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A Clinical Study of *Jalaukāvchārna* in the Management of *Indralupta* w.s.r. *Alopecia areata*

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ABSTRACT

Hair loss is silent but devastating problem which may occur to a healthy person also. It has been regarded as geriatric physiological phenomena, generally after the mid-forties. In *Ayurveda*, alopecia may be considered as *Khalitya* or *Indralupta*. *Indralupta* is the type of hair loss in patchy form on scalp and somehow correlates with alopecia areata. It is one among the *Kapalagata Roga*. As *Indralupta* is included in *Kshudra Roga*, and in many *Kshudra Rogas*, *Jalaukāvchārna* is directly indicated. *Prachchhan* is also mentioned as a favourite method of *Raktamokshana* in *Indralupta*. *Raktamokshana* is indicated in *Raktaja Vyadhi* that helps in draining the vitiated *Rakta*, especially *Jalauka* indicated in *Pitta Dosha* which in turn plays an important role in *Samprapti Vighatana* of *Indralupta*. The vitiated *Rakta* with *Kapha* obstructs the hair follicle due to which hair loss is seen. *Ayurveda* advocates use of purification measures along with topical use of instrument and drug for effective management of *Indralupta*. Hence, this study aims to analyze and assess *Jalaukāvchārna* indicated for *Indralupta* in *Ayurvedic* texts.

KEYWORDS

Indralupta, *Alopecia Areata*, *Jaloukacharana*, *Kshudra Roga*, *Raktamokshana*



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INTRODUCTION

Alopecia areata, also known as spot baldness, is an autoimmune disease in which hair is lost from some or all areas of the body, usually from the scalp, due to the body's failure to recognize its own body cells and subsequent destruction of its own tissue¹. Early hair fall has been attributed to be the result of varied factors like faulty hair care, hormonal imbalance; pollution etc. Patient may describe it as either a diffused or localised hair fall. Alopecia areata was first coined by Sauvages in 1760. It accounts for 2-3% of new dermatology cases in UK and USA, 3.8% in China and 0.7% in India. In general population, the prevalence was estimated to be at 0.1-0.2% with a life time risk of 1.7%. Both males and females are equally affected but some studies reported male preponderance².

Alopecia areata is a disorder in which there is loss of hair causing patches of baldness but with no scarring of the affected area. Alopecia totalis is a condition where, there is loss of hair from entire scalp and Alopecia Universalis is another condition where loss of hair over the entire scalp and body. Alopecia areata patchy, the most common variation of the autoimmune disease, presents itself as round, smooth patches of various sizes³.

In *Ayurveda*, alopecia may be considered as *Khalitya* or *Indralupta*. It is the type of hair loss in patchy form on scalp and somehow correlates with alopecia areata. *Indralupta* is one among the *Kapalagata Roga*⁴ as explained by *Vagbhata* whereas *Sushruta*⁵ considered it in *Kshudra Roga*. *Harita* describes *Indralupta* in detail by describing its specific types such as *Vataja*, *Pittaja*, *Kaphaja* and *Sannipataja Indralupta*⁶.

The present study was undertaken to evaluate the effect of leech application in alopecia and in alopecia areata. For *Indralupta*, *Jalaukavacharana* is indicated as the choice of drug. *Raktamokshana* is indicated in *Raktaja Vyadhi* and it helps in draining the vitiated *Rakta*, especially *Jalauka* indicated in *Pitta Dosha* which in turn plays an important role in *Samprapti Vighatana* of *Indralupta*⁷. The vitiated *Rakta* with *Kapha* obstructs the hair follicle due to which hair loss is seen.

AIMS & OBJECTIVES

1. To evaluate the effect of *Jalaukāvchārna* in the management of *Indralupta* w.s.r. to alopecia areata. [Ethical Committee Clearance Number- UAU/R/C/IEC/2016-17/2]

MATERIALS AND METHODS

Selection of the patients: 20 patients of *Indralupta* were selected from the



Department of Panchkarma OPD/IPD, Rishikul Campus, Haridwar. The patients were selected on the basis of inclusion and exclusion criteria depending on the detailed clinical history, physical examination and other necessary investigations irrespective of their caste, creed and gender.

INCLUSION CRITERIA:-

1. Age 15-45 year
2. Single or multiple patches measuring less than 6x6 cm involving one or more sites.
3. Patient having clinical feature of patchy hair loss occurring on scalp.
4. Patient fit for **Jalaukāvchārna**.

EXCLUSION CRITERIA:-

1. Age <15 years and >45 years
2. Alopecia totalises and alopecia universalise
3. Focal sepsis or any other inflammatory conditions over the affected site.
4. Any other skin disorder
5. Patients of diabetes mellitus
6. Patients of bleeding disorder
7. Patients treated with corticosteroid or immuno-suppressant in past 3 months
8. Patients who have been diagnosed to have local systemic disorder
9. Patients on anti-cancer drug
10. Pregnancy and lactation

INVESTIGATIONS:-

- Haemoglobin %

- TLC
- DLC
- Erythrocyte sedimentation rate (ESR)
- Random blood sugar (RBS)
- Bleeding Time
- Clotting time
- Thyroid profile if necessary

INTERVENTION: - Twenty patients of alopecia areata were treated with 5 sittings of *Jalaukāvchārna*, with the gap of 10 days. *Jalaukāvchārna* was applied after *Abhyanga* and *Swedana* on scalp patches area of hair loss.

Follow up period: 60 Days.

CRITERIA FOR ASSESSMENT

SIGN & SYMPTOMS	SCORE
1) HAIR LOSS PATCH	
Absent	0
Present	1
2) ITCHING	
Absent	0
Present	1
3)NUMBER	
No patch	0
Up to 2 patch	1
Up to 3 patch	2
Up to 4 patch	3
Up to 5 patch	4
>5 patch	5
4)SIZE	
00 mm	0
01-10 m cm	1
11-20 mm	2
21-30mm	3
31-40mm	4
>40mm	5
5)AREA	
Left side (temporal)	18% (5+4+5+4)
Right side (temporal)	18% (5+4+5+4)
Top side (parietal)	40% (10+10+10+10)
Back side (occipital)	24% (6+6+6+6)

STATISTICAL ANALYSIS:-



The obtained data was subjected to various tests. On both subjective parameters, “Wilcoxon test” was applied while on objective parameters i.e. Number and Size

of patches “Wilcoxon test” was applied and on Area of patches and SALT score “paired” t-tests” were applied respectively.

RESULTS

Table 1 Effect of Intervention on Subjective Parameters

	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Itching	0	0	-3.276 ^a	<0.001	100	Sig
Hair loss patch	1	0	-3,276 ^a	<0.001	63.6	Sig

Table no. 1 shows that on subjective parameters, 100% improvement was found in itching and 63.6% improvement was

found in hair loss patches. Both of these are considered significant statistically ($p < 0.001$).

Table 2 Effect of Intervention on Objective Parameters

	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Number of patches	1	1	-2.449 ^a	0.014	27.3	Sig
Size	2	1	-3.912 ^a	0.000	73.1	Sig

Table no. 2. Above table shows that number of patches was reduced by 70.4% and size of the patches were reduced by 73.1%. On

both the objective parameters Significant result was obtained statistically ($p < 0.05$).

Table 3 Effect of Intervention on Area of Patches and Salt Score

	Mean		t-Value	P-Value	% Effect	Result
	BT	AT				
Area	29.4	13.3	7.382	0.000	54.8	Sig
SALT Score	9.7	3.7	6.592	0.000	61.9	Sig

Table no. 3. Above table shows that Area of patches was reduced by 31.3% and 39% improvement was found on SALT Score. On both the objective parameters Significant result was obtained statistically ($p < 0.05$).

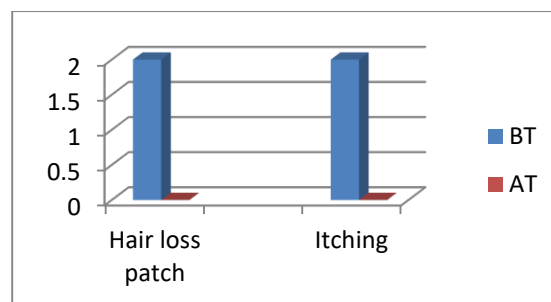


Fig 1 Effect of intervention on subjective parameters

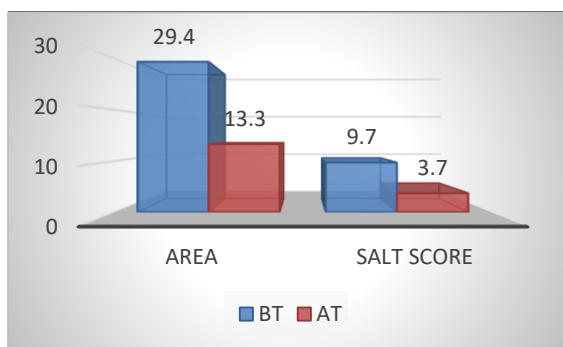


Fig 2 Effect of Intervention on Objective Parameters

Complete remission of symptoms was found in this study in 21.05% patients. In this study maximum patients got A₃ Regrowth (50-74%) i.e. 42.11% and 26.32% got A₂ Regrowth (50-74%) and 21.05% while 5.26% patients got A₄ and A₀ (no changes) respectively.

Table 4 Overall Regrowth of hair loss on Patches by *Jalaukavcharna* on 19 patients of *Indralupta*

STATUS	No.	%
A ₀	1	5.26%
A ₁	0	0%
A ₂	5	26.32%
A ₃	8	42.11%
A ₄	1	5.26%
A ₅	4	21.05%

DISCUSSION

In all *Kshudra Roga*, *Rakta Dusti* is consider as prime pathology while *Raktamokshana* is advocated as an effective method of *Shodhana* as a treatment in *Rakta Dusti*. As *Indralupta* is also a *Kshudra Roga* and after *Snehana* and *Swedana* *Raktamokshana* is indicated in *Indralupta*⁸. While in many *Kshudra Rogas*, *Jalaukāvcahārna* is directly indicated. Although no specific *Purvakarma* is

mentioned before performing *Jalaukāvcahārna* still mild *Abhyanga* and *Swedana* are done before *Jalaukāvcahārna* with *Taila* for *Abhyanga*.

Jalauka is known as the best *Anushastra* (used in the place of *Shastra* in those who are afraid of surgery). *Jalaukāvcahārna* being a painless procedure it is more suitable than *Prachchhan* to most of the patients.

In *Jalaukāvcahārna*, *Jalauka* (leech) has many medicinal secretions like hirudin which inhibit the blood coagulation, acetylcholine and histamine like substance that are vasodilators and lead to increase blood circulation. Carboxypeptidase A inhibitors also increase local blood flow. This makes hair follicles stronger and hair growth. Bdelins and eglins having anti-inflammatory property and hyaluronidase increase interstitial viscosity.

CONCLUSION

On the basis of present work, some conclusions are drawn as follows:

- In present study 63% patients responded as 50% to 100% re-growth of hairs in alopecia patches without any adverse effect.
- The average area of hair loss patches was reduced from 22.68mm to 8.57mm.



- Improvement in re-growth of hairs in respect of SALT score was found 61.9%.
- This study proved that *Jalaukavcharna* is an effective and safe treatment of *Indralupta*.



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