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A Comparative Study to Evaluate the Efficacy of *Asthisrinkala Lepa* and *Thriphala Mashi* with *Pracchanna* in the Management of *Indraluptha* w.s.r. to Alopecia Areata

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ABSTRACT:

Indralupta is a disease characterized by loss of hair and inhibition of its regrowth. The Alopecia areata is manifested as loss of hair in small round patches. The aggravated *vata* and *pitta* cause hair fall and later aggravated *kapha* and vitiated *rakta* accounts for its poor regrowth. *Pracchanna* and *lepana* are included among various treatment modalities advised for *Indralupta*. In the present study, *Asthisrinkala lepa* and *Triphala mashi lepa* were prepared. A total of 52 patients included were randomly divided into Group A and Group B with 26 patients in each. After doing *Pracchanna* at the affected area, Group A was treated with application of *Asthisrinkala lepa* and Group B with *Triphala mashi*. The results were assessed separately and then comparisons were made between both the treatments. A highly significant ($p<0.001$) reduction in size of lesion was noted after *Pracchanna* with *Asthisrinkala lepa*. *Pracchanna* with *Triphala mashi Lepa* also came up with a highly significant reduction in size of lesion after treatment with p value < 0.001. Thus, both procedures were having good and lasting results, but comparing both the groups, *Asthisrinkala lepa* is more effective clinically than *Triphala mashi lepa* in *Indralupta.*

Keywords: *Indralupta*, *Pracchanna*, *Asthisrinkala lepa*, *Triphala mashi lepa*

INTRODUCTION

Indraluptha is a disease mainly affecting the hair follicles due to vitiation of *tridosha* in various levels along with *rakthadhatudushti*. The cardinal clinical presentation is loss of hair with its poor replacement.[1,2] Alopecia areata, also known as spot baldness, is a condition in which hair is lost from some or all areas of the body. Alopecia areata is believed to be an autoimmune disease wherein the immune system (T-lymphocytes) attacks hair follicles and cause their loss. Genetic predisposition and environmental factors may trigger the initiation of disease. There is a high frequency of family history in affected person, ranging from 8% to 50 % of cases.[3] About 34% to 50% of patients with Alopecia areata will recover within 1 year and 15% to 25% will progress to total loss of scalp hair and body hair,

from which full recovery is unusual.[3] The management of Alopecia areata mainly includes corticosteroids, topical immunotherapy and phototherapy. These may induce hair re-growth but do not change the course of disease.[4] The pathogenesis of *Indralupta* involves two stages. The initial stage is characterized by excessive shedding of hair due to *Vatapitta prakopa*. If noticed early at this stage, *Vatapittahara -Brimhana chikitsa* can be adopted. The condition progresses to the next stage, with the involvement of *Kapha* and *Raktha*, leading to prevention of re growth of hair. Commonly patients seek medical care during this stage.[1,2]The treatment plan adopted for second stage aims at resolving the *srothorodha* by *Kapharaktha sodhana*. But local measures for resolving *romakupa rodha* (obstruction of hair follicle) are essential for *samprapthi vighatana* (disrupting the pathogenesis) of the second stage. For *ekadeshasta rakthadusti* (localized vitiation of blood), the adoptable blood-letting modality is *Pracchanna*. *Pracchanna* refers to blood-letting by means of making multiple pricks using a sharp pointed edge instrument. *Pracchanna* is mentioned in *Indralupta*, as it reaches hair follicles seated in the dermis and removes local obstruction caused by *Kapha* and *Raktha*. Then *lepana* is applied. which is a *bahiparimarjana chikitsa*.[5,6]
The present study was an attempt to evaluate and then compare the efficacy of the *Asthisrinkala lepa* and *Triphala Mashi* after *Pracchanna* on the affected part.

MATERIALS AND METHODS

The study was undertaken after receiving approval from IEC committee **[KAMC/IEC/15/2015-16].** Patients were obtained from OPD and IPD of *Shalyatantra* P.G department, Karnataka Ayurveda Medical College and Hospital Mangaluru. 26 patients were managed with *pracchanna* followed by application of *Asthisrinkala lepa* is applied which was kept as the study group (Group A). *Pracchanna* followed by application of *Triphala mashi* was done for another 26 patients, kept as control group for this study (Group B). The healthy hairs around the affected area were trimmed. The patients were treated by *Pracchanna* followed by *Asthisrinkala lepa/ Triphala mashi* on every 14th day (four times) for a period of 56 days. *Pracchanna* was done over the affected area with the help of a lancet, at a distance of three millimeters. Just after *Pracchanna*, scalp was cleaned with luke warm water, then *Asthisrinkala lepa/ Triphala mashi* was applied. Later, the *lepa* was removed just before it got dried up completely.
Assessment was done based on butter paper analysis. Before treatment the area of lesion had been marked on to a butter paper, then after treatment the lesion was marked again. The area of the lesion was calculated based on the shape of the lesion with appropriate corresponding formula (Square, Rectangle, Triangle, Circle). If the lesion didn't belong to any of the above said shapes, then small squares were imagined and respective areas were calculated. Overall effect of the therapy was assessed in terms of complete remission (100%), marked improvement (75-99%), moderate improvement (50-74%), mild improvement (25-49%) and unchanged (less than 25%). It was observed by adopting the following criteria. Recurrence of the symptoms to the similar extent of severity was noted as recurrence.

RESULTS

Table No.1 Effects of *Pracchanna* with *Asthisrinkala Lepa* (Group A) on 26 Patients of *Indralupta* The mean score of size of lesion was 4 before treatment. It reduced to 3.577 at 14th day of treatment. On 28th day, the score further reduced to 2.923 followed by a decrement to 2.500 on 42nd day. On 56th day, a mean score of 1.846 was obtained due to reduction in the lesion size. A highly significant result ($P < 0.001$) was obtained for reduction in the size of lesion at 14th, 28th, 42nd and 56th day of treatment involving *Pracchanna* followed by application of *Asthisrinkala lepa*.
Table No. 2 The Overall effects of *Pracchanna* with *Asthisrinkala Lepa* (Group A) on 26 Patients of *Indralupta*
Overall effects of *Pracchanna* with *Asthisrinkala lepa* (group a) on 26 patients of *Indralupta* showed that 34.6% of patients had marked relief, 46.15% of patients had moderate relief, 19.23% of patients had mild relief.
Table No.3 Effects of *Pracchanna* with *Triphala mashi* (Group B) on 26 Patients of *Indralupta* Before treatment the mean score of lesion size in group B was 4.000. On the 14th day of treatment, the mean score reduced to 3.769. On the 28th day of treatment the mean score reduced to 3.115. A reduction in lesion size was noticed and mean score reduced to 2.615 on 42nd day of treatment. There was reduction in size of lesion with a mean score of 2.077 on 56th day of treatment. The change observed after treatment with *Pracchanna* followed by application with *Triphala mashi* was highly significant ($P < 0.001$) at 14th day, 28th day, 42nd day and 56th day of treatment.
Table No. 4 The Overall effects of *Pracchanna* with *Triphala Mashi Lepa* (Group B) on 26 Patients of *Indralupta*
Overall effects of *Pracchanna* with *Triphala Mashi lepa*

(Group B) on 26 patients of *Indralupta* showed that 34.6% of patients had marked relief, 34.6% of patients had moderate relief, 19.23% of patients had mild relief and 11.53% of patients had no relief.

Table No. 5 The overall effect of treatment on size of the lesions in both groups On comparing the effect of treatment statistically between two groups using unpaired t test, there is no significant change as p value is > 0.05. In Group A (*Pracchanna* with *Asthisrinkala Lepa***)**, the significant ($p<0.001$) reduction in size of lesion of 53.82% was noted after the treatment. In Group B (*Pracchanna* with *Triphala mashi Lepa***)**, the reduction in size lesion after the treatment was reduced by 48% with significant p value <0.001.

DISCUSSION

Indralupta is a disease characterized by hair fall caused by aggravated *vata dosha* and *pitta dosha* followed by inhibition of hair growth precipitated by obstruction caused due to aggravated *kapha dosha* and vitiated *rakta dhatu. Pracchanna* stimulates the local circulation and removes the vitiated *rakta* from a localized area. The drugs applied as *lepana* is readily absorbed through *dhamanis* by the action of *twakasrita brajakagni*. The *veerya* of drug in *lepa* is responsible for pacification of aggravated *doshas* and regrowth of hair.[7] The modern parlance Alopecia areata characterized by circular bald patches is so far considered as an autoimmune disease. The drugs possessing antioxidant and anti-inflammatory properties can reduce the damage caused to hair, its fall and can promote its regrowth. *Roma* is considered as *mala* of *Asthidhatu*.[8] One of commonly available drug possessing marked action on *asthi* is *Asthisrungala* (*Cissus quadrangularis* L.). The capability of drug to rejoin (*Sandhaneeya karma*) fractured bones and wounds through internal and external application has been documented in *Nighantus*. *Asthisrunkala* (*Cissus quadrangularis* L.) possesses *madhura rasa*, *laghu*, *ruksha*, *sara guna*, *madhura vipaka* and *ushna veerya*.[9] It pacifies aggravated *kapha dosha* by its *ruksha guna* and removes the *srotorodha* by its *ushna* and *sara* properties. The antioxidant and anti-inflammatory actions of aqueous extract of the drug have been proven in previous experimental studies.[9] The phytoconstituents like beta-carotene, vitamin C, flavonoids act as antioxidants that restore the cell damage induced by reactive oxygen species and by enhancing immune protection. The drug is a rich source of Vitamin A that regulate and decrease the excess production of sebum which contributes to hair fall. The drug contains collagen which replenish hair strands with protein and moisture. The Vitamin E present in the drug prevents oxidative damage and provides significant protection against harmful UV rays.[10,11]*Triphala*, the magical combination of *Hareetaki* (*Terminalia chebula* Retz.), *Amalaki* (*Emblica officinalis* Gaertn.) and *Vibheetaki* (*Terminalia bellerica* (Gaertn) Roxb.) has *ropana* property. It is good at removing the *twak-gata kleda*, *kapha* and *rakta*. The *ruksha guna* of all the three drugs also reduces the *kapha dosha*.[12] *Vibheetaki* (*Terminalia bellerica* (Gaertn) Roxb.) has *keshya* property and *Amalaki* (*Emblica officinalis* Gaertn.) can specifically cure *khalitya* and *palitya*.[13] *Triphala* has promising antioxidant property because of polyphenolic compounds such as tannin, gallic acid, ellagic acid and Vitamin C. The strong anti-inflammatory action executed by reducing expression of interleukins and cyclooxygenase enzymes have already been observed from previous studies.[14]

CONCLUSION

There was a highly significant reduction in patchy hair loss among patients treated with *Asthisrinkala lepa* as well as *Triphala mashi*. On clinical basis better results were obtained for *Pracchanna* with *Asthisrinkala lepa* when compared to *Pracchanna* with *Triphala mashi lepa*. Thus, the data showed that *Pracchanna* with *Asthisrinkala Lepa* is more effective than *Pracchanna* with *Triphala mashi Lepa*.

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Conflict of interest - None

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Table No.1 Effects of *Pracchanna* with *Asthisrinkala Lepa* (Group A) on 26 Patients of *Indralupta*

Lesion size	Mean Score		Difference in mean	% of reduction	S.D	S.E.M	t value	p value
	BT	AT						
14th day	4.000	3.577	0.423	10.57%	0.503	0.098	4.282	<0.001
28th day	4.000	2.923	1.076	26.9%	0.483	0.094	11.355	<0.001
42nd day	4.000	2.500	1.500	37.5%	0.509	0.100	15.000	<0.001
56th day	4.000	1.846	2.153	53.82%	0.731	0.143	15.010	<0.001

Table No. 2 The Overall effects of *Pracchanna* with *Asthisrinkala Lepa* (Group A) on 26 Patients of *Indralupta*

Overall improvement/relief	No. of Patients	Percentage (%)
Complete remission	0	0%
Marked relief	9	34.6%
Moderate relief	12	46.15%
Mild relief	5	19.23%
No relief	0	0%

Table No.3 Effects of *Pracchanna* with *Triphala mashi* (Group B) on 26 Patients of *Indralupta*

Lesion size	Mean Score		Difference in mean	% of reduction	S.D	S.E.M	t value	p value
	BT	AT						
14th day	4.000	3.769	0.230	5.75%	0.429	0.084	2.739	<0.001
28th day	4.000	3.115	0.884	22.1%	0.431	0.084	10.455	<0.001
42nd day	4.000	2.615	1.384	34.6%	0.697	0.136	10.126	<0.001
56th day	4.000	2.077	1.923	48%	1.016	0.199	9.644	<0.001

Table No. 4 The Overall effects of *Pracchanna* with *Triphala Mashi Lepa* (Group B) on 26 Patients of *Indralupta*

Overall improvement/relief	No. of Patients	Percentage (%)
Complete remission	0	0%
Marked relief	9	34.6%
Moderate relief	9	34.6%
Mild relief	5	19.23%
No relief	3	11.53%

Table No. 5 The overall effect of treatment on size of the lesions in both groups

Parameters	Group	Mean	S.D	S.E	Difference between Means	t value	p value	Remarks
Lesion Size	A	1.846	0.731	0.143	0.230	0.939	>0.05	NS
	B	2.077	1.016	0.199				