“THE MANAGEMENT OF INDRALUPTA WITH KARVEER MOOLA LEPA FOLLOWING JALAUKA AVACHARANA”

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ABSTRACT

Alopecia areata is not life threatening disorder but it definitely affects the quality of life as it has psychological impact due to bald patch. It is characterized by smooth, circumscribed bald patch(s) on the hair bearing area. It arises from the vitiation of tridoshas and Rakta. Treatment advised is Sira vedhana and topical application of herbal and mineral drugs. To avoid complications of Prachhana, Jalauka avacharana was preferred and Karveer Moola was chosen as drug for Topical application at the site of Indralupta. 30 diagnosed patients of Indralupta were subjected to clinical trials conducted at Bharati Vidyapeeth Medical Foundation’s Ayurved Hospital and Research center. Institutional Ethical Committee clearance was taken prior to commencement of trial. Patients were divided into control and trial group by lottery method. Control group was treated with Jalauka avacharana fortnightly on the bald patch and trial group was treated with Jalauka avacharana followed by Karveer Moola lepa. Follow up were taken after every 7 days. Observations were made about arbitrary the percentage of hair growth on patch of Indralupta by visual examination and images taken during the study. For statistical analysis Intra Group paired t-test was used and for comparing the results of both groups ‘Two sample t-test’ was used. Average 15% hair growth was observed in control
group and 25% in trial group. Thus, was concluded that Karveer Moola lepa followed by Jalauka Avacharana is partially effective and comparatively more effective than Jalauka avacharana alone.

**KEYWORDS:** Alopecia areata, Indralupta, Karveer, Jalauka avacharana.

**INTRODUCTION**

Hair loss is one of the common problems seen across all age groups. It can lead to significant psychological and emotional distress that supports a multibillion-dollar pharmaceutical and cosmetic effort to reverse these conditions.

In modern medicine hair loss condition is termed as Alopecia. In today’s era prevalence of alopecia is nearly 25% across the globe.

Alopecia areata-a pattern in which there is one or more well defined spots of hair loss on scalp. The etiology of Alopecia areata is idiopathic or for unknown reasons the body’s own immune system attacks the hair follicles and disrupts normal hair formation.

Currently, the medicines for Alopecia areata are- Topical corticosteroids eg. Flucinolone acetonide cream, Intralesional corticosteroids eg. Hydrocortisone acetate, Minoxidil, Topical immunotherapy eg. DNCB (Dinitrochlorobenzene)

Ayurved has described hair problems under Kshudra roga, Shiroroga as Khalita, Palita, Indralupta etc. Indralupta is a specific condition characterized by hair loss in form of patches in some scalp areas by the vitiation of tridosha and rakta dhatu.[3]

Acharya Sushruta states the treatment as Pracchan followed by lepa application or abhyanga.[4]

Previous work on Indralupta had been carried out by using formulations like Malatyadi taila, Narsimha Rasayana, Hastidanta Mashi, Vandhanyaka lepa and drugs like Gunja, Jaypal with and without Raktamokshan in the form of Jalauka Avachaharana or Prachhana with standard control. So following the principles of management, a study has been designed to study efficacy of Karveer Moola lepa after Jalauka Avacharan in Indralupta.
AIM AND OBJECTIVES

AIM
To explore the possibility of use of topical application of Karveer moola Lepa following Jalauka Avacharana in Indralupta.

OBJECTIVES
1) Procurement, Authentication, Standardization of the trial drug i.e Karveer Moola.
2) To observe the side effects [if any] during treatment.

HYPOTHESIS
Null Hypothesis (H_0)
Application of Karveer Moola lepa following Jalauka Avacharana is possibly not an effective remedy in Indralupta.

Alternate Hypothesis (H_1)
Application of Karveer Moola lepa following Jalauka Avacharana is possibly an effective remedy in Indralupta.

MATERIAL AND METHOD

MATERIAL
- Materials used were Jalauka and Karveer Moola.
- Jalauka was procured from Mankarnika Aushadhalaya, Pune.
- Karveer Moola was procured from Singhad fort area, Pune.
- Authentication of Karveer Moola was done from Department of Botany, Pune University, Pune.
- Standardization of Karveer Moola was done from Department of Ras Shastra and Bhaishajya Kalpana of B.V.D.U., College of Ayurved, Pune.

METHOD
- The Study is a clinical, randomized, active controlled trial study which was conducted at Bharati Vidyapeeth Medical Foundation’s Ayurved Hospital, Dhankawadi, Katraj, Pune.
- Topic of Disseratation is approved with the permission of the Institutional Ethics Committee prior the trials
- The selected patients were allotted into two groups by lottery method-
Group A (Control Group)- 15 patients
Group B (Trial Group)- 15 patients

- Informed Consent of each patient of both the groups was taken prior to their enrollment in the clinical trials.

**DOSAGE SCHEDULE**

- Jalauka Avacharana (for group A and group B) has been conducted twice in a month i.e. day 1 and day 15.
- Trial drug administration (for trial group B only)- Topical application of Karveer Moola on entire bald patch and then was removed by washing with water.
- Lepa was been applied for four weeks excluding the day and one day after the Jalauka Avacharana.

**FOLLOW UP SCHEDULE**

Follow ups were taken on day 7, 14, 21 and 28 of the study duration.

**CRITERIA FOR ASSESSMENT**

- **SUBJECTIVE PARAMETERS**
  - Area covered by hair follicles [arbitrary % improvement in hair growth].
  - Images of the patients were taken before and after the trial and used for analysis.

**OBSERVATIONS**

A) General Observations

It is noted that males were 53.33% and 66.66% in Group A and Group B respectively.
Females were 46.66% and 33.33% in Group A and Group B respectively.

B) Observations of subjective parameters

1. In control group

It was observed that, in 15 patients of Indralupta, on Day 0 there was 0% hair growth i.e. complete bald patch and on Day 28 i.e. at the end of study, there was on an average 15% hair growth. Thus average 15% improvement in regrowth of hair was seen in the study period of 4 weeks.
2. In trial group

It was observed that, in 15 patients of Indralupta, on Day 0 there was 0% hair growth i.e. complete bald patch and on Day 28 i.e. at the end of study, there was average 25% hair growth on the bald patch. Thus average 25% improvement in regrowth of hair was seen in the study period of 4 weeks.
3. **Comparison between Control and trial group**

Comparison of percentage of hair growth in the 15 patients of Indralupta in each i.e. control (A) and trial group (B), it was observed that the complete bald patch (0% hair) in control group was recovered with overall 15% hair growth and in trial group with overall 25% hair growth. Thus it was found that Group B is more effective than Group A on percentage of hair growth in Indralupta.

C) **Side Effects Observed in Trial Group**

In this study, 15 patients in trial group were applied with Karveer Moola lepa following Jalauka Avacharana. On application of Karveer Moola lepa, there were no any side effects observed.

**STATISTICAL ANALYSIS**

The Paired t test was used for Intra group i.e analysis within the groups and Two sample t test was used for comparative analysis between the groups.

In the statistical analysis of control group, the observed t value (17.34) is greater than the table value (3.87), so it is concluded that the improvement on percentage of hair growth was significant.

In the statistical analysis of trial group, the observed t value (17.28) is greater than the table value (3.87), so it is concluded that the improvement on percentage of hair growth was significant.

By observing the values of ‘t’ of both the groups, it was observed that both treatment modalities are effective as calculated value of ‘t’ is greater than the table value of ‘t’.

According to statistical analysis, on 0.5 % of significance level, efficacy of Group B (trial) was more than that of Group A (control) on percentage of hair growth in Indralupta.

**DISCUSSION**

The present study has been designed, by applying the Ayurvedic principles of management of Indralupta i.e. Raktamokshan and then application of lepa or abhyanga. A pilot study was carried out. In present study Shweta Karveer has been chosen as it mentioned in all the formulations of Karveer in bruhatrayis. It is abundantly available too.
Raktamokshan is stated as a modality in the treatment of Indralupta either by Siravedh or Prachhan. Siravedh is having possible risk of excessive blood loss and Prachhan is painful and later may develop sepsis like condition. So instead of siravedh and Prachhan, Jalauka Aavacharana has been preferred. In the patients of Indralupta, it was observed that few of them were having more than one patch. So considering the feasibility of leech application and limitations of study, either one patch or patients of one patch and small size of average 3 cm diameter were included in the study after screening on OPD level.

During the trial, no side effects were observed in Jalauka Avacharan and Karveer moola lepa. In control group of 15 patients, average hair regrowth was 15% seen at the end of 28 days which is statistically significant whereas in trial group of 15 patients, average hair regrowth was 25% seen at the end of 28 days which is also statistically significant.

On 0.05 level of significance, the improvement in hair growth in control group was statistically significant. It was due to the fact that on day 0, there were no hair on the patch i.e. complete bald patch of Indralupta and hair growth up to 15-20% was observed at the end of 28 days. It clearly indicates the significant result in hair growth.

On 0.05 level of significance, the improvement in hair growth in trial group was significant. It may be due to the fact that on day 0, there were no hair on the patch i.e. complete bald patch of Indralupta and hair growth up to 25-30% was observed at the end of 28 days.

The effectiveness of “Karveer moola lepa following Jalauka Avacharan” may be discussed with following points:
1. Jalauka Avacharan (A shodhan Upakrama) leads to expell out the vitiated Rakta along with vitiated tridosha especially Kapha, which are involved in samprapti of Indralupta. Thus vitiated Rakta and kapha would have been removed.
2. Karveer in a single form or formulation with external application is indicated in Kustha, Kandu, Vrana etc. Thus it has therapeutic action (Gamitwa) on skin.
3. Karveer (Nerium odororum) is local irritant, but relatively mild. As irritants, accelerate the intracellular activities that might have relation with stimulation of regrowth of hair.

Thus above trial drug regimen may have shown partial effectiveness in Indralupta.
CONCLUSION
It was concluded that Karveer Moola lepa is a partially effective remedy in the management of Indralupta as-
1) Karveer Moola lepa following Jalauka Avacharana has shown relatively less effectiveness (25-30%) but statistically significant improvement in hair growth in Indralupta.
2) No adverse or side effects were recorded during the study.

REFERENCES
1. API textbook of Medicine, 1: 509, 9th edition.