

Clinical Study on Evaluation of the Effect of Neem, Tulsi and Henna on Psoriasis

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Abstract

Psoriasis is an autoimmune, non-infectious, inflammatory disorder of the skin with the hyper proliferation of the skin. Psoriasis can be considered as the vitiation of Vata and Kapha. The characteristics of Ek Kustha resemble with the Generalized Psoriasis Vulgaris. Ayurveda advocates various palliative and purificatory therapies for the management of psoriasis. Neem used by Charak in Kustha Chikitsa as Churna, Paan, Lepa, Tail. Sushruta advised neem in Kustha as Churna, Kwath, Lepa and Snana. Tulsi used by Charak in Kustha as Lepa, Nashya, Kshir and Tail. Heena is the important ingredient of Mahaneela ghrita used by Sushruta in Kustha Chikitsa. Therefore, a study was planned with the aim to assess the efficacy of Neem, Tulsi and Heena in the treatment of psoriasis. Out of 30 patients in group A, 53.3% patient showed cured, 33.3% showed improved and 13.3% showed mild improved. In group B, 80% patient showed cured, 13.3% improved and 6.6% mildly improved. Findings of both the groups suggest that selected drugs are effective, but better results were observed in Group B where both the drugs were administered to the patients.

Keywords: Psoriasis; Ek kustha; Ayurveda

Introduction

Psoriasis is an autoimmune, non-infectious, inflammatory and hyperproliferative disorder of the skin characterized by well-defined erythematous (reddish) plaques with large adherent silvery scales [1]. Psoriasis and its symptoms as a whole are not mentioned as a single entity in Ayurveda. Psoriasis may be considered as the vitiation of Vata and Kapha [2]. The characteristics of Ek kustha resemble with the generalized psoriasis vulgaris [3,4]. Ayurveda advocates various palliative and purification therapies for the management of psoriasis. Several single drug and compound formulations are described in Ayurvedic texts but none of the treatment is specific for psoriasis. Presently the Ayurvedic physicians prescribe the nonspecific formulation for the treatment of this disease. The various drugs have been indicated in Ayurvedic classics for different skin diseases. The Neem (*Azadirachta indica* A.juss), Tulsi (*Ocimum sanctum*) and Henna (*Lawsonia inermis*) are one of them. These drugs have been using since thousands of years for skin diseases. Neem used by Charak in *Kustha chikitsa* as *Churna, Paan, Lepa, Tail* [5]. Sushruta used neem in Kustha as Churna, Kwath, Lepa and Snana [6]. Tulsi used by Charak in Kustha as Lepa, Nashya, Kshir and Tail [7]. Heena is the important ingredient of Mahanila ghrita used by Sushruta in kustha chikits [8]. Therefore, this study was planned with the aim to assess the efficacy of neem, tulsi and heena in the treatment of psoriasis.

Materials and Methods

A total of 30 patients of Psoriasis attending the Out Patient Department of Dravyaguna, L.H.S.P.G. Ayurvedic College and Hospital, Pilibhit (U.P.) were selected for the Randomized Parallel Group Clinical study. During the period of study incidence of disease

in relation to different factors like Age, Sex, Prakriti (constitution), Dietary habits, Personal hygiene were evaluated.

Inclusion criteria

A classically diagnosed and uncomplicated case of psoriasis patients of both sexes of age group between 18 years to 50 years were taken in the study. Patients having more than 50% of the symptoms were selected for the clinical study.

Exclusion criteria

The patient having active hepatic and renal disorders, endocrinal disorders like diabetes mellitus, thyrotoxicosis, and exfoliating dermatitis were not taken in the study. The patients having active infectious diseases like Syphilis, Gonorrhoea and other chronic diseases were also excluded.

Criteria for assessment

1. Sharply demarcated lesion with clear-cut borders.
2. Surface consists of non-coherent scales.
3. Under the scales, the skin has a glossy homogenous erythema.
4. Candle grease sign or onion peeling sign positive.
5. Auspitz's sign positive [9].

The lesion of Psoriasis was graded as mild (+1), moderate (+2), severe (+3) on the basis of symptoms-

- Mild-if there were itching and 1-3 lesions with 1-3 cm size
- Moderate- if there were itching, scaling and 4-8 lesions with 4-6 cm size

- Severe- if a number of lesions were more than 8 with more than 6 cm size with intense itching, scaling, and papules.

Grouping and posology

All the 30 patients are randomly divided into two groups Group A and Group B (n=15 each).

Group A: Nimb churna and Tulsi churna 2.5 gm each twice daily.

Group B: Nimb churna and Tulsi churna 2.5 gm of each twice daily. Nimb-Tulsi-Henna oil for external use twice a day. During the treatment period, the use of soap was strictly restricted. The duration of treatment was 90 days.

Observation and Statistical Analysis

The following Tables 1-16 represents the statistical data.

Sex	No. of patients	Percentage(%)
Male	23	76.67%
Female	07	23.33%

Table 1: Incidence of psoriasis in either sex of 30 patients. $Z=4.13$, $P<0.001$; No. of male patients is significantly higher than female patients.

Seasons	No. of patients	Percentage (%)
Greesma	3	10
Varsha	12	40
Sharad	15	50

Table 2: Relationship with seasonal variation in psoriasis of 30 patients. $X^2=7.8$, $P<0.05$; No. of patients was maximum in Sharad ritu and significant.

Duration	No. of patients	Percentage
Less than 1 year	9	30 %
More than 1 year	9	30%
More than 2 year	12	40%

Table 3: Relationship with duration of the disease. $X^2=0.60$, $P=0.70$; No of patients were same in different duration and non-significant.

Prakriti	No. of patients	Percentage
Vataja	3	10
Pittaja	0	0
Kaphaja	6	20
Vata-Pittaja	0	0
Vata-Kaphaja	15	50
Pitta-Kaphaja	6	20
Total	30	100

Table 4: Deha prakriti in 30 patients of Psoriasis. $X^2=31.2$, $P<0.001$; Vata-Kaphaja is most common Prakriti and significant.

State of Agni	No. of patients	Percentage
Samagni	9	30
Mandagni	16	53.33
Tikshnagni	2	6.67

Vishamagni	3	10
Total	30	100

Table 5: State of Agni in 30 patients of Psoriasis. $X^2=16.7$, $P<0.001$; Mandagni is most common and significant.

Kandu	No. of patients	Percentage
Present	30	100
Absent	0	0
Total	30	100

Table 6: Incidence of kandu in the lesion of 30 patients of Psoriasis. $Z=7.75$, $P<0.001$; Kandu was present in all patients and significantly significant.

Scaling	No. of patients	Percentage
Present	30	100
Absent	0	0
Total	30	100

Table 7: Incidence of progressive scaling and lesion in 30 patients of psoriasis. $Z=7.75$, $P<0.001$; Scaling was present in all patients and significantly significant.

Papules	No. of patients	Percentage
Present	20	66.7
Absent	10	33.4
Total	30	100

Table 8: Incidence of *Raktata* in 30 patients of Psoriasis. $Z=2.58$, $P<0.01$; papules were present in 66.6% of patients and highly significant.

S.No	Site of lesion	No. of patients	Percentage
Upper extremities	Above the Elbow	3	10
	Below the Elbow	2	06.67
	Extensor surface of Hand	5	16.67
Lower extremities	Above the Knee	2	06.67
	Below the Knee	9	30.00
	Planter surface of foot	0	00
	Extensor surface of foot	6	20.00
	Area of Ankle joint	3	10
Whole body	Whole body	0	00

Table 9: Incidence of site of lesions. $X^2=20.40$, $P<0.05$; Below the knee was most common site followed by extensor surface of foot and significant.

Complaints	No. of patients	Percentage %
Burning sensation	12	40

Involvement of joints	3	10
Involvement of nails	1	03.33
Fear about the lesions	18	60
Cosmetic problem	20	66.7

Table 10: Incidence of other complaints in 30 patients. $X^2=27.30$, $P<0.001$, cosmetic problem were most common complaint followed by fear about the lesion and significant.

Group	Before treatment				After treatment						
	Severe	Moderate	Mild	Nil	Severe	Moderate	Mild	Nil	Improvement in %	C ²	P
A	9	6	-	-	-	1	2	12	80	26.57	<0.001
B	4	6	5	-	-	-	-	15	100	29	<0.001

Table 11: Comparison of severity of Kandu Before treatment & After treatment. $Z=1.83$, $P=0.01$; Severity of symptoms of Kandu decreases significantly after treatment in all group. In group B the cure rate was 100% and in group A it was 80%. Cure rate was higher in group B than group A ($P=0.06$).

Group	Before treatment				After treatment						
	Severe	Moderate	Mild	Nil	Severe	Moderate	Mild	Nil	Improvement in %	C ²	P
A	6	9	-	-	-	-	7	8	53.3	30	<0.001
B	9	3	3	-	-	-	-	15	100	30	<0.001

Table 12: Comparison of severity of progressive scaling and lesions Before treatment & After treatment. $Z=3.02$, $P<0.01$; there was significant improvement in group A & group B and improvement is higher in group B and significant.

Group	Before treatment				After treatment						
	Severe	Moderate	Mild	Nil	Severe	Moderate	Mild	Nil	Improvement in %	C ²	P
A	3	5	-	7	-	-	1	14	91.7	11.33	<0.01
B	12	1	-	2	-	-	-	15	100	29	<0.001

Table 13: Comparison of severity of Pidika before treatment and after treatment. $Z=1.31$, $P=0.20$; there is significant improvement in pidika in group A & group B and improvement is higher in group B than A.

Group	Before treatment				After treatment						
	Severe	Moderate	Mild	Nil	Severe	Moderate	Mild	Nil	Improvement in %	C ²	P
A	-	-	9	6	-	-	1	14	85.7	9.28	<0.01
B	-	3	10	2	-	-	-	15	100	22.94	<0.01

Table 14: Comparison of severity of Raktata before treatment and after treatment. $Z=1.32$, $P=0.22$; there is significant improvement in severity of raktata after treatment in group A & group B. improvement is higher in group B.

Relief score	30 days		60 days		90 days	
	Group A	Group B	Group A	Group B	Group A	Group B
50% relief(mild)	6	5	3	2	3	1

75% relief(moderate)	8	7	8	5	5	2
100% relief(complete)	1	3	4	8	8	12

Table 15: Drug results noted during 90 days. $X^2=24.21$, $p<0.01$; relief is higher in group B than group A at different time intervals and slow increases in relief significantly with time.

S.N.	Group	Before Treatment						After Treatment							
		Severe		Moderate		Mild		Nil		Cured		Improve		Mild improve	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
1	A	3	20	9	60	3	20	-	-	8	53.3	5	33.3	2	13.3
2.	B	2	13.3	10	66.6	3	20	-	-	12	80	2	13.3	1	6.6
	Total	5	16.6	19	63.3	6	20	-	-	20	66.6	7	23.3	3	10

Table 16: Showing result in term of severity of patient before treatment and after treatment.

Results and Discussion

Out of 30 patients in group A 53.3% patient showed cured, 33.3% showed improved and 13.3% showed mild improved. In group B 80% patient showed cured, 13.3% improved and 6.6% mild improved. Findings of both the groups suggest that selected drugs are effective, but better results were observed in Group B where both the drugs were administered to the patients. This can be because administration of oral drug alone is not sufficient to reverse the biochemical changes happening in the whole body and to attain sufficient quantity of drug to skin tissues. Local drug application keeps the drug in longer contact with the skin surface.

Conclusion

Internal use of Neem and Tulsi churna along with external application of Neem-Tulsi-Heena oil combined therapy in Group B showed better result. It can be concluded that systemic and topical administration required for better management of Psoriasis. Another important aspect of the study is that the results could have been more effective if study would have been done for longer duration considering the chronic nature of disease.

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