

A COMPARITIVE CLINICAL EVALUTION OF GUNJA MOOLA LEPA WITH THAT OF BEEJA LEPA IN THE MANAGEMENT OF INDRALUPTA WITH SPECIAL

REFERNCE TO ALOPECIA AREATA

Dr. INDRAJA.T, PG Scholar, Dept. of DRAVYAGUNA, Ashwini Ayurveda Medical College and Research center, Tumkur.

GUIDE- Dr. Deepa Nagaraj, Asst Professor, Dept. of DRAVYAGUNA, Ashwini Ayurvvedic Medical College And Research center, Tumkur.

ABSTRACT

Gunja is one of the most ancient and widely used drug in Asia. It has different chemical ingredients which help in scalp diseases. Indralupta is one among the Kapalagata and Kshudra Rogas. It is characterized by loss of hair with poor growth. According to Acharya Sushruta, Pitta associated with Vata gets localized in the Roma kooapa and causes the hair fall, later Kapha dosha associated with Rakta causes the obstruction to the hair roots and restricts them re growth. Gunja Beeja and moola lepa are mentioned in Indralupta chikitsa while explaining Bhallatakadi yoga as remedy for Indralupta. Kayyadeva Nighantu, Bhavaprakasha Nighantu and Rasa tarangini have mentioned Gunja as Indraluptahara. With this background current study was carried out to evaluate the efficacy of Gunja as single herb and to find an easy, less painful and effective treatment for Indralupta (Alopecia areata).

Key words: Gunja Beeja, Gunja Moola, Indralupta, Lepa, Alopecia Areata.

INTRODUCTION

The medicinal plants are the plants whose parts (leaves, seeds, stem, roots, fruits, foliage etc.) extracts, infusions, decoctions, powders are used in the treatment of different diseases of humans, plants and animals. Plant extracts are highly competent against many diseases. It is projected that around 70,000 plant species, from lichens to tall plants, have been used at one time to other for medicinal purposes. The use of different parts of several medicinal plants to cure particular ailments has been in trend from antique times. Besides the demands made by these systems as their raw material, the demands for medicinal plants made by the modern pharmaceutical industries has also increased manifold. Alopecia areata is the most frequent cause of inflammation induces hair loss, affecting 0.1% to 0.2% of population worldwide. The lifetime risk

of developing the disease is about 2% in general population⁴. The experience of alopecia is psychologically damaging, causes intense emotional suffering, and leads to personal, social, and work-related problems.

The disease course is difficult to predict because spontaneous remissions are frequently observed, while in about 5% of cases the disease progresses into total alopecia, and in 1% of cases into universal alopecia. After completed treatment patients must be informed about the high risk of disease relapse. Alopecia areata is having features same as one of the diseases mentioned in classics namely Indralupta.

Indralupta is one among the Kapalagata and Kshudra Rogas. It is characterized by loss of hair with poor replacement. According to Acharya Sushruta, Pitta associated with Vata gets localized in the Roma kooopa and causes the hair fall, and later on Kapha dosha associated with Rakta causes the obstruction to the hair roots and restricts their re growth.

Pracchana is the line of treatment adapted which is effective but painful procedure and causes discomfort to patient. It needs expert hand and skill to practice Pracchana. Acharya Sushruta has advised Upakramas like application of paste in the treatment of Indralupta.

Gunja Beeja and Moola lepa are mentioned in Indralupta chikitsa while explaining Bhallatakadi yoga as remedy for Indralupta. Kayyadeva Nighantu, Bhavaprakasha Nighantu and Rasa tarangini mentioned Gunja as Indraluptahara. With. Gunja (*Abrus precatorius* Linn.) commonly known as Indian Liquorice belongs to the family Fabaceae. It's a well-known drug in Indian subcontinent and used in different ailments of hair and scalp.

Many works are previously carried out on Gunja Beeja lepa following Pracchana or Jalaukavacharana but efficacy of Gunja as single drug is not emphasized. With this background current study is proposed to evaluate the efficacy of Gunja as single herb and to find an easy, less painful and effective treatment for Indralupta (Alopecia areata).

OBJECTIVES

- To conduct Pharmacognostic and Preliminary phytochemical analysis of Gunja Moola and Beeja.
- To evaluate the Efficacy of Gunja Moola Lepa in the management of Indralupta (Alopecia areata).
- To Evaluate the Efficacy of Gunja Beeja Lepa in the Management of Indralupta. (Alopecia areata).
- To compare the Efficacy of Gunja Moola Lepa with that of Gunja Beeja Lepa in the Management of Indralupta. (Alopecia areata).

METHODOLOGY

Study was carried out in following steps,

Phase I – Identification, Collection& processing of the drugs.

Phase II –Pharmacognostic, Physio- chemicalanalysis&phytochemical tests

Phase III – Clinical trial proper.

DIAGNOSTIC CRITERIA:

- Clinical features of Indralupta, which is Patchy hair loss and Itching.

STUDY DESIGN:

Nature of study: Randomized comparative clinical study

The subjects fulfilling the inclusion- exclusion criteria were randomly divided into two groups.

Study group: 30 patients were divided into group a and group b.

INTERVENTION:

Group A was treated with Gunja Beeja Choorna Lepa

Group B was treated with Gunja Moola Choorna Lepa.

Application once a day, leave the lepa until it dries out completely. Then wash the scalp by protecting eyes.

ASSESSMENT CRITERIA:

Assessment was done before and after treatment based on the scores given for the subjective and objective parameters.

SUBJECTIVE PARAMETERS:

- Patchy Hair loss
- Itching

Table No: 14

SUBJECTIVE GRADING: -		
Hair loss patch	Present	Absent
Itching	Present	Absent

OBJECTIVE PARAMETERS:

1. Number of patchy Lesion count in number.
2. Size of the lesion in mili meters (mm).
3. Butter paper Analysis before and after treatment.
4. Pictorial presentation before and after treatment.

NO CHANGE 1

CHANGE 0

SIZE OF LESION IN MM GRADE: More than three millimeter of changes in lesion were considered as change in size of lesion after treatment

NO CHANGE 1

MORE THAN 3MM 0

BUTTER PAPER ANALYSIS:

Butter Paper Used To Record Shape Of Lesion; Any Changes In Shape Of Lesion Were Recorded After Treatment

NO CHANGE 1

CHANGE IN SHAPE 0

INTERVENTION:

Group	Cases	Drug	Dose	Vehicle	Duration
A	15	Gunja Moola Choorna	Quantity sufficient to cover the patch	Madhu	1 Month
B	15	Gunja Beeja Choorna	Quantity sufficient to cover the patch	Madhu	1 Month

Follow up during treatment : I Follow up - 15th day

II Follow up - 30th day

Post treatment follows up : After 15 Days

Showing Grading of total effect of Treatment

Grading	Class
No improvement	0-25%
Mild improvement	26%-50%
Moderate improvement	51%-75%
Marked improvement	76-99%
Completely cured	100%

Data Analysis:

The obtained data were analysed statistically. Descriptive and inferential statistical analysis has been carried out in the present study. Results on continuous measurements are presented on means + sd (min – max) and the results on categorical measurements are presented in number (%). Significance is assessed at 5% level of significance. Chi-square / Fisher exact test has been used to find the significance of study parameters on categorical scale between two or more groups, non-

parametric setting for qualitative data analysis. Fisher exact test used when cell samples are very small.

OBSERVATION AND RESULTS

OBSERVATION AND RESULTS ON CLINICAL TRIAL

The following observations were made during the study. Observations were made before the treatment, during the treatment and after the treatment. In the present study, 30 patients fulfilling the inclusion criteria of Indralupta were studied. Following pages contain the descriptive statistical analysis of the patients studied along with the observation and results are as listed below.

Gender: in group a 27% (4) of subjects were females and there were males 11 male subjects i.e. 73% .in group b 27% (4) of subjects were females and there were males 11 male subjects i.e. 73%.

OCCUPATION: Maximum no. of participant's occupation was agriculture, in Group A 40% and in Group B 33% belonged to that occupation. Coolie and business was other major occupation in the study group.

Religion: in group a 100% (15) of subjects were Hindus. In group a 93% (14) of subjects were Hindus and there were 7% (1) Christian

MARITAL STATUS: 93% subjects were married in both group A & B, and 7% were unmarried in both groups.

FOOD HABITS: Group A had 40% veg and non veg food consuming participants, were as Group B had 53% vegetarian and 27% mixed food habit participants.

SOCIO ECONOMIC STATUS: Group A had 67% middle socio economic class participants, 20% lower middle and 13% lower class participants in study, Group B had 80 % middle socio economic class participants, 13% lower middle and 7% lower class participants in study.

Chi-Square/Fisher Exact Test

In the present study group, A (Gunja Beeja application) showed 60% reduction in patch, and 40% subjects showed no reduction in patch, where as in group B (Gunja moola application) showed only 26.7% reduction in patches in subjects, and 73.3% subjects showed no change in patch. Chi square test not significant.

ITCHING- A Comparative assessment in two groups of patients studied

In the present study group, A (Gunja Beeja application) showed 60% reduction in itching, and 40% subjects showed no reduction in itching, where as in group B (Gunja moola application) showed decrease of 53.3% in itching, and 46.7% subjects showed no change in itching. Chi square test not significant

NO. OF PATCH- A Comparative assessment in two groups of patients studied

In the present study group, A (Gunja Beeja application) showed 60% reduction in number of patches, and 40% subjects showed no reduction in patch, where as in group B (Gunja moola application) showed only

20% reduction in patches in subjects, and 80% subjects showed no change in number of patches. Chi square test statistically significant.

BUTTER PAPER ANALYSIS: In the present study group A (Gunja Beeja application) showed 60% reduction in butter paper analysis, and 40% subjects showed no reduction in butter paper analysis, where as in group B (Gunja moola application) showed only 26.7% reduction in patches in subjects, and 73.3% subjects showed no change in number of patches. Chi square test not significant

Overall relief in symptoms in both groups

Clinical features	Group A			Group B			Overall relief in percentage
	B. T	A. T	%	B. T	A. T	%	
Patch	15	9	60	15	4	26.7	43.33
Itching	10	4	40	10	2	20	30
No.of patch	15	9	60	15	3	20	40
Size of lesion	15	9	60	15	0	0	30
Butter paper analyses	15	9	60	15	4	26.7	43.33
No of patch	15	8	53.33	15	15	0	26.66

Overall effect of therapy

Grading	No of cases	%
No improvement	14	46.7
Mild improvement	7	23.3
Moderate improvement	4	13.3
Marked improvement	3	10
Completely cured	2	6.7

Out of 30 patients 2 patients completely cured (6.7%), marked improvement was seen in 3 cases (10%), moderate improvement was seen in 4 subjects (13.3%), mild improvement was seen in 7 (23.3%), were as no improvement was seen in 14 cases i.e (46.7%).

Statistical Methods:

Descriptive and inferential statistical analysis has been carried out in the present study. Results on continuous measurements are presented on Mean \pm SD (Min-Max) and results on categorical measurements are

presented in Number (%). Significance is assessed at 5 % level of significance. The following assumptions on data is made, Assumptions: 1. Dependent variables should be normally distributed, 2. Samples drawn from the population should be random, Cases of the samples should be independent. Chi-square/ Fisher Exact test has been used to find the significance of study parameters on categorical scale between two or more groups, Non-parametric setting for Qualitative data analysis. Fisher Exact test used when cell samples are very small.

Significant figures:

+ Suggestive significance (P value: $0.05 < P < 0.10$)

* Moderately significant (P value: $0.01 < P \leq 0.05$)

** Strongly significant (P value: $P \leq 0.01$)

DISCUSSION

Discussion on Gunja:

Gunja is a very common drug with extensive usage in Ayurveda and other traditional systems of medicine. Gunja is known for its fungicidal, anti-inflammatory and anti-microbial effect. It's widely used plant for various diseases all around the Indian subcontinent. : Species is native to tropics, commonly occurring in Garhwal region up to a height of 1200 m above the sea level. It grows in tropical climates such as India, Sri Lanka, Thailand, the Philippine Islands, South China, tropical Africa and the West Indies. In Himalayas ascending to 900m, spreading throughout plains, on hedges and bushes in exposed. Its most abundantly available drug, various Nighantu have mentioned about variety of uses about the Gunja starting from krimignana property to Indralupta. In Sushruta Samhita, Uttara Tantra we can find references regarding 'Oshadhi Dharana' in 'Putana and Andha Putana' and also we can find reference in the treatment of 'Rakshasa Graham' in Kaiyadeva and Shaligrama Nighantu. Gunja Beeja and moola Lepa are mentioned in Indralupta Chikitsa while explaining Bhallatakadi yoga as remedy for Indralupta. Kayyadeva Nighantu, Bhavaprakasha Nighantu and Rasa Tarangini have mentioned Gunja as Indraluptahara. With

The drug has been selected for this study based on these factors.

- It has references from Classics, Nighantus and also its uses in folk practice because of its rasa panchaka (katu, tikta, kashaya rasa, katu vipaka, ushna veerya and ruksha guna) for tackling krimi, kandu, kushta etc.

CONCLUSION

1. Gunja is a drug which is known from ancient time.
2. Sangraharas have mentioned the use of Gunja in various contexts

3. Pharmacognostic and phytochemical analysis of sample Gunja Moola and Beeja showed presence of standard alkaloids glycosides steroids.
4. Gunja Beeja lepa has shown statistically significant result in reducing the size of patch in Indralupta, but less effective in reducing the kandu the management of Indralupta (Alopecia areata).
5. Gunja moola lepa has not shown statistically significant result in the management of Indralupta (Alopecia areata).
6. In comparison to Gunja moola lepa, Gunja Beeja is effective in the management of Indralupta (Alopecia areata)

Scope for further study

1. Present study can be done with increased sample size with longer duration follow up.

Other variety of Gunja i.e. sweta Gunja can be studied on same diseases

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