedule, observations and results.

Day of Visit	Medicines/procedure	Dose	Observations and results
1st week	*Krimikuthara rasa*	2 tablets (125 mg each) BD Before food	No changes were seen
	Vidangarista	3 tsp BD After food	
	Arogyavardhini Rasa	2 tablets (125 mg each) BD Before food	
	Malatyadi taila	External application over scalp	
3rd week	Modified *Alabu* (cupping therapy) was performed	(Image 2)	No visible changes and the irritation was reduced. Hair continued to fall out.
	Punarnava Mandoor	2 tablets (125 mg each) BD Before food	
	Poorna chandrodaya rasa	1 tablet (125 mg each) BD After food	
	Narasimha Rasayana	1 tsp on empty stomach early in the morning along with milk	
	Manjistadi Kashaya	3 tsp BD Before food	
	Dhurdhurapatradi taila	External application over scalp	
2nd month	Modified *Alabu* (Wet Hijama) was performed		Tiny white hairs were spotted and the irritation was reduced.
	Asanadi Gana Kashaya	3 tsp BD Before food	
	Poorna Chandrodaya Rasa	1 tablet (125 mg each) BD After food	
	Arogyavardhini Rasa	2 tablets (125 mg each) BD Before food	
	Guduchi + *Ashwagandha* + *Amalaki* + *Musta* + *Vidanga* powder combination	1 tsp BD After food	
	Tab. *Narasimha Rasayana*	2 tab (250 mg) BD	
3rd month	Same medicines were repeated		Complete loss of hair observed. The scalp was shiny with little irritation. (Image 4)
5th month	Same medicines were repeated		Fine black hair emerged from her scalp. No further hair fall.
6th month	Tab *Narasimha Rasayana*	2 tab (250 mg) BD	Hair started growing all over the scalp, No further hair fall
	Guduchi + *Ashwagandha* + *Amalaki* + *Musta* + *Vidanga* powder combination	1 tsp BD After food	
	Manjistadi Kashaya	3 tsp BD Before food	
12th month	The same medicines were continued		Hair were black and completely grown covering the whole scalp, No further hair fall was noticed. (Images 5 & 6)

Cupping eliminates toxic elements from microcirculation and interstitial compartment, benefiting the patient [16].

Cupping tends to activate the complement system and modulate the cellular immune system [17]. It lowers aberrant immune system IgE, IL-2, and C3 levels [18]. It affects the immune system in three pathways. First, it provokes an artificial local inflammation, which infuriates the immune system. Second, triggers the complementary system. Third, amplifies immunological products like interferon and TNF. It also affects the thymus and promotes lymphatic flow [19]. Activation of the immune system by cupping may explain its diverse effects, including therapeutic results in individuals with autoimmune illnesses. Therefore, cupping may have been a significant factor in stimulating the immune system, which helped to facilitate hair eruptions.

Cupping therapy and *Alabu Chikitsa* share a similar concept of blood removal. In *Alabu Chikitsa,* a dried vegetable shell, particularly a bottle gourd, is used on the chosen area of the body. Small, shallow pricks are made on the site, and a vacuum is created inside the bottle gourd using *Deepaka*, such as a small lamp light or burning cotton. This vacuum draws out the air, resulting in the vitiated blood oozing out from the pricked site. In cupping therapy, the same principle is applied, but instead of using a bottle gourd, acrylic or glass cups are used. A pump is employed to create the vacuum inside the cups. Due to this modification, the therapy is referred to as Modified *Alabu Chikitsa*. The scraping (Lekhana karma) was carried out using parijata patra, which was selected due to its coarse leaves prior to the CT to remove or to scrap off the adherent dead tissue or debris. And it will also improve local blood circulation.

Krimighna therapy (Deworming) was used as the first course of therapy. *Krimikuthar rasa, Vidangarista* were chosen for the *krimighna karma*. The components of the *Arogyavardhini compound,* such as *Tamra Bhasma, Triphala, Lasuna, Guggulu,* which have *Dipana* and *Pachana* properties and remove *Ama* (the intermediate byproduct of digestion and metabolism), *Triphala, Shilajita,* and *Kutaki, reduce Kleda (*fluidity), and *Meda* and *Guggulu,* which remove *Avarana* of *Vata* and clear the srotas. Further Pharmacological actions and therapeutic indications of all the prescribed medicines are listed in Table 2. Punarnava Mandoor possesses pandughna, krimighna, and kustaghna actions. There is reported evidence that *Punarnava Mandor* (PM) has the potential to significantly increase iron levels in the body [21]. PM plays a vital role in supplying iron to the hair roots, thereby enhancing their strength and supporting their growth.

Asanadi gana Kashaya possesses *Laghu*, *Ruksha* and *Sheeta guna; Tikta* and *Kashaya rasa* and *Katu Vipaka*. They have *shoshana* and *shodhana* of *kleda, meda, vasa, mutra & sweda*, and *rakta prasadana guna* due to which mitigates *raktagata* and *romakupa gata kleda* and *meda* [22].The *kleda* have likely been alleviated by *Asanadi Gana Kashaya*, facilitating hair growth.

The *Dhurdhurapatradi taila* contains Datura (*Dhatura metal*), which has qualities such as *Rookshana, Teekshana, Vyavayi, Vikasi,* and *Sukshma* in addition to Kapha-Vata hara. It alleviates *Abhishyanda, Sweda, Kleda & Vridhha Mala*. Additionally, it possesses properties known as *Kandughna* (relieve itching) and *Krimighna* [23]. The *Kandughna* and *Krimighna* characteristics' cleaning of the hair roots may have aided in promoting hair growth.

The *Guduchi, Ashwagandha*, *Amalaki, Musta*, and *Vidanga* ingredients in the *churna* combination have all been demonstrated to have immunomodulatory, antioxidant, and antistress effects [24–30], all of which are essential for immune activation for hair regeneration. Guduchi, ashwagandha and amalaka are known for their Rasayana effect. Musta and amalaka are mentioned as Keshya. Vidanga is krimighna.

The *Malatyadi Taila* constituents (*Malati* [31]*, Karaveera* [32]*, Karanja* [33] *and Chitraka* [34]) have also been evaluated as a potential benefit in promoting hair growth. These contents are ushna, teexna and lekhana properties which facilitate avarana and medoharana. *Malati* (*Jasmenium grandiflorum*) has shown antioxidant, antiulcer, antimicrobial and wound healing properties [31]. Dey P et al. have demonstrated that Nerium Indicum (Karaveera) has demonstrated potent anti-inflammatory activity by inhibiting PGE2 expression in murine lymphocytes. This is possibly due to the suppression of NO, TNF-, and COX activity and an increase in IL-10 levels, as well as

Table 2
Medicines, pharmacological actions, and therapeutic indications [20].

Sl. No	Medications	Actions	Ayurvedic Therapeutic Indications
1.	*Krimikuthara Rasa*	*Krimighna*	*Krimi* (Worms)
2.	*Vidangarista*	*Krimighna*	*Krimi* (Worms)
3.	*Arogya Vardhini Rasa* [20]	Antioxidant, Antihyperlipidemic, Hepatoprotective Cholerectic Effect [36]	*Jirna Jwara* (Chronic Fever), *Medodosha* (Disorder Of Adipose Tissue), *Kushtha* (Diseases of Skin), *Yakrutvikara* (Disorder Of Liver)
4.	*Punarnava Mandoor*	Carminative, Hematinic	*Pandu, Grahani, Sotha, Pleeha Roga, Vishamajwara, Arsha, Kusta, Krimi*
5.	*Poorna Chandrodaya Rasa*	Rejuvenator, Aphrodisiac	*Rasayana, Vrushya,*
6.	*Narasimha Rasayana*	Hair Growth Promoter Rejuvenator, Aphrodisiac	*Rasayana, Vrushya, Keshya, Balya*
7.	*Manjistadi Kashaya*	Free Radical Scavenging, Antioxidant, Blood Purifier	*Vartarakta, Pama, Kapalika*, Kushtha, *Medodosha, Raktamandala,*
8.	*Asanadi Gana Kashaya*	Antidiabetic, Antihyperlipidemic [22]	*Switra, Kusta, Kapha And Medo Dosha, Krimi, Pandu Prameha*
9.	*Guduchi* [24] *Tinospora Cordifolia* (Willd.)	Immunomodulator, Antimicrobial, Analgesic, Antistress, Antiallergic, Antioxidant Activities.	*Kushtha, Vatarakta, Jvara, Kamala, Pandu, Rasayana, krimi*
10.	*Ashwagandha* [25, 26] *Withania Somnifera* L.	Anti-Diabetic, Anti-Inflammatory, Anti-Microbial, Anti-Stress, Cardioprotective, Or Neuroprotective Enhanced Endothelial Function, Antioxidant, Modulates Mitochondrial Function, Thyroid Function, And Skin Diseases	*Shotha, Kshyaya, Daurbalya, Vataroga, Klaibya. Rasayana, Balya, Vrishya.*
11.	*Amalaki* [27] [–] [29] *Emblica Officinalis* Gaertn.	Immunostimulant Activity And Moderate Cytoprotective Antioxidant, Anti-Inflammatory, Anti-Microbial, Anti-Stress, Cardioprotective	*Raktapitta, amlapitta, prameha, daha, keshya*
12.	*Musta* [30] *Cyperus Rotundus* L.	Antioxidant, Anti-Inflammatory, Antimicrobial, Anticancer, Neuroprotective, Antidepressive, Antiarthritic, Antiobesity, Vasodilator, Spasmolytic, Bronchodilator, And Estrogenic	*Agnimandya, atisara, shwasa, amavata, atisara, jvara, kasa, mutrakrichra, trishna, ajeerna, krimiroga, keshya*
13.	*Vidanga* [37] *Embelia Ribes* Burm F.	Antioxidant Activity, Wound Healing, Antidiabetic, Central Nervous System (CNS)-Related Disease, Antiviral, Antiobesity, Cardioprotective, Antifungal, Antibacterial	*Shula, Krimiroga, Udararoga, Adhmana*
14.	*Dhurdhurapatradi taila*	Anti-dandruff	*Darunaka*
15.	*Malatyadi Taila*	Hair growth Promoting Rejuvenating	*Indralupta Rasayana*
16.	*Poornachandrodaya Rasa*		

immunomodulatory activity by up-regulating IL-2, IFN-, and IL-10 expression and down-regulating IL-4, TNF-, in vitro [32,35].

6. Conclusion

Altogether, the synergetic immunomodulatory, antioxidant, anti-stress, and other effects of all the medicines along with the immunostimulant effect of cupping therapy might have had beneficiary actions in this patient. Large-scale clinical trials and more sophisticated assessment criteria are required to determine the overall efficacy of these medicines.

7. Patient perspective

The patient was happy with the treatment, and cooperative throughout the treatment. Her informed consent was obtained prior to the publication.

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Author contribution details

Dr Shivanand P: Concepts, Design, Definition of intellectual content, Clinical studies, Experimental studies, Data acquisition, Data analysis, Manuscript preparation, Manuscript editing, Manuscript review. Dr Giramalla P: Literature search, Clinical studies, Experimental studies, Data analysis, Manuscript preparation. Dr Vijay P: Definition of intellectual content, Literature search, Data analysis, Manuscript editing.

Declaration of competing interest

None.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jaim.2023.100805.

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