

## Medicinal Leech Therapy in Alopecia areata patchy (*Khalitya*)-A Case Report

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### Abstract:

Alopecia areata patchy is an autoimmune disease. When Alopecia areata patchy develops, the body attacks its own hair follicles. A person's genetic makeup, combined with other factors, triggers this form of hair loss. A Hindu, Unmarried 29 yr old male patient was seen in the outpatient department of Institute OPD No. 201719479 with complaint of Loss of Hair (Baldness), scarring . The patient was diagnosed as a case of Alopecia areata patchy (*Khalitya*) with clinical findings & examination done. Medicinal Leech Therapy (*Jalauka*) were done along with Internal medicine Tablet *Aarogya-Vardhini*, Tablet *Saptamruta-Loha*, Tablet *Ashwagandha* and *Mahamanjishthadi Kwath* for three months. Leeches are effective at increasing blood circulation and breaking up blood clots. Patient felt relieved of itching and dandruff on scalp. Regrowth of hair was achieved remarkably.

**Key words-** Alopecia areata patchy, Baldness, Blood Letting, Hair loss, Hirudotherapy, *Indralupta*, *Jalauka*, *Khalitya*, Medicinal leech therapy, Panchakarma, Raktamokshan.

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**Introduction:**

Alopecia areata patchy is an autoimmune disease. When Alopecia areata patchy develops, the body attacks its own hair follicles. A person's genetic makeup, combined with other factors, triggers this form of hair loss. It accounts for 2-3% of the new dermatology cases in UK and USA, 3.8% in China, and 0.7% in India. In general population, the prevalence was estimated at 0.1-0.2% with a lifetime risk of 1.7%.<sup>[1-2]</sup> Both males and females are equally affected, but some studies reported male preponderance. It can occur at any age. The youngest case reported in literature is 4-months-old and the oldest in late seventies. Highest prevalence is seen in the third and fourth decade. Family history is seen in approximately 8.7-20% of cases. Currently, there is no cure for Alopecia areata patchy. In modern medicine treatment is unsatisfactory; it has no effect on long term progression.<sup>[3]</sup> Efforts may be used to try to speed hair regrowth such as Cortisone injection. This drug can cause serious side effect. But the good news is that even when your disease is "Active", your hair follicles remain alive.

In classics of *Ayurveda* this ailment has been described as *Khalitya (Indralupta)* under the heading of Head diseases (*Shiro-Roga*) and *Kshudraroga*. *Vata-Piitahar Chikitsa* and increasing blood circulation is one of the major treatments for Alopecia areata patchy.<sup>[4]</sup> Medicinal leech therapy (MLT) or *hirudotherapy*, an old technique, has been studied by many researchers for possible effects on various diseases such as inflammatory diseases, Skin diseases etc. Clinical observation has shown its effectiveness in the management of

Alopecia areata patchy (*Khalitya*).

**Case Report:**

A Hindu, unmarried 29 yr old male patient was seen in the outpatient department of Institute OPD No. 201719479, with complaint of Loss of Hair (Baldness), scarring etc. The patient was diagnosed as case of Alopecia areata patchy (*Khalitya*) with clinical findings and local examination. A history of the present illness revealed that the patient was apparently normal 2 year back. Patient experienced dandruff and itching of scalp 1.5 year back. After few months, he suffered from hair fall. Gradually he developed patchy hair loss. He was under mental stress due to hair loss. The problem increased day by day and the patient became bald at Parietoccipital area, and the patient took self internal medicine and local application of oil for 9 months which did not relieve the condition. After 6 months, the patient experienced increased hair loss. With this complaints patient approached to Shalakya Tantra (ENT) OPD of the Institute Hospital.

The personal history revealed that the patient is vegetarian. Patient was not addicted to any addiction. (Table-1) There was genetic linkage of the disease observed in the family, his father suffered from same disease and became bald. Patient was not having any major illness. The general examination of patient showed pulse rate of 80/min, respiratory rate of 23/min, blood pressure of 130/80mm of Hg and body weight of 78 kg.

On local examination patchy hair loss of scalp at parieto-occipital area. Hair on other areas of scalp were thin and fragile. Hair could be easily pulled out.

On systemic Examination Central nervous

system, Cardiovascular system, Respiratory system and Musculoskeletal system was found to be within normal limit. On per abdomen examination, abdomen was bloated, stiff and there was mild tenderness on palpation.

**Pathological Investigations-** Hb- 12.6 g/dl. TLC, DLC and ESR values were within normal limit.

**Test-** Following test are used to examine hair loss.

1. Norwood Hamilton Scale: It is found to be IV<sup>th</sup> Type hair loss.
2. Hair Pull Test

**Treatment Planned:**

Primary management of Alopecia areata patchy (*Khalitya*) is Detoxification (*Panchakarma*). As per Ayurved literature application of *Jalauka* (Leeches) on diseased area is a type of *Raktamokshan Panchakarma Chikitsa* (Blood Letting). It

is performed to eliminate the toxins from the bloodstream. *Jalauka* (Leeches) are worms with suckers on each end. Blood vitiated by *Pitta* should be removed from the body (Diseased part) by using *Jalauka* (Leeches) because they are cold and born in water. Application of *Jalauka* (Leeches) were done as per methodology described by Ayurved text with all aseptic precautions.

After First 1 month session of Medicinal Leech Therapy (*Jalauka*) (Table-2) patient was kept on oral medication as following. After First 1 month session, Medicinal Leech Therapy (*Jalauka*) was done once a month along with internal medication up-to 3 month. (Table-3). The medicines were procured from outside *Ayurvedic* pharmaceutical shop. Follow up was taken once in a 15 days.

**Table-1: Personal History:**

Micturition	5-6 times a day, 0-1 time a Night.
Bowel habit	Irregular.
Water intake	Not adequate(1.5-2lit/day)
Sleep	Not adequate
Appetite	Mostly fast / junk food
Stool	Constipation
Scalp Hair	Thin & Fragile
Skin Type	Dry
Hair Wash habit	Twice a week with shampoo
Oil application habit	Coconut oil every morning

**Table-2: Medicinal Leech Therapy (*Jalauka*):**

<i>Panchakarma(Raktamokshan)</i>	Frequency	Duration
Application of <i>Jalauka</i> (Leeches) 3 at a time	Twice a Month	Upto First 1 Month
	Once a Month	Upto last 3 month
Total Duration	4 Month	

**Table-3: Internal Medicines**

Medicine	Dose	Duration
1.Aarogya Vardhini Vati(500mg each)	2 Tab. TDS with water	2 month
2.Tb.Saptamruta Loha(500mg each)	2Tab. TDS with water	3month
3.Tb.Ashwagandha(500mg each)	2Tab. TDS with water	3 month
4.Mahamanjishthadi Kwath	10 ml TDS with water	3month

**Table-4: SALT Score:**

Area	SALT (Before Treatment)	SALT (After Treatment)
Vertex	4	1.2
Posterior aspect of Scalp (Occiput)	1.4	0.2
Total Score	5.4	1.4

**Assessment of Result:**

Assessment is done on the basis of improvement in clinical symptom and SALT score

Scalp is divided into 4 areas namely:

Vertex- 40% (0.4) of scalp surface area.

Right profile of scalp- 18% (0.18)of scalp surface area.

Left profile of scalp- 18% (0.18) of scalp surface area.

Posterior aspect of scalp- 24% (0.24) of scalp surface area.

Percentage of hair loss in any of these areas is percentage hair loss multiplied by percent surface area of scalp.

SALT score is sum of percentage of hair loss in all above mentioned areas.(Table-)

**Advise:**

1. Do's-

- ✓ Washing of hair 2 to 3 times a week with herbal shampoo.

- ✓ Use natural oil for scalp.
- ✓ Use cap when at outside home.
- ✓ Have adequate sleep

2. Don'ts-

- ✗ Avoid direct sun exposure.
- ✗ Avoid use of Hair dryer.
- ✗ Avoid any chemical Cosmetic Hair product.
- ✗ Avoid Fast / Junk Food

On the first follow up, the patient reported reduction in Itching of Scalp a Mild reduction in hair fall. Improvement was noted in anxiety. After 3 month of treatment with above medication there was complete relief in hair fall, hair became thick and strong. New hair growth started After 3 month of Treatment. The patient was on follow up till two months, without any single episode of relapse.

### Images Before/During Treatment and After Treatment:



Fig-1 Before/during treatment

Fig-2 After treatment

#### Result and Discussion:

*Vāta, Pitta, Kapha and Rakta* are involved in *Khālitya* (Alopecia areata patchy) as mentioned in the texts. Excessive *Pitta dosha* is main reason for hair loss. *Romakupagata* (Hair follicles) contain *brajaka pitta*. It increases root of hair and associates itself with *vata dosha* it results in the falling of hair. *Kapha and rakta* then together block the follicle not allowing further fresh hair growth. *Khālitya* is primarily a *pitta* predominant *tridoshajanya vyadhi*. *Vata-Piitahar Chikitsa* and increasing blood circulation is one of the major treatments for *Khālitya* (Alopecia areata patchy).

Medicinal Leech Therapy (*Jalauka*) has analgesic, anti-inflammatory, platelet inhibitory, anticoagulant, and thrombin regulatory functions, as well as extracellular matrix degradative and antimicrobial effects. Following the bite, leeches immediately release hyaluronidase and collagenase enzymes to facilitate tissue penetration and spread of their bioactive molecules. These enzymes also support antimicrobial activity.<sup>[5-6]</sup>

Leech feeding and therapeutic effects require increased blood flow. These are achieved mainly by histamine - like molecules that cause vasodilatation and arise via local vascular permeability. Acetylcholine is also a component in leech secretions, causing endothelial muscle relaxation and vasodilatation.

Medicinal Leech Therapy (*Jalauka*) is the best treatment for *Pittaja* and *Raktaja-Vikara*. It helps to suck out impure blood (*Rakta & Pitta Dosha*), open the hair follicle for new growth (*Kapha dosha*). Internal medications were chosen on the basis of their *Raktashodhaka* (Blood Purification) property. *Rasāyana* drugs which were given also had hair growth (*Keshya/Vatahar*) property. Looking towards both ancient and modern Pathophysiology it shows that Medicinal Leech Therapy (*Jalauka*) assist in pathology breaking of *Khālitya* (Alopecia areata patchy) with the help of *Ayurvedic Keshya/Rasayan* (Hair grow) drugs.

**Conclusion:**

Based on clinical signs and symptoms, the disease Alopecia areata patchy can be correlated to *Khalitya*. Medicinal Leech Therapy (*Jalauka*) technique is cheap, effective, easy to apply. In this study Management of Alopecia areata patchy (*Khalitya*) with the help of Ancient Medicinal Leech Therapy (*Jalauka*) along with prescribed *Ayurvedic* Medicines were found to be effective. There is a need of study on this Medicinal Leech Therapy (*Jalauka*) in a large number of population suffering from Alopecia areata patchy (*Khalitya*).

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