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Research Article

A COMPREHENSIVE CLINICAL STUDY ON *BHRINGARAJA* (*ECLIPTA ALBA* HASSK) CHURNA FOR THE TREATMENT OF *EKAKUSTA* (PSORIASIS)

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ABSTRACT

Objectives: This study was conducted to evaluate the efficacy of *Bhringaraja (Eclipta alba* Hassk) *Churna* in the management of *Ekakusta* (psoriasis). **Materials and Methods:** A single arm randomized open clinical study was conducted at Govt. Ayurvedic Hospital, Erragadda, Hyderabad. A total of 30 patients were selected and treated with 3 grams of whole plant powder of *Bhringaraja* (*Eclipta alba*) administered orally twice a day, 30 minutes before meals, along with Luke warm water. Additionally, the whole plant powder was used once a day as a *Pradeha* (application) with lukewarm water, as required, for 4 hours. The treatment was continued for 45 days, with results being assessed and recorded every 15 days. Subjective and objective parameters were analyzed before and after the treatment. In subjective parameters *Aswedhanam* and *Matsyasakalopanam* are taken while PASI Score as objective parameter. **Results**: It was observed that in subjective parameters 17% were in mild relief, 73% were of moderate relief and there was good relief in 10% of patients. In objective parameter 10% were in mild relief, 73% were of moderate relief and there was good relief in 17% of patients. Both subjective and objective parameters have been analyzed statistically. The relief of *Aswedhanam* and *Matsyasakalopanam* found highly significant ($P<0.001$) and same results in reduction of PASI score also. **Conclusion**: The conclusion of the present study, which aimed to evaluate the therapeutic efficacy of *Bhringaraja* (*Eclipta alba* Hassk) whole plant powder administered both internally and externally in managing *Ekakusta* (psoriasis), indicates promising results. The clinical trial demonstrated significant improvements in the patients' symptoms, including *Aswedhanam* (loss of sweating) and *Matsyasakalopanam* (scaling), as evidenced by a marked reduction in the Psoriasis Area and Severity Index (PASI) scores. These findings suggest that *Bhringaraja* whole plant powder may be an effective treatment modality for alleviating the signs and symptoms of psoriasis.

INTRODUCTION

Ayurveda medical system is very effective in prevention and treatment of non-communicable diseases and lifestyle disorders. There are three types of treatment modalities in Ayurveda viz; *Shodhana* (*Panchakarma*) therapy, *Shamana* (palliative) and *Nidhana parivarjana* (avoid the causative factor of the disease.) described by ancient Acharyas in Ayurvedic classical literature in order to purify the body and mind, cure the diseases and prevent the diseases, respectively. Psoriasis, known as *Ekakusta* in Ayurveda, is a chronic, non-communicable skin condition that significantly affects the quality of life of those afflicted. Characterized by red, scaly patches on the skin, this condition goes beyond cosmetic concerns, causing substantial physical discomfort and emotional distress. psoriasis prevalence ranging from 0.91 to 8.5% in adults and 0.0 to 2.1% in children. The global psoriasis prevalence rate is around 2–3% of the world population. *Bhringaraja* (*Eclipta alba* Hassk)[1] is a well-known herb in Ayurvedic medicine, praised for its therapeutic properties. It is commonly used for hair health, treating skin diseases, and overall rejuvenation.

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Bhringaraja is recognized for its potential to balance *Kapha* and *Vata doshas*, making it a powerful tool in traditional medicine.

MATERIALS AND METHODS

- Identification and collection of *Bhringaraja* whole plant.
- Selection of patients
- Dose and administration
- Criteria for selection
- Diagnostic criteria
- Parameters for assessment
- Results of the treatment

Collection of *Bhringaraja* whole plant

Plant Identification

The correct identity of the species and its morphological characters are authenticated by comparing them with the characters mentioned in various Ayurvedic texts and text book of Botany. Later subject expert of Dravyaguna Department, Dr. B.R.K.R. Govt. Ayurvedic College, Hyderabad confirmed the identification.

Drug Collection

In the present study *Bhringaraja* whole plant was collected from its natural habitat from the surroundings of Sheshachalam forest area Tirupati in Andhra Pradesh State. Good quality materials which are free from any worm infection was cut, separated, washed, dried in shade and stored in air tight dried container. Fine powder of sufficient quantity prepared and packed in zip lock polythene bag and labelled. The prepared powder is used for performing analytical and clinical study.

Selection of patients

For the present study 30 patients diagnosed of *Eka kushta* were randomly selected from the OPD Dravyaguna Dept. of Govt. Ayurvedic Hospital, Erragadda, Hyderabad. Patients were selected randomly irrespective of sex, caste, religion and occupation. All patients were subjected to detailed history, clinical examinations routine laboratory investigations before treatment. Clinical features and *Aswedhanam*[2], *Matsyasakalopanam*[3], PASI score were taken as criteria for assessment of results.

Dose and Mode of Administration

The selected patients were treated with whole plant powder of *Bhringaraja* 3gm twice a day orally with water, half an hour before food. Whole plant powder with lukewarm as required as *Pradeha*[4] for 4 hours. Treatment was given for 45 days with the result assessment recorded at every 15 days.

Criteria for Selection

Inclusion Criteria

- Patients of either sex between 20 to 60 years of age. Fulfilling the diagnostic criteria, having signs and symptoms of *Eka kushta Aswedanam*, *Matsytasakalopamam* will be included.
- Patient disease chronicity less than 2 years.
- Patients who are willing to complete the treatment schedule.

Exclusion Criteria

- Patients of age below 20 and above 60 years will be excluded.
- Pregnant women and lactating women are excluded. Patients suffering from chronic illness like HIV, HBSAG, CKD, CAD are excluded.
- Patient disease chronicity more than 2 years.

Laboratory Investigations

Routine investigations included CBP, ESR, CRP, RBS.

Diagnostic criteria

- Auspitz sign [5]
- Candle grease sign

Parameters for Assessment

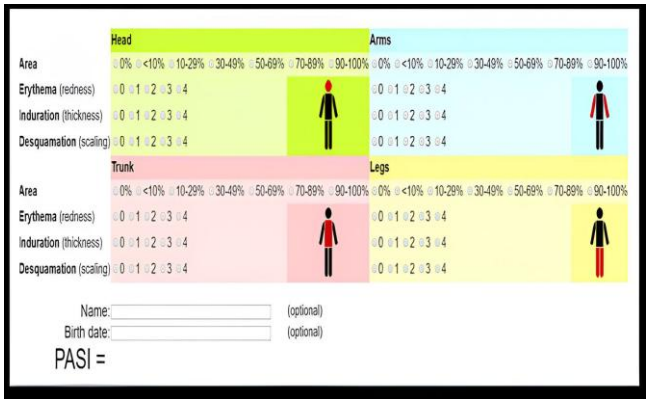
- *Aswedhanam*- Loss of sweat
- *Mastyasakalopanam*- Resembling fish scales.

Anhydrous (*Aswedhanam*)	**Score**
Non anhydrous	0
Mild, present in very few lesions	1
Moderate, present in few lesions	2
Excess, present in all lesions	3
Excess, anhydrous in both lesion and uninvolved skin	4

Scaling (*Mastyasakalopanam*)	**Score**
No Scaling (normal skin)	0
Scaling in vigorous rubbing	1
Scaling on light pressure	2
Scaling on wearing cloths	3

Objective parameter

PASI score (psoriasis area severity index) [6]



PASI Calculation Formula: PASI = 0.1 (Eh + Ih + Dh) Ah + 0.2 (Eu + Iu + Du) Au + 0.3 (Et + It + Dt) At + 0.4 (El + Il + Dl) Al.

E – Erythema (redness) (h-Head, u-upper limbs, t-trunk, l-lower limbs)

I- Induration (thickness) (Ah- Area of head: Au-area of upper limbs)

D- Desquamation (scaling) (At- Area of trunk: Al-area of lower limbs)

Results of the Treatment

The results will be analysed statistically before and after the treatment the effect of the therapy was assessed in terms of cured, markedly improved, and unchanged. The details are as follows:

Excellent response: When the sign and symptoms are relieved about 76%-100% improvement.

Good response: When the sign and symptoms are relieved about 51-75% improvement

Moderate response: When the sign and symptoms are relieved about 26%-50% improvement

Mild response: When the sign and symptoms are relieved about upto to 25% improvement.

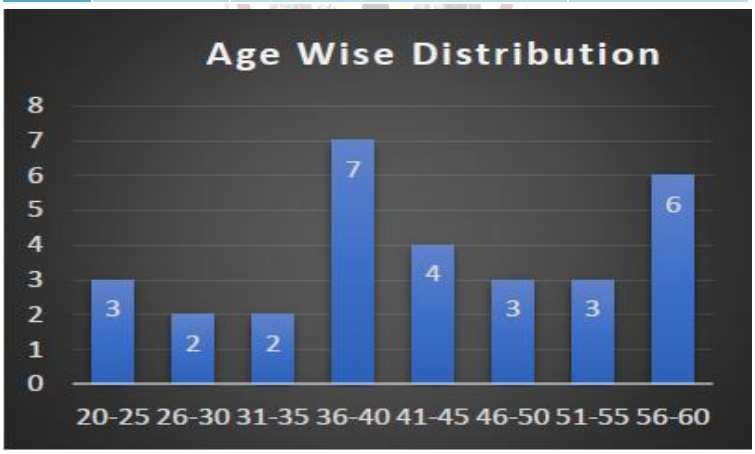
OBSERVATIONS AND RESULTS

The different data collected and study observations are presented as follows:

General observations

Table 1: Age wise distribution

S.No	Age	No. of Patients	Percentage
1	20-25	3	10%
2	25-30	2	7%
3	30-35	2	7%
4	35-40	7	23%
5	40-45	4	13%
6	45-50	3	10%
7	50-55	3	10%
8	55-60	6	20%
	Total	30	100%

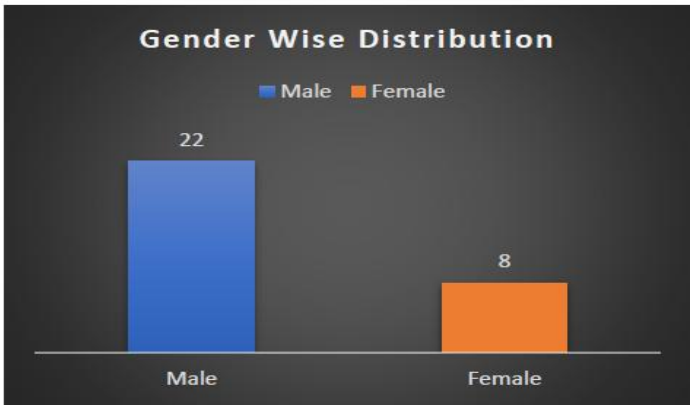


Age Wise Distribution

The above table and graph shows the patients ranging from 20-60 years of age, they have been divided into 8 classes with each class having 5 years age range. 3 (10% patients were in 20-25 years range, 2 (7%) patients were in 25- 30 years of range, 2 (7%) patients were in 30-35 range, 7 (23%) patients were in 35-40 years range, 4 (13%) patients were in 40-45 range, 3 (10%) were in 45-50 range and 3 (10%) patients were in 50-55 range, 6 (20%) were in 55-60.

Table 2: Gender Wise Distribution

S.No	Gender	No. of Patients	Percentage
1	Male	22	73.33%
2	Female	8	26.67%
	Total	30	100%

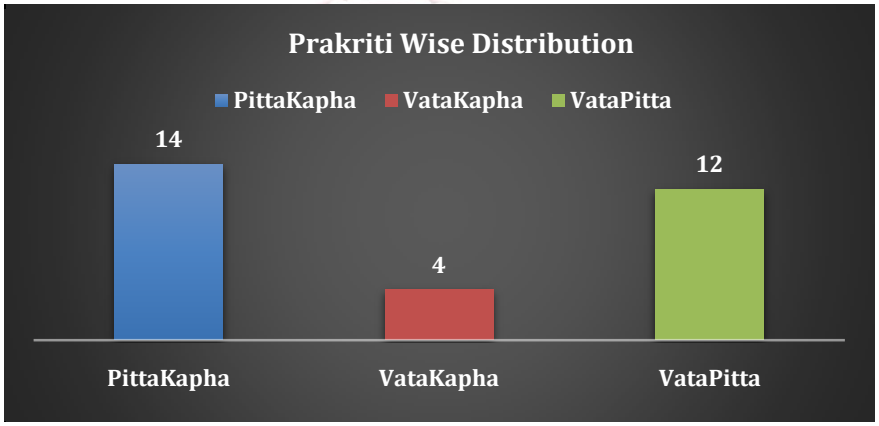


Gender Wise Distribution

The above table and graph shows over all analysis based on gender, out of 30 patient's males 22 (73.33) and females 8 (26.67%) in number.

Table 3: *Prakriti* Wise Distribution of Patients

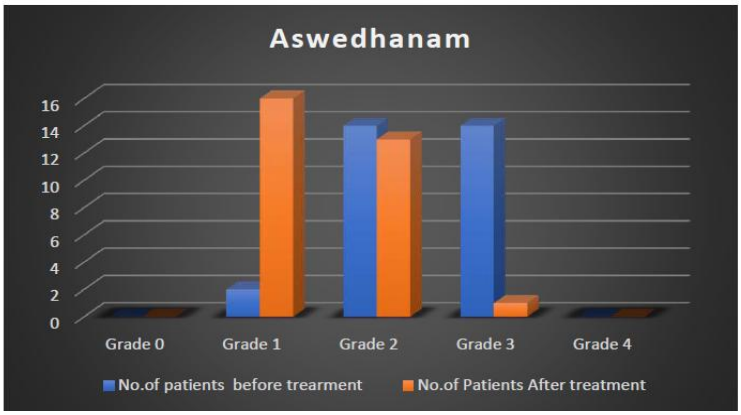
S.No	*Prakriti*	No. of Patients	Percentage
1	*Pitta Kapha*	14	47%
2	*Vata Kapha*	04	13%
3	*Vata Pitta*	12	40%
	Total	30	100%



The above table and graph shows the distribution of patients according to *Prakruthi*, out of 30 patients 14 (7%) patients having *Pitta kapha*, 12 (40%) patients having *Vata pitta*, 4 (13%) patients having *Vata kapha prakruthi*.

Table 4: Comparison of patients based on Aswedhanam before and After treatment

S.no	*Aswedhanam*	No. of patients before treatment	No. of patients After treatment
1	Grade 0	0	0
2	Grade 1	2	16
3	Grade 2	14	13
4	Grade 3	14	1
5	Grade 4	0	0
6	Total	30	30

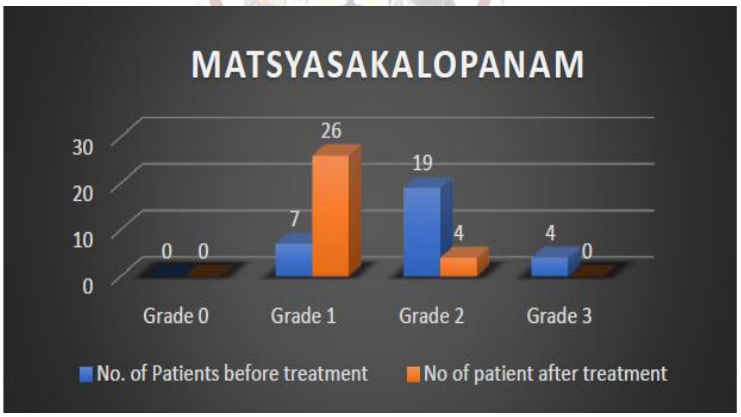


Comparison of patients based on *Aswedhanam* BT and AT

The above table and graph show the comparison of patients based on *Aswedhanam* before and after treatment. The number of patients suffering with Grade 1 before treatment is 2 and after treatment 16, the number of patients suffering with Grade 2 before treatment is 14 and after treatment 13, the number of patients with Grade 3 before treatment 14 and after treatmentis 1.

Table: 5 Comparison of patients based on *Matsyasakalopanam* before and After treatment

Matsyasakalopanam	**No. of patients before treatment**	**No. of patients After treatment**	**Relief Percentage**
Grade 0	0	0	0%
Grade 1	7	26	55%
Grade 2	19	4	38%
Grade 3	4	0	7%
Total	30	30	100%



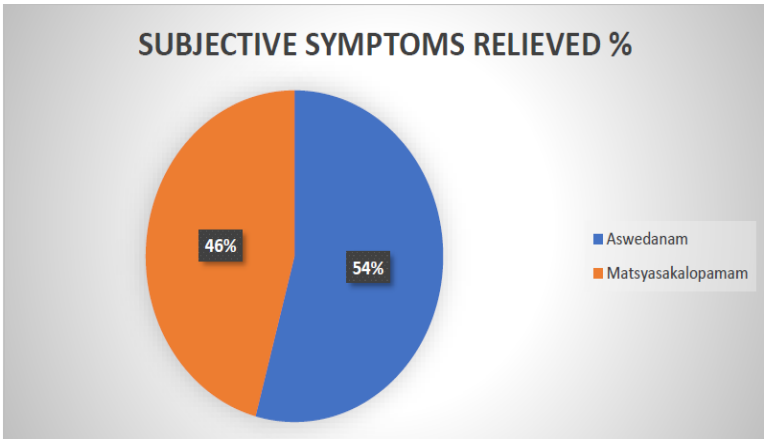
Comparison of patients based on *Matsyasakalopanam* BT andAT

The above table and graph show the comparison of patients based on *Masyasakalopanam* before and after treatment. the number of patients suffering with Grade 1 before treatment is 7 and after treatment 26, the number of patients suffering with Grade 2 before treatment is 19 and after treatment 4, the number of patients with Grade 3 before treatment 4 and after treatment is 0.

Results n Subjective Parameters

Table 6: Results on subjective parameters

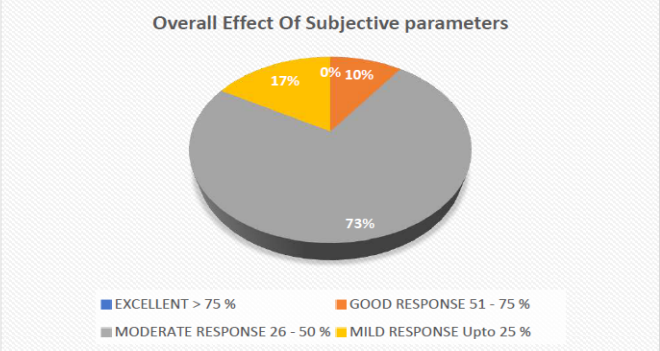
Symptoms	**BT**	**AT No. of Patents Relieved**	**AT No. of Patents not Relieved**	**% Relief**
Aswedanam	30	27	03	90%
Matsyasakalopamam	30	21	09	76%



The above tables show the response of patients to the treatment with *Bhringaraja* (*Eclipta alba* Hassk*)* whole plant powder 30 patients presented with the symptom *Aswedhanam*, after treatment 27 patients got partially relief, 3 patients were not relieved from the symptom. Overall relief percentage was 90%. 30 patients presented with the symptom *Mastyasakalopanam*, after treatment with *Bhringaraja* (*Eclipta alba Hassk)* whole plant powder 21 patients got partially relief, 9 patients were not relieved from the symptom. Over all relief percentage was 76%.

Table 7: Overall Effect of Subjective parameters

Result	Reduction in subjective parameters	No. of patients	Percentage
Excellent	>75%	0	0%
Good Response	51-75%	3	10%
Moderate response	26-50%	22	73%
Mild response	Upto 25%	5	17%



The above table and pie chart shows the overall assessment of results with the treatment of *Bhringaraja* (*Eclipta alba* Hassk*)* whole plant powder out of 30 patients 3 patients showed between 51%-75% i.e., good response. 22 patients showed between 26%-50% relief i.e., moderate response, 5 patients showed between 0%-25% relief in subjective parameters.

Table 8: Results on Objective Parameter -PASI Score

S.No	OP No.	Area Score		Erythema		Induration		Scaling		Total BT	Total AT
		BT	AT	BT	AT	BT	AT	BT	AT		
1	**55202**	0	0	0	0	0	0	0	0	**11.2**	**5.2**
		2	2	1	1	1	1	2	1		
		4	3	2	2	2	1	3	1		
		1	1	1	0	1	0	1	1		
2	**12648**	1	1	1	0	1	1	2	1	**11.6**	**5.7**

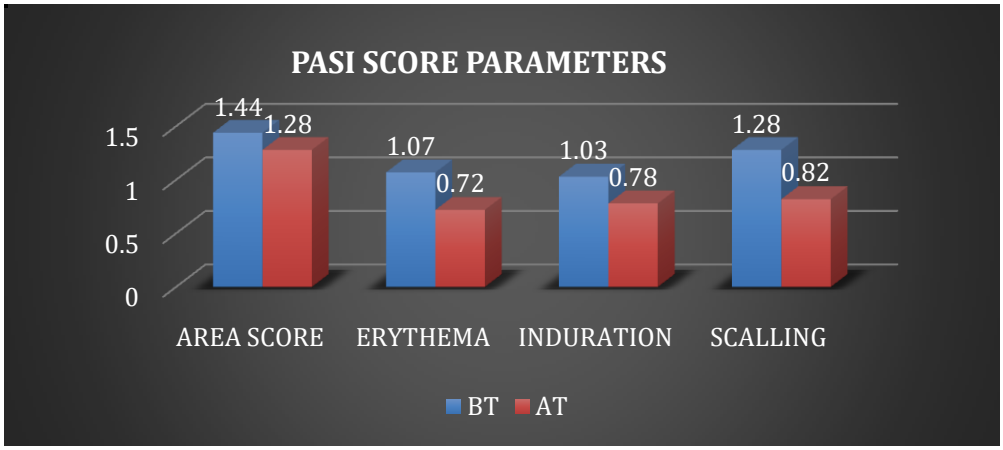
		1	1	1	1	1	1	2	1		
		4	3	2	1	2	2	3	2		
		1	1	1	0	1	1	3	0		
3	**12857**	0	0	0	0	0	0	0	0	**8.4**	**6.8**
		1	1	1	1	0	0	1	1		
		0	0	0	0	0	0	0	0		
		4	4	2	1	1	1	2	2		
4	**3708**	1	1	0	0	0	0	1	1	**7.8**	**5**
		3	2	2	1	2	2	2	1		
		1	1	1	1	1	1	1	1		
		2	2	1	1	1	1	2	1		
5	**17775**	3	3	1	1	2	1	2	2	**5.7**	**4.8**
		1	1	1	1	1	1	1	1		
		2	2	1	1	1	1	2	1		
		1	1	1	1	1	1	1	1		
6	**21032**	0	0	0	0	0	0	0	0	**7**	**3.4**
		1	1	1	1	0	0	1	1		
		3	2	2	1	1	1	3	1		
		1	1	1	1	1	1	1	1		
7	**38977**	0	0	0	0	0	0	0	0	**9.4**	**5**
		2	1	1	1	2	1	2	1		
		3	2	2	1	2	1	2	2		
		1	1	1	1	2	2	2	2		
8	**16629**	0	0	0	0	0	0	0	0	**8.7**	**4.7**
		1	1	1	1	1	1	1	1		
		1	1	1	1	1	1	1	1		
		3	2	2	1	2	1	2	2		
9	**3340**	0	0	0	0	0	0	0	0	**8.4**	**4.4**
		2	2	2	1	2	1	2	1		
		1	1	0	0	0	0	0	0		
		3	2	2	2	1	1	2	1		
10	**4751**	0	0	0	0	0	0	0	0	**8.7**	**5.5**
		1	1	1	1	1	1	1	1		
		1	1	1	1	1	1	1	1		
		3	2	2	1	2	2	2	2		
11	**14174**	0	0	0	0	0	0	0	0	**5.7**	**3.3**
		3	2	2	1	2	1	2	1		
		1	1	1	1	1	1	1	1		
		1	1	1	1	1	1	1	1		
12	**1590**	0	0	0	0	0	0	0	0	**8.9**	**4.5**
		1	1	1	1	0	0	0	0		
		1	1	1	1	0	0	0	0		
		3	2	3	2	2	2	2	1		
13	**1646**	2	1	1	1	1	1	2	1	**8.5**	**4.1**
		1	1	1	1	0	0	0	0		
		3	2	3	2	2	1	2	1		

		1	1	1	1	1	1	1	1		
14	**47644**	0	0	0	0	0	0	0	0	**9**	**4.2**
		1	1	1	1	1	1	1	0		
		3	2	2	1	3	2	3	2		
		1	1	1	1	1	1	1	0		
15	**47522**	3	2	2	1	2	1	3	2	**4.8**	**2.6**
		1	1	1	1	1	1	1	0		
		1	1	1	1	1	1	1	0		
		1	1	1	1	1	1	1	0		
16	**465**	0	0	0	0	0	0	0	0	**6.8**	**4.8**
		2	2	2	1	1	1	2	2		
		2	2	2	1	2	1	2	2		
		1	1	1	1	1	0	1	1		
17	**106**	0	0	0	0	0	0	0	0	**7**	**4.8**
		1	1	0	0	0	0	1	0		
		2	2	2	1	2	1	2	2		
		2	2	1	1	1	1	2	1		
18	**3557**	2	1	1	1	1	1	2	1	**5.6**	**3.5**
		0	0	0	0	0	0	0	0		
		2	2	2	1	2	1	2	2		
		1	1	1	1	1	1	1	0		
19	**11330**	2	2	1	0	1	1	2	1	**7.7**	**5**
		2	2	1	1	1	1	1	0		
		1	1	1	1	1	1	1	0		
		2	2	2	1	2	1	2	2		
20	**3465**	0	0	0	0	0	0	0	0	**5.8**	**4.4**
		1	1	1	1	0	0	0	0		
		2	2	1	1	1	1	2	1		
		2	2	1	1	1	1	2	1		
21	**8333**	2	2	1	1	1	1	2	1	**4.4**	**3**
		2	2	2	1	2	1	2	2		
		0	0	0	0	0	0	0	0		
		1	1	1	0	1	1	1	1		
22	**12807**	0	0	0	0	0	0	0	0	**9**	**5.8**
		1	1	1	1	1	1	1	0		
		2	2	2	2	2	2	2	1		
		2	2	2	1	2	1	2	1		
23	**13835**	0	0	0	0	0	0	0	0	**8.4**	**5.8**
		2	2	1	0	1	1	1	1		
		2	2	1	1	1	1	2	1		
		2	2	2	1	2	1	2	2		
24	**6050**	0	0	0	0	0	0	0	0	**9**	**4.6**
		1	1	1	0	1	1	1	1		
		2	2	2	1	2	1	2	1		
		2	2	2	1	2	1	2	1		
25	**26198**	0	0	0	0	0	0	0	0	**7.8**	**4.2**

		2	2	1	1	1	1	2	1		
		2	2	1	1	2	1	2	1		
		2	1	1	1	1	1	2	1		
26	**27050**	0	0	0	0	0	0	0	0	**8.2**	**4.6**
		1	1	1	0	1	1	1	1		
		2	2	2	1	2	1	2	1		
		2	2	1	1	2	1	2	1		
27	**28290**	2	2	1	0	1	1	1	1	**10.2**	**6.4**
		2	2	1	1	1	1	1	1		
		2	2	2	1	2	1	2	2		
		2	2	2	1	2	1	2	1		
28	**20086**	2	2	1	1	1	1	2	1	**6.8**	**4.6**
		2	2	1	0	1	1	1	1		
		0	0	0	0	0	0	0	0		
		2	2	2	1	2	1	2	2		
29	**27340**	0	0	0	0	0	0	0	0	**7.2**	**3.5**
		2	1	1	0	1	1	1	0		
		2	1	2	1	2	1	2	1		
		2	2	1	1	1	1	1	1		
30	**2872**	2	2	1	1	2	1	2	1	**5.5**	**3.2**
		2	2	2	1	2	1	2	1		
		1	1	1	0	1	1	1	1		
		1	1	1	0	1	1	1	1		
MEAN		1.44	1.28	1.07	0.72	1.03	0.78	1.28	0.82	**7.77**	**4.58**

Table 9: Showing Mean of PASI Score Parameters

PASI Score Parameters		
	BT	**AT**
Area Score	1.44	1.28
Erythema	1.07	0.72
Induration	1.03	0.78
Scaling	1.28	0.82



Mean of PASI Score Parameters

The above table and graph show analysis of the PASI score parameters for before treatment (BT) and after treatment (AT).

The table provides a summary of different parameters contributing to the Psoriasis Area and Severity Index (PASI) scores before and after treatment. The parameters include area score, erythema (redness), induration (thickness), and scaling.

Area Score

- Before treatment mean: 1.44
- After treatment mean: 1.28
- Analysis: There is a decrease in the area score, indicating that the affected area of the skin has reduced after the treatment.

Erythema (Redness)

- Before treatment mean: 1.07
- After treatment mean: 0.72
- Analysis: There is a notable reduction in erythema, suggesting that the redness of the skin has significantly subsided post-treatment.

Induration (Thickness)

- Before treatment mean: 1.03
- After treatment mean: 0.78
- Analysis: The induration score has decreased, which implies a reduction in the thickness of the skin lesions after the treatment.

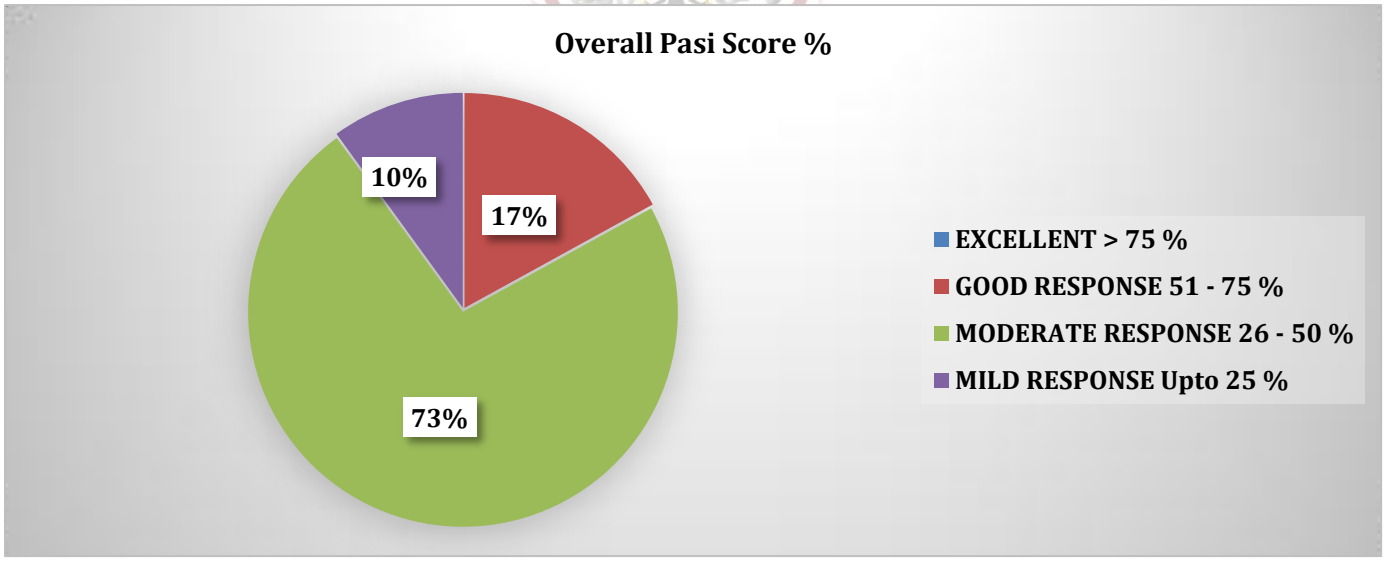
Scaling

- Before treatment mean: 1.28
- After treatment mean: 0.82
- Analysis: Scaling has also decreased, showing that the severity of scaling or flaking of the skin has lessened post-treatment.

Overall, all parameters Area Score, erythema, induration, and scaling show a reduction in their values after the treatment. This indicates that the treatment was effective in improving the condition of the patients, reducing the severity and extent of psoriasis symptoms.

Table 11: Results in PASI score

Results	Reduction in PASI score	No. of patients	Percentage
Excellent	> 75 %	0	0%
Good response	51 - 75 %	5	17%
Moderate Response	26 - 50 %	22	73%
Mild response	Upto 25 %	3	10%



Overall results of PASI score

This table and pie chart show the outcomes of a treatment based on the reduction in PASI (Psoriasis Area and Severity Index) scores. It categorizes the results into four levels of response: Excellent, Good, Moderate, and Mild, along with the number of patients falling into each category and the corresponding percentage.

Excellent Response (> 75%): No patients achieved an excellent response, indicating that none saw more than 75% reduction in their PASI scores.

Good Response (51-75%): 5 patients (17%) experienced a good response, achieving a 51-75% reduction in their PASI scores. This suggests a noticeable improvement for these individuals.

Moderate Response (26-50%): The majority, 22 patients (73%), fell into this category, showing a 26-50% reduction in their PASI scores. This indicates moderate improvement for most patients, highlighting some efficacy of the treatment but leaving room for better outcomes.

Mild Response (up to 25%): 3 patients (10%) showed a mild response with up to a 25% reduction in PASI scores, suggesting minimal improvement for these individuals.

In summary, the treatment shows varying degrees of effectiveness, with the majority of patients experiencing a **moderate response**.

Statistical Analysis

Table 12: Statistical Analysis of Subjective Parameters With Using Wilcoxon Signed Rank Test

S.no	Parameter	Median (W)		S.D (W)		Z Value	% of Improvement	P Value (95% confidence level)	Significance
		BT	AT	BT	AT				
1	*Aswedhanam*	2	1	0.62	0.57	-4.6537	54%	<0.001	Highly Significant
2	*Matsyasakalopanam*	2	1	0.61	0.35	-4.3935	46%	<0.001	Highly Significant

The table presents the statistical analysis of two parameters, *Aswedanam* and *Matsyasakalopanam*, before and after treatment, based on median values, standard deviation, Z value, percentage of improvement, and significance levels.

Aswedanam

1. Median Values: There is a reduction in the median value from 2 (BT) to 1 (AT), indicating improvement.
2. Standard Deviation (S.D.): A slight decrease in standard deviation from 0.62 to 0.57 shows less variability after treatment.
3. Z Value: The negative Z value (-4.6537) suggests a significant decrease.
4. Percentage of Improvement: 54% improvement, showcasing substantial efficacy of the treatment.
5. P Value: Less than 0.001 (<0.001), indicating the results are highly significant.

Matsyasakalopanam

1. Median Values: The median value decreases from 2 (BT) to 1 (AT), indicating an improvement.
2. Standard Deviation (S.D.): A decrease from 0.61 to 0.35 suggests reduced variability post-treatment.
3. Z Value: The negative Z value (-4.3935) indicates a significant decrease.
4. % of Improvement: 46% improvement, indicating the treatment's effectiveness.
5. P Value: Less than 0.001 (<0.001), indicating the results are highly significant.

Summary

Both parameters, *Aswedanam* and *Matsyasakalopanam*, show significant improvements post-treatment, as evidenced by the decrease in median values, standard deviations, and highly significant p-values. The high percentages of improvement (54% and 46% respectively) and strong statistical values (Z and t values) suggest the treatment's efficacy in reducing these parameters. This data supports the hypothesis that the treatment has a highly significant positive effect on these parameters.

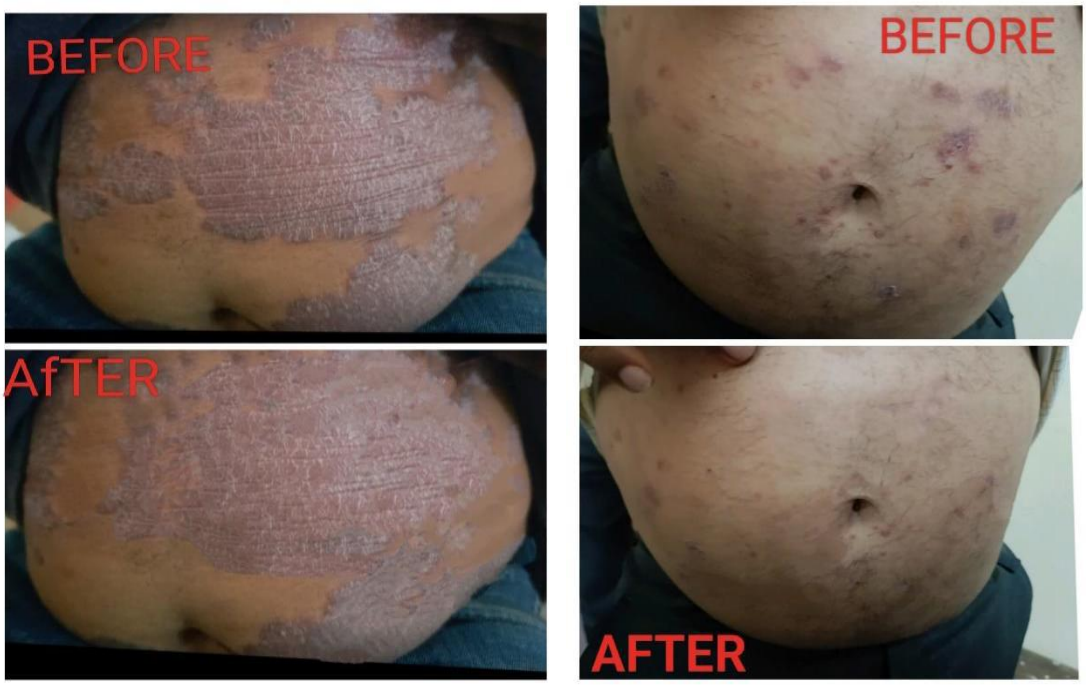
Table 13: Showing statistical analysis of Objective parameters with paired t test

Parameter	Mean		S. D		S.+E. D	T value	P value	Result
	BT	AT	BT	AT				
PASI Score	7.77	4.58	7.80	4.58	0.361	8.93	<0.0001	extremely significant

The table compares the mean values, standard deviation (S.D.), standard error of difference (S.E.D.), t-value, p-value, and results of PASI parameter PASI Score before (BT) and after treatment (AT).

Analysis: The PASI score shows a substantial reduction, and the high t value along with the extremely significant p-value further corroborate the treatment's effectiveness. PASI Score exhibited significant reductions post-treatment. The consistency in reduced mean values and extremely significant p-values across all parameters highlights the overall effectiveness and reliability of the treatment administered.

Showing photographs of psoriasis affected areas before and After treatment



Psoriasis effected abdomen Before and After treatment

DISCUSSION

This study aimed to evaluate the efficacy of *Bhringaraja* (*Eclipta alba* Hassk) *churna* in the management of *Ekakusta*. The clinical trial results demonstrated a significant improvement in the severity of psoriasis symptoms among the patients treated with *Bhringaraja churna, Aswedanam.* Among 30 patients to the treatment with *Bhringaraja* (*Eclipta alba Hassk)* Whole plant powder 30 patients presented with the symptom *Aswedanam*, after treatment 27 got partially relief, 3 patients were not relived from the symptom overall relief percentage -90%. *Matsyasakalopamam*: Among 30 patients, *Matsyasakalopamam* was present in all patients to the treatment with *Bhringaraja* (*Eclipta alba Hassk*) Whole plant powder 30 patients presented with the symptom *Matsyasakalopamam*, after treatment 21 got partially relief, 9 patients were not relived from the symptom overall relief percentage -76%. PASI Score: 5 patients (17%) experienced a good response, achieving a 51-75% reduction in their PASI scores. This suggests a

noticeable improvement for these individuals. The majority, 22 patients (73%), fell into this category, showing a 26-50% reduction in their PASI scores. This indicates moderate improvement for most patients, highlighting some efficacy of the treatment but leaving room for better outcomes. 3 patients (10%) showed a mild response with. up to a 25% reduction in PASI scores, suggesting minimal improvement for these individuals. The reduction in Psoriasis Area and Severity Index (PASI) scores and patient-reported outcomes indicated effective management of erythema, induration, and desquamation. The absence of adverse effects further supports the safety and tolerability of *Bhringaraja churna* as a natural treatment option for psoriasis.

The study underscores the relevance of integrating Ayurvedic principles with modern clinical practices. *Bhringaraja*, traditionally used for its *Rasayana* (rejuvenating) properties, has shown promising results in contemporary settings for managing chronic conditions like psoriasis. This integration not only validates the traditional knowledge but also offers a holistic approach to treatment that aligns with current trends towards natural and alternative therapies.

Probable Mode of Action

The action on the body is explained and understood on the level of *Rasa Panchaka*[7] of the drug.

Rasa	*Katu, Tikta*
Guna	*Laghu, Ruksha*
Veerya	*Ushna*
Vipaka	*Katu*
Dosha karma	*Kapha vata hara*

Bhringaraja (*Eclipta alba*) works on the *Doshas* involved in *Ekakusta* (psoriasis) by balancing *Vata* and *Kapha doshas*.

***Rasa* (Taste)**: *Bhringaraja* has a *Katu* (pungent) and *Tikta* (bitter) taste, which helps in reducing *Kapha*. *Tikta rasa* which decrease *Pitta dosha* results in decrease of erythema (redness).

***Guna* (Property)**: It is *Laghu* (light) and *Ruksha* (dry), which helps in reducing the heaviness and moisture associated with *Kapha*.

***Veerya* (Potency)**: The herb is *Ushna* (hot), which helps in reducing the *Sheetha* associated with *Vata*. *Ushna veerya* drugs can dilate sweat glands and increase sweat production which results decrease of Aswedhnam.

***Vipaka* (post-digestive effect)**: The post digestive effect is *Katu* (pungent), which further helps in reducing *Kapha*.

***Prabhava* (Special potency)**: *Bhringaraja* is known for its unique ability to nourish and rejuvenate the skin, making it particularly effective for skin conditions like psoriasis.

By balancing these *Doshas*, *Bhringaraja* helps in reducing the symptoms of *Ekakusta*, such as scaling, redness, and inflammation. Eclipta alba *(Bhringaraja)* contains several bioactive phytoconstituents that contribute to its therapeutic effects in psoriasis.

Probable Mode of Action Modern Aspect [8]

Coumestans: The primary active compound in Eclipta alba is wedelolactone, a coumestan derivative. Coumestans exhibit anti-inflammatory and antioxidant properties, which help reduce inflammation and oxidative stress in psoriatic lesions Flavonoids: Eclipta alba contains flavonoids like luteolin and apigenin. These flavonoids have antioxidant and anti-inflammatory effects, which help in reducing the redness, scaling, and inflammation associated with psoriasis. Triterpenes: Compounds like ursolic acid and oleanolic acid are present in Eclipta alba. triterpenes have anti-inflammatory and immunomodulatory properties, which help in managing the immune response and reducing inflammation in psoriatic skin. Phenolic Compounds: These compounds exhibit antioxidant properties, which help in neutralizing free radicals and reducing oxidative stress in the skin. Saponins: Saponins have anti-inflammatory and antimicrobial properties, which help in reducing inflammation and preventing infections in psoriatic lesions. Steroids: Eclipta alba contains stigmasterol, a phytosterol with anti-inflammatory and immunomodulatory properties, which help in managing psoriasis symptoms.

CONCLUSION

The conclusion of the present study designed to assess the effectiveness of *Bhringaraja* (*Eclipta alba Hassk*) whole plant powder both internally and externally in reducing the signs and symptoms of *Ekakushta* (psoriasis) are as follows.

In clinical study 30 patients were selected and *Bhringaraja* Whole Plant *Churna* Advocated in a dose of 3gm twice in a day before food and Whole plant powder with lukewarm as required as *Pradeha* for 4 hours. Treatment was given for 45 days with the result assessment recorded at every 15 days.

In subjective paramaters response of patients to the treatment with *Bhringaraja* (*Eclipta albaHassk)* whole plant powder 30 patients presented with the symptom *Aswedhanam*, after treatment 27 patients got partially relief, 3 patients were not relieved from the symptom. Overall relief percentage was 90%. 30 patients presented with the symptom *Mastyasakalopanam*, after treatment with *Bhringaraja*

(*Eclipta alba* Hassk*)* whole plant powder 21 patients got partially relief, 9 patients were not relieved from the symptom. Over all relief percentage was 76%.

Both subjective and objective parameters have been analysed statistically. The relief of *Aswedhanam*, *Matsyasakalopanm*, PASI Score found highly significant ($P < 0.001$). Clinical study of *Bhringaraja* (*Eclipta alba* Hassk) *churna* for the treatment of *Ekakusta* (psoriasis) has provided compelling evidence supporting its traditional use in Ayurveda.

Ethical Committee Clearance

The Ethical Clearance was obtained by the institutional Ethical Committee of Dr. BRKR Govt Ayurvedic Medical College Hyderabad. (**Approval No:IEC /DRBRKRGAC/ 2021-22/30**.)

CTRI NO: CTRI/2024/03/063713

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