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# A comparative clinical study on *Tagara-Devadaru Lepa* with and without *Prachhanna* in the management of *Indralupta* with special reference to Alopecia Areata

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## ABSTRACT

Hair disorders causes negative impact towards individual and his/her quality of life. *Indralupta* is a disease in which hair is lost from some or all areas of the body, usually from scalp. It shows one or more round spot on the scalp . It arises from the vitiation of *Tridosha* and *Rakta*. Treatment advised is *Siravedhana* and topical application of herbal and mineral drugs. To avoid complications of *Siravedhana*, inthis study *Prachhanna* was preffered and *Tagara-Devadaru* chosen as drug for topical application at the site of *Indralupta*. In this study we had taken 40 Diagnosed patients of *Indraluptaa*nd were subjected to clinical trials. They were randomly assigned into two Groups namely Group A and Group B. Group A treated with *Tagara-Devadaru Lepa*, while subject under Group B treated by *Prachhanna* along with *Tagara-Devadaru Lepa*. The treatment modalities of *Tagara-Devadaru Lepa* and *Prachhanna* with *Tagara-Devadaru Lepa* are equally efficacious in treating.On comparing the results of Group A and Group B, the conclusion were drawn.Both the methods of treatment are cost effective, easy to prepare and had no adverse effects.

**Key words:** *Alopecia Areata, Indralupta, Tagara-Devadaru, Prachhanna, Lepa.*

## INTRODUCTION

Among the eight branches of *Ayurveda*, the science of *Shalyatantra* or Surgery is placed in a position of great respect as it ensures early and complete relief from diseases, encompasses not only surgical procedures but also various other minimally invasive surgical methods like *Kshara Karma* (chemical cautery*), Agnikarma* (thermal cautery), *Rakta Mokshana (blood letting*) and equally adoptedble in all the other branches of Ayurveda.[1]

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 on the hair bearing area.[2]

Steroid is only treatment for this disease in modern medicine. Hair often regrows on its own but treatment helps the hair to regrow more quickly.[3] In this study patient with *Indralupta* disease treated with *Tagara-Devadaru Lepa* with and without *Prachhanna.* This treatment helps to regrow hair earlier.[4]

*Indralupta* is a common form *Kapalagata Roga* according to *Vagbhatta,* it is observed in adults Occasionally found in childrens. It is characterized by loss of hair with poor replacement.[5] *Sushruta* mentioned in *Kshudra Roga,* according to *Acharya Susruta, Pitta* associated with *Vata* gets localised in the *Roma Kupa* and causes hair fall, later on *Kapha*

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associates with *Rakta Dosha* causes the obstruction to the hair roots and restricts their regrowth.[6]

Hair is one of the defining characteristics of mammals. A human have around more than 2 million hair follicles which have both positive and negatives effect on skin health. It is one of the vital part of our body which is derived from ectoderm of the skin, it is work as a protective appendage for the body. The changes in hair follicle density, size or growth cycles are the fundamentally causes of hair disorders. Hair loss, also known as alopecia is a loss hair from the head or body.[7] Alopecia areata is a prevalent autoimmune skin disease, resulting in the loss of hairs on the scalp and elsewhere on the body. It usually starts from one or more small, round, smooth patches on the scalp and progress total scalp (alopecia totalis) or complete body hair loss (alopecia universalis). Scalp is the most commonly affected area, but beard or any hair bearing site can be affected alone or together with the scalp.[8]

Ayurveda suggests many preventive and curative treatment measures for *Indralupta* like *Pathyasevana, Apathya Nishedha, Rasayana Moordha Taila (Abhyanga, Pichu, Shirodhara, Shirobasti), Shirolepa* and parasurgical procedures like *Raktamokshana.*[9]

*Prachanna Karma* indicated in *Raktaja Vyadhi* that helps in draining the vitiated *Rakta*, this process purifies the blood and relieves blockage at the roots of hair follicle in turn plays important role in *Samprapti Vighatana* of *Indralupta. Tagara-Devadaru Lepa* is applied on the scalp to promote hair growth. *Susruta* mentioned that *Lepa* should be applied after *Prachannna Karma* then better hair growth is obtained.[10]

In the present clinical study 40 patients of *Indralupta* are treated by dividing them into 2 groups with 20 patients in each group. In 'A group' *Tagara Devadaru Lepa* is applied for 30 days. In' Group B' *Prachanna Karma* weekly once for one month (4 weeks) followed by *Tagara Devadaru Lepa* application daily for 30 days. The main aim of this study to evaluate the efficacy of *Tagara Devadaru Lepa* with and without *Prachanna Karma*.

## OBJECTIVES

To evaluate the efficacy of *Tagara-Devadaru Lepa* with and without *Prachhanna Karma* in the management of *Indralupta.*

## MATERIALS AND METHODS

It is a comparative clinical study in which 40 patients of Indralupta were selected and randomly divided into 2 groups as Group A - 20 patients and Group B - 20 patients.

Group A was subjected to all the selected 20 patients with *Tagara-Devadaru Lepa*.

Group B was subjected to all the selected 20 patients with *Prachhanna Karma* along with *Tagara-Devadaru Lepa*

### Inclusion criteria

- Patient age between 15-60yrs.
- Patients of either sex are taken.
- Diagnosed patient with clinical features of *Indralupta.*

### Exclusive criteria

- *Indralupta* covering the scalp in total i.e. Alopecia Totallus and Alopecia Universalis.
- Abnormal Clotting Time and Bleeding Time.
- Patient with Endocrine disorders.
- Patients suffering from systemic disorders.

### Diagnostic criteria

Patient presenting with clinical features of *Indralupta.*

### Materials Used

1. Sterile Needle
2. Sterile gauze
3. Water
4. *Lepa Curna*

### Method of Preparation

Raw drugs of *Tagara* root of 2kg and *Devadaru* stem 2kg taken in Pounding machine seperately made into

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fine powder, then sieved with cloth. Then fine powder *Tagara* and *Devadaru* was kept in air tight container separately in a dried place.

### Method of Application

#### For *Lepana*

1. Always *Lepa Churna* containers should be kept in a dry place with the lid tightly closed. Care should be taken that hands are completely dry before touching medicine.
2. The part of Application should be cleaned with a piece of wet soft cloth or wet cotton. This place should be thoroughly dried with piece of cotton .
3. The medicine i.e. *Lepa Churna* should be taken in small vessel and Mixed it with water and applied over the affected part of scalp, daily once for a period of one month.
4. The patient should be informed for repeat consultation once in 7days during treatment, and 15days once during followup.

#### For *Prachhanna*

1. Trolly for *Prachhanna* should be kept ready with sterile needle, sterile gauze piece and *Tagara-Devadaru Lepa Churna.*
2. After the systemic examination of the patient and investigations, Patient is made to sit on a stool comfortabely.
3. After all antiseptic precaution, *Sthanika Snehana Swedana* should be done.
4. Take a needle hold it firmly and *Prachhanna Karma* is to be carried out until the *Samyak Lakshana* obtained.
5. The blood coming from the sites of incision, then *Tagara-Devadaru Lepa* was applied, Later on the *Lepa* was removed just before it dries.

*Prachhanna Karma* is carried out once in a week for four weeks. After *Prachhanna Karma, Tagara-Devadaru Lepa* is applied on the affected part.

*Tagara-Devadaru Lepa* Procedure is the same for both Group A and Group B Patients.

### Duration of Treatment

The treatment was started in each group, After diagnosing the disease. The Duration of the treatment was a period of 1month and 2month follow-up. After treatment, the improvement was evaluated.

### Assessment Criteria

Progress was recorded on the basis of number of hairs grown and reduction in the area of *Indralupta* Patch. The cases are grouped into five categories depending upon the improvement of symptoms to the treatment.

1) G0 - Cured

2) G1 - Maximum improvement

3) G2 - Moderate improvement

4) G3 - Mild improvement

5) G4 - No improvement.

The five categories were done by confirming the assessment of parameter.

### Subjective Criteria

#### Patchy Hair Loss

G0 – Absent

G1 – Present

#### Itching

G0 - Absent

G1 – Present

### Objective Criteria

#### Size of Patch

G0 – No Patch

G1 – 0.5 to 1cm

G2 – 1cm to 2cm

G3 – 2cm to 3cm

G4 - >3cm

#### Number of Patch

G0 – Nil

G1 – 1 to 2 in no

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G2 – 2 to 3 in no

G3 – 3 to 4 in no

G4 - >4 in no.

## OBSERVATIONS

The clinical observations from different aspects approaching to the treatment for patients of both Group A and B have been represented showing the incidence, statistic analysis of effectiveness along with clinical assessment of result etc. the data of each item are explained here under and have been represented in the tabular from with footnotes.

### Table 1: Multiple comparisons in Patchy Hair Loss

| Post hoc test | | | | | |
|---|---|---|---|---|---|
| | Comparison between | | % Changes | Sign | Remark |
| Group A | BT | 15th Day | 0% | >0.05 | NS |
| | | 30th Day | 32% | >0.05 | HS |
| | | 45th Day | 57% | <0.05 | Sign |
| | | 60th Day | 74% | P<0.001 | HS |
| | 15 th day | 30th Day | 32% | >0.05 | IS |
| | | 45th Day | 57% | >0.05 | IS |
| | | 60th Day | 74% | <0.01 | HS |
| | 30th Day | 45th Day | 77% | >0.05 | NS |
| | | 60th Day | 61.7% | >0.05 | NS |
| | 45th Day | 60th Day | 39.5% | >0.05 | NS |
| Group B | BT | 15th Day | 0% | >0.05 | NS |
| | | 30th Day | 35% | >0.05 | NS |
| | | 45th Day | 85% | <0.001 | HS |
| | | 60th Day | 85% | <0.001 | HS |
| | 15th day | 30th Day | 35% | >0.05 | NS |
| | | 45th Day | 85% | <0.001 | HS |
| | | 60th Day | 85% | <0.001 | HS |
| | 30th day | 45th Day | 77% | >0.05 | NS |
| | | 60th Day | 77% | >0.05 | NS |
| | 45th day | 60th Day | 0% | >0.05 | NS |
| NS-Not significant HS-Highly significant | | | | | |

### Table 2: Multiple comparisons in Itching

| Post hoc test | | | | | |
|---|---|---|---|---|---|
| | Comparison between | | % Changes | Sign | Remark |
| Group A | BT | 15th Day | 15% | >0.05 | NS |
| | | 30th Day | 54% | >0.05 | HS |
| | | 45th Day | 84.5% | <0.05 | Sign |
| | | 60th Day | 100% | P<0.01 | HS |
| | 15th Day | 30th Day | 46% | >0.05 | IS |
| | | 45th Day | 47.3% | >0.05 | IS |
| | | 60th Day | 100% | <0.05 | Sign |
| | 30th Day | 45th Day | 66.3% | >0.05 | NS |
| | | 60th Day | 100% | >0.05 | NS |
| | 45th Day | 60th Day | 100% | >0.05 | NS |
| Group B | BT | 15th Day | 13.3% | >0.05 | NS |

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| | | | | | |
|---|---|---|---|---|---|
| | | 30th Day | 73.3% | >0.05 | NS |
| | | 45th Day | 86.7% | <0.05 | Sign |
| | | 60th Day | 100% | <0.01 | HS |
| | 15th Day | 30th Day | 69% | >0.05 | NS |
| | | 45th Day | 84.6% | >0.05 | NS |
| | | 60th Day | 100% | <0.05 | Sign |
| | 30th Day | 45th Day | 50% | >0.05 | NS |
| | | 60th Day | 100% | >0.05 | NS |
| | 45th Day | 60th Day | 100% | >0.05 | NS |

NS-Not significant HS-Highly significant

**Table 3: Multiple comparisons in Size of Patch**

| Post hoc test | | | | | |
|---|---|---|---|---|---|
| | Comparison between | | % Changes | Sign | Remark |
| Group A | BT | 15th Day | 6% | >0.05 | NS |
| | | 30th Day | 32% | >0.05 | HS |
| | | 45th Day | 62% | <0.001 | HS |
| | | 60th Day | 84% | P<0.001 | HS |
| | 15th Day | 30th Day | 27.6% | >0.05 | IS |
| | | 45th Day | 59.5% | <0.001 | HS |
| | | 60th Day | 83% | <0.001 | HS |
| | 30th Day | 45th Day | 44% | >0.05 | NS |
| | | 60th Day | 76.5% | <0.01 | HS |
| | 45th | 60th | 58% | >0.05 | NS |
| | Day | Day | | | |
| Group B | BT | 15th Day | 14.4% | >0.05 | NS |
| | | 30th Day | 50.8% | <0.01 | HS |
| | | 45th Day | 77% | <0.001 | HS |
| | | 60th Day | 89.4% | P<0.001 | HS |
| | 15th Day | 30th Day | 37.8% | >0.05 | IS |
| | | 45th Day | 71% | <0.001 | HS |
| | | 60th Day | 86.7% | <0.001 | HS |
| | 30th Day | 45th Day | 53.5% | >0.05 | NS |
| | | 60th Day | 78.6% | <0.05 | Sign |
| | 45th Day | 60th Day | 53.8% | >0.05 | NS |

NS-Not significant HS-Highly significant

**Table 4: Multiple comparisons in No. of Patch**

| Post hoc test | | | | | |
|---|---|---|---|---|---|
| Group | Comparison between | | % Change | Sig. | Remarks |
| Group A | BT | 15th Day | 7.1% | >0.05 | NS |
| | | 30th Day | 25% | >0.05 | HS |
| | | 45th Day | 64.6 | <0.01 | HS |
| | | 60th Day | 82.1% | P<0.001 | HS |
| | 15th Day | 30th Day | 19.2% | >0.05 | IS |
| | | 45th Day | 62% | <0.01 | HS |
| | | 60th Day | 80.7% | <0.001 | HS |
| | 30th Day | 45th Day | 53% | >0.05 | NS |
| | | 60th Day | 76% | <0.01 | HS |
| | 45th Day | 60th Day | 49.4% | >0.05 | NS |
| Group B | BT | 15th Day | 16.6% | >0.05 | NS |

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| | | | | | |
|---|---|---|---|---|---|
| | | 30th Day | 50% | <0.05 | Sign |
| | | 45th Day | 73.8% | <0.001 | HS |
| | | 60th Day | 88% | P<0.001 | HS |
| | 15th Day | 30th Day | 40% | >0.05 | IS |
| | | 45th Day | 73.8% | <0.001 | HS |
| | | 60th Day | 85.7% | <0.001 | HS |
| | 30th Day | 45th Day | 47.6% | >0.05 | NS |
| | | 60th Day | 76% | >0.05 | NS |
| | 45th Day | 60th Day | 54.5% | >0.05 | NS |

**Table 5: Overall effect of *Tagara-Devadaru Lepa***

| Class | Grading | Tagara-Devadaru Lepa without Prachhanna | | Tagara-Devadaru Lepa with Prachhanna | | Total | |
|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No | % |
| <24% | Poor Response | 0 | 0 | 0 | 0 | 0 | 0 |
| 25-49% | Moderate Response | 0 | 0 | 0 | 0 | 0 | 0 |
| 50-75% | Good Response | 5 | 25% | 6 | 30% | 11 | 27.5% |
| 75-100% | Excellent Response | 15 | 75% | 14 | 70% | 29 | 72.5% |
| | Total | 20 | | 20 | | 40 | |

The overall effect of *Tagara-Devadaru Lepa* without *Prachhanna* therapy in Group A had excellent response in 15 patients (75%), good response in 5 (25%) patients and No response to moderate and poor.

The overall effect of *Tagara-Devadaru Lepa* with *Prachhanna* therapy in Group B had excellent response in 14 patients (70%), good response in 6 (30%) patients and No response to moderate and poor.

The overall effect in Group A and in Group B, Both the Groups shows excellent response but when comparing all the parameters *Prachhanna* with *Tagara-Devadaru Lepa* Group shows excellent response to all the parameters then in the *Tagara-Devadaru Lepa* Group.

## Discussion

The study has been designed as per the Ayurvedic principles of management of Indralupta. In Ayurvedic literature *Indralupta* has been explained as one of the *Kshudra Roga* by *Susruta* .

### Mode of action of *Prachhanna Karma*

*Prachhanna* indicated in *Raktaja Vyadhi* that helps in draining the vitiated *Rakta*, in turn plays important role in *Samprapti Vighatana* of *Indralupta.* So that *Sushruta* mentioned *Lepas* applied after *Prachhanna Karma* for better hair growth.

*Prachhanna* indicated in *Uttana Rakta*, and *Ekadesha Pindita Rakta*. In this case of *Indralupta Rakta* vitiated in localised area so *Prachhanna* helps to evacuate the vitiated *Rakta*. By doing this procedure the obstructed *Srotas* gets cleared which stimulates the regrowth of hair.

### Mode of action *Tagara-Devadaru Lepa*

*Tagara-Devadaru Lepa* applied on the affected area of scalp to promotive hair growth. *Sushruta* mentions that if *Lepa* is applied after *Prachhanna* then better hair growth is obtained. Even after doing *Prachhana Karma* if the vitiated *Rakta* is not evacuated properly then *Ela, Shitashiva, Kustha, Tagara, Patha, Bhadradaru, Vidanga, Chitraka, Trikatu, Gaaradhuma, Ha Idra, Ankura* Of *Aak, Karanja Phala*, among these as like three or four or Entire medicine are taken in the form of *Churna*, along with *Lavana* and *Taila*, this should used for scraping. Due to proper evacuation of vitiated *Rakta*, the *Sroto-Avarodha* which prevents the regrowth of the hair gets cleared, which indirectly helps in the regrowth of the hair and it also act as *Vedana Shamaka.*

*Tagara-Devadaru Lepa* mainly act as *Kapha-Vatahara*, which obstructs the regrowth of the hair is used after *Prachhanna Karma*. *Lepa* has the efficacy of pacifying or restoring the vitiated blood and pitta to their normal condition. *Lepa* pacifies the vitiated *Vayu* and

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*Kapha* and tends to bring about purification and healing of the ulcer and causing of the substance of pain and swelling.

## CONCLUSION

The prevalence of disease is observed more in males than females. *Prachhanna Karma* and *Tagara-Devadaru Lepa* has very significant effect in pacifying the *Indralupta*. Among the different treatment procedures, *Prachhanna Karma* and *Tagara-Devadaru Lepa* is important as it is easy to practice, adoptable, cheaper and widely accepted *Tagara-Devadaru Lepa* with *Prachhanna* and *Tagara-Devadaru Lepa* without *Prachhanna* are to be cost effective, safe and better treatment modality for *Indralupta.* In this clinical study, *Tagara-Devadaru Lepa* and *Prachhanna Karma* with *Tagara-Devadaru Lepa* have significant effect but clinically *Prachhanna* with *Tagara-Devadaru Lepa* have more significant effect on *Indralupta* campare to *Tagara-Devadaru Lepa*. It is concluded that *Indralupta* is condition in which *Prachanna* a type of *Raktamokshana* provides quite relief to the patient.

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