

Original Article**AYURVEDIC MANAGEMENT OF KITIBHA W.S.R. TO PSORIASIS****MANOJ KUMAR GUPTA¹ NEERAJ KANUNGOO² SANDHYA SHARMA³DINESH SINGH GAUR⁴**

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ABSTRACT

Objective:Following are the aims and objectives of the dissertation. For study the aetiology, pathology, symptomatology and progress of the disease. Nidan Panchak and predominance of Doshas according to Ayurvedic as well as modern medical science and to analyse the efficacy of Virechan karma on Kitibha. Analyse the efficacy of the ayurvedic drug Navayas Rasayanan yog (5 gm. BID) and virechana karma on Kitibha or Psoriasis after purification of the body (Shodhan puravaka Shaman chikitsa). Compare the effect of ayurvedic drug Navayas Rasayanan yog (5 gm. BID) both Group A & Group B without purification (shaman chikitsa) and after purification (shodhan purvaka shaman chikitsa). Group C worked as a placebo group (2 capsules Godanti Bhasma/day).

Method:The present clinical study has been divided into three groups to analyses the efficacy and clinical comparative study of both the therapies on kitibha/psoriasis.

Group A- This is Shodhan group virechana karma was given to patients of this group. After samsarjan karma placebo was given up to the 30 days.

Group B- This is Shodhan purvaka shaman group. Virechana was followed by administration of Navayas Rasayan yog in the dosage of 5 gm. BID after Samsarjan karma. The total therapy is carried out by 30 days.

Group C-This is Shaman group. Navayas Rasayan yog was given to the patients of the group in the dosage of 5 gm. BID for 30 days

Results :All the results obtains of subjective and objective parameter of the psoriasis during before treatment and after treatment of clinical trial has been noted and assess the effect of given drug Navasyas Rasayan Yog Dose 5 gm. BID with lukewarm water on the patients of group B after Snehana Svedan Puravak Virechan karma was performed (Shodhan puravak shaman therapy) . Where as in the patients of Group A Snehana Svedan Puravak Virechan karma was performed. After that dispensing of capsule of placebo in forms of Godanti Bhasma Dose – 2 Capsules BID (125mg=1capsules) has been given in the patients of Group A. Only Shaman Therapy Navasyas Rasayan Yog Dose 5 gm. BID with lukewarm water on the patients of Group C has been given without Snehana Svedan Puravak Virechan karma was performed in the patients of psoriasis of Group C. Scoring (PASI Score) Psoriasis area severity index score It has been employed in numerous clinical trials to assess difference between before and after treatment in a fairly vigorous and consistent manner that is reproducible between investigators and the centres. The four main anatomic sites are assessed 1- the head (h), 2-upper extremities (u), 3-lower extremities (l), 4-trunk (t).PASI scores were introduced for studies of synthetic retinoid in 1978.it had been calculated as follows. $PASI=0.1(Eh+Sh+lh) Ah+0.2(Eu+Su+lu) Au+0.3(Et+St+lt) At+0.4(El+Sl+ll) Al$. Where-E=Erythema, S=Scaling, I=Indurations, A=Area.PASI score was completed on the basis of its severity index such Erythema, Induration and scaling, and for Area. Score by percentage grading as mentioned in materials and methods.Mean changes in PASI score in different groups after therapy with trial drugs by Navayas Rasayanas, Virechan and Shodhan Poorvak Shaman group though produced a statically significant change the overall reduction of PASI score only 1.28 + 1.40 and by Navayas rasaya and 6.64 + 5.62 by Shodhan Poorvak Shaman group. Group C suggests that Navayas rasayan has got small but consistent effect of PASI score, while C Shodhan Poorvak Shaman group has good result.In Group A no. of patches were reducing by 46.21% and 54.4% no. of patches reduced in Group B while in Group C it was reduced by 48.5% all the result were highly significant. All three groups gave very good relief to the patients, though very good relief to the patients, though symptom was assuaged more in Group B shodhan poorvak shaman group.

Conclusion:Complete remission was found in 20% in Group A, 60% in Group B and 50% Group C. As a whole of 30 pt. studied, complete remission was found in 43%. Markedly improvement was obtained in 30% in Group A, 30% pt of Group B and 20% pt. of Group C. Of the 30 pt. studied, markedly improvement was found in 26.7%. Improvement was found in 40% of Group A, 30% of Group B and 30% Group C pt. of the 30 pt. studied improvement was found in 26.7%. 10% of pt. of Group A only remains unchanged.

Keywords : Kitibha

INTRODUCTION

People and extremely rare in dark skinned individually. It is estimated that over seven million Americans 2.6% have psoriasis with more than 150,000 new cases report each year. According to the national psoriasis foundation 20,000 children under ten year of ages are diagnosed with psoriasis annually. It has been recognized as non-infectious Papulosquamous skin disease easily diagnosable in its typical form, usually run a chronic course with remission exacerbation. The exact aetiology is still unknown but many precipitating factor like genetic, environmental, immunological and psychological has been to be influential in the manifestation of the disease. The main abnormality in psoriasis is increased epidermal proliferation due to excessive division of

cells in the basal layers and shorter cell cycle time. The transit time of keratinocytes through the epidermis is shortened and epidermal turnover time fall from 28 to 5 or 6 days. The unpredictable nature of psoriasis makes treatment challenging for many people. There are many different both topical and systemic. That can clear psoriasis for period of time because the course of this disease varies with each individual, doctors must experiment with or combine different treatment to find most effective therapy for particular patient. Since psoriasis cannot be cured in modern medical science. It can only be attenuated. The use of many different types of topical and systemic corticosteroid serves as preventer's but bestows various complications. So it is essential to discover new strategy of treatment that could cure the disease.

Psoriasis is a common chronic and non-infectious skin disease characterized by well-defined slightly raised, dry erythematous macules with scales and typical extensor distribution and reddish brown papules and plaques covered with layers of silvery scales. The eruption usually symmetrical and mostly commonly affects elbows, scalp, nails and the sacral regions. Psoriasis is one of the most common dermatological diseases effecting up to 1-3% of the world and 0.5-1.5% of Indian population. Although the disease can develop at any time, 10-15% of all the cases are diagnosed in children under 10, at the average age at the onset of symptom is 28. Psoriasis is most common in fair-skinned people and extremely rare in dark-skinned individuals. It is estimated that over seven million Americans 2.6% have psoriasis with more than 150,000 new cases report each year. According to the national psoriasis foundation 20,000 children under ten years of age are diagnosed with psoriasis annually. It has been recognized as non-infectious Papule-squamous skin disease easily diagnosable in its typical form, usually run a chronic course with remission exacerbation. The exact aetiology is still unknown but many precipitating factors like genetic, environmental, immunological and psychological has been to be influential in the manifestation of the disease. The main abnormality in psoriasis is increased epidermal proliferation due to excessive division of cells in the basal layers and shorter cell cycle time. The transit time of keratinocytes through the epidermis is shortened and epidermal turnover time fall from 28 to 5 or 6 days. The unpredictable nature of psoriasis makes treatment challenging for many people. There are many different both topical and systemic. That can clear psoriasis for period of time because the course of this disease varies with each individual, doctors must experiment with or combine different treatment to find most effective therapy for particular patient. Since psoriasis cannot be cured in modern medical science. It can only be attenuated. The use of many different types of topical and systemic corticosteroid serves as preventer's but bestows various complications. It is essential to discover new strategy of treatment that could cure the disease. Skin is the aspect of ourselves, are present to the world. The skin is not only largest organ of the body but are also forms living biological barriers. Large areas of psoriasis can lead to infection, fluid loss and poor blood flow. In severe cases, people need to be hospitalized. About 56 million hours of work are lost each year by people who suffer from psoriasis and between \$1.6 billion it spent per year to treat psoriasis. Modern medical science has number of therapeutic measures i.e. topical and systemic corticosteroids, PUVA therapy but there are so many side effects like nausea, skin burn blister increased hair growth, bone marrow depletion, liver failure etc. whereas Ayurvedic management includes not only medicines but diets, daily routine, atmosphere and mental health as well and it covers vast field. Ayurvedic chikitsa balances and rejuvenates its immunity to prevent new disease from developing. Preventive therapy of Ayurveda gives better result without any complication than modern medicine.

MATERIAL & METHOD

Criteria of selection of patients

The 30 patients were chosen from O.P.D. & I.P.D. of Govt. Dhanwantri Ayurvedic hospital irrespective of age, sex, and religion & exclusion criterion were taken into account before choosing the patients for the clinical trial.

Inclusion Criteria

- Patients above the age of 10 year were chosen. Patients with the sign and symptoms of kitibha described in Ayurvedic text were selected further the diagnosis was confirmed by the presence of other. Symptoms and sign of psoriasis described in modern texts e.g. candle grease sign, auspitz sign and koebner phenomenon.
- Routine hematological examination.
- Routine urine examination and Biological investigation, like blood sugar, serum cholesterol, calcium and blood urea.

Exclusion Criteria

- Patients below the age of 10 year.
- 2-Patients of psoriatic arthropathy and psoriatic erythroderma were excluded.
- 3-The patients having associated disease and inconclusive diagnosis were discarded.
- 4-patients having cardiac, renal disease, endocrine disorders were excluded in the study to avoid overlapping of symptomatology.

Plan of Study

The present clinical study has been divided into three groups to analyse the efficacy and clinical comparative study of both the therapies on kitibha/psoriasis.

Group A- This is Shodhan group virechana karma was given to patients of this group. After samsarjan karma placebo was given up to the 30 days.

Group B- This is Shodhan purvaka shaman group. Virechana was followed by administration of Navayas Rasayan yog in the dosage of 5 gm. BID after Samsarjan karma. The total therapy is carried out by 30 days.

Group C- This is Shaman group. Navayas Rasayan yog was given to the patients of the group in the dosage of 5 gm. BID for 30 days.

Group	Details of Group	Number of patients registered	Number of patients completed the course	Duration of course	Drug of choice
A	Shodhan group + placebo	10	10	30 days	Virechan karma + placebo
B	Shodhan therapy + Shaman drug	10	10	30 days	Virechan karma followed by Navasyas Rasayan Yog
C	Shaman Group	10	10	30 days	Navasyas Rasayan Yog

Group A-Shodhan Group

10 patients were registered in this group. All patients completed the course. In this category, Snehana Svedan Puravak Virechan karma was performed. This was succeeded achieved in Virechan karma. This is followed by dispensing of capsule of placebo. Following is the schedule followed in this group.

S. No.	Therapy	Time Duration	Drug and Dosage
1	Diphan Pachan	3 days	Trikatu Churna 5 gm. BD.
2	Abhyantar Snehana	5-7 days*	25-175 ml in increasing order daily increasing by 25 ml (Moorcchit Til tail)
3	Bahya Snehana and Svedan karma	3 Annakals	Moorcchit til tail for Snehana, Bahya Svedan with Nimba Kwath and karanj leaves
4	Virechan karma	Morning **	Haritaki - 20 gm. Trivrita - 20 gm. Aragvadha - 20 gm. Kutaki - 20 gm. 200 ml kwath of above drug was prepared 30 ml Erand tail was added to it.
5	Samsarjan Karma	3-7 days***	Peya, Vilepi, Akritiyush, krit yush, Akrit krishara, Krit Krishara Ardhar, Purana Aahara in chronological order***
6	Placebo	15 days****	Godanti Bhasma Dose - 2 Capsules BID (125mg=1capsules)

*Depends on Samyak Snigdha Lakhans.

**Empty stomach in the morning 9:00 A.M.

***Depends on Shudhi Prakar Uttam, Hina, and Madhyam.

****Depends on Shudhi:

Total Duration of course 30 days step 1-6 was followed in systemic order

Mode of Dispensing:-

Godanti Bhasma was dispensed in the form of capsule of 125mg.

Anupan: Anupan of Virechan kalpa & placebo is lukewarm water.

Aushadhkala: Virechana kalpa in prescribed in morning hours after sunrise at 9:00 A.M. placebo given after meals.

Group B: Shodhan puravak shaman therapy in group B of 10 patients was registered in this group all patients completed this course: In this category, Snehan Svedan Puravak Virechan karma was performed this was succeeded by Samsarjan karma which relied in the type of Shudhi achieved in Virechan. This is followed by dispensing of pouches of Navasyas Rasayana following in the schedule followed in this group.

S. No.	Therapy	Time Duration	Drug and Dosage
1	Dipan Pachan	3 days	Trikatu Churn 5 gm. B.I.D.
2	Abhyantar Snehan	5-7 days*	25-75 ml in increasing order
3	Bahya Snehan and Svedan	3 Annakalas	Moorchhit til tail for Snehan
4	Virechan karma	Morning **	Haritaki - 20 gm. Trivrita - 20 gm. Aragvadha - 20 gm. Kutaki - 20 gm. 200 ml Kwath of above drug
5	Samsarjan Karma	3-7 days***	Peya, Vilepi, Akrit, krit, Y chronological order***
6	Shaman drug	30 days****	Navasyas Rasayan Yog**** 5 gm. BID

*Depends on Samyak snighdha lakshan.

**After sunrise in the morning 9:00 A.M.

***Depends on shudhi prakara-Uttam, Hina, and Madhyam.

****Depends on shudhi total duration of course 30 days step 1to 6 was followed in systemic order.

Method of Dispensing:

Navasyas Rasayan Yog was dispensed in the form of pouch according to dose.

Anupan:

Anupan of virechan kalp and Navasyas Rasayan Yog is lukewarm water.

Aushadhkala:

Virechan kalp is described in morning hours after sunrise at 9.00 A.M. & Navayas rasayan yog is given after meals.

Group C- Shaman Group:

10 patients were registered in the group and all patients completed this course Navayas rasayan yog was administered to 10 patients.

Mode of Dispensing:

50 gm. pouches were dispatched to the patients.

Dose and Anupana: 5gm BID with lukewarm water

Aushadhkala: After meals.

Ingredients of Drug

Navayas Rasayan yog as mention in Chakradatta, in kushtha Chikitsa is the drug of choice for shaman therapy. Following ingredients are present in the below mentioned ratio.

S.No	Ingredients	Quantity
1	Amalki	1 part-200gm.
2	Bibhitaki	2Part-400gm.
3	Haritaki	3Part-500gm.
4	Vidang	4Part-600gm.
5	Chitrakmool	5Part-700gm.
6	Bhilava	6Part-800gm.
7	Bakuchi	7Part-900gm.
8	Lauh Bhasma	8Part-1000gm.
9s	Bhiringraj	9Part-1100gm.
	Total	6.200gm.

Method of preparation

Fine Churma of all ingredients except Bhilava was prepared. Purification of Bhilava by classical method given in Rasa Tantra Sara Siddha Prayoga Samagraha has been done properly. Bhawana in Gomaya qwath then in Gomutra then in Godugdha after that Bhilva was purified by Dola yantra savedanayantra 24 hrs vidhi. In each Bhawana 24 hours time was given. After that by pure water Bhilava washed in running tap then Bhilava Boiled for 6hours in Narikela jala after that Bhilava kept in open and made surya tapta for 3-4 days. The Bhilva was crushed in the grinder and then powdered. Powdered Bhilava mixed with the powder of others ingredients.50gm. Pouch was then filled for dispensing. Powder is easy to take and hence patients were advised in the dosage of 5 gm BID mixed with shuddha til tail in linctuses from with sukshosha jala as Anupan.

Moorchhit til tail has been chosen for abhyantar snehan in present study. Hence, initially moorchhit til tail was done followed by tail Paak (Sneha Paak Vidhi).

Ingredients for Tail Moorchhana

was prepared 50 ml Eranda tail was added it.
Taila-16 parts (Til Tail). Kalka Dravyas-1parts. Water-16Partsⁱⁿ
Kalka Dravyas are 1-Manjistha-560gm. 2-Haritaki-140gm. 3-Bibhitaki-140gm. 4-Amlaki-140gm. 5-Nagarmotha-140gm. 6-Lodhra-140gm. 7-Hebera-140gm. 8-Dalchini-140gm. 9-Vatankur-140gm. 10-Ketkipushpa-140gm. 11-Til Tail 8960 Litre.

Method of preparation

Manjistha 4 part and all ingredients except Manjistha were taken in equal quantity 1 part. Murchchana process was done in mini pharmacy of govt. Dhanwantari Ayurvedic college.Yavakut churma of above ingredients kinchit jaladra murchchana dravyas was made. Til Tail was kept on Manda Agni. Moorchchana dravyas mixed in til tail. Meanwhile, burner was put off in precaution and water was added little by little and mixed well. Burner was again put on and tail pak was done till, it gets the sneha siddha lakshana.The vessel was stirred till the process was completed.Til taila was then filtered and used.

Virechan Kalpa

Ingredients	Quantity
1.Haritaki	20 gm
2.Nishotha	20 gm
3.Aragvadha	20 gm
4.Kutaki	20 gm
5.Eranda tail	30 ml

Yavkuta churana of Haritaki, Nishodha, Aragvadha, and Kutaki was prepared. It was then soaked in water over night. In the morning, 16 times water was added and boiled till reduced to 1/8 times. It was then filtered and eranda tail was mixed when kwath was lukewarm. Then virechana kalpa was prepared for uses.

PASI Score-Scoring (PASI Score) Psoriasis area severity index score: It has been employed in numerous clinical trials to assess difference between before and after treatment in a fairly vigorous and consistent manner that is reproducible between investigators and the centres. The four main anatomic sites are assessed 1- the head (h), 2-upper extremities (u), 3-lower extremities (l), 4-trunk (t).

PASI scores were introduced for studies of synthetic retinoid in 1978.it had been calculated as follows.

$$\text{PASI} = 0.1(\text{Eh} + \text{Sh} + \text{lh}) \quad \text{Ah} + 0.2(\text{Eu} + \text{Su} + \text{lu}) \quad \text{Au} + 0.3(\text{Et} + \text{St} + \text{lt}) \\ \text{At} + 0.4(\text{El} + \text{Sl} + \text{ll}) \text{ AL}$$

Where-E=Erythema, S=Scaling, I=Indurations, A=Area.

E.S.I.were assessed according to a 4 point scale where no symptoms.

Severity	Score
None	0
Slight	1
Moderate	2
Marked	3
Severe	4

Coverage	Score
0%	0
<10%	1
10-29%	2
30-49%	3
50-69%	4
70-89%	5
90-100%	6

Modified rule of nine

Head-3%, Scalp-6%, Ant.trunk-14% ,Post.trunk-16%, Genitalia and perineum-1% ,Leg-16%(each), Dorsumfoot-2%each, Sole-2%(each), Arm-7%(each), Dorsum hand-1.5%(each),Palm-1.5%(each).

- Head:(I_{head}+E_{head}+S_{head}+T_{head})×A_{head}×0.1=Total_{head}
- Arms:(I_{arms}+E_{arms}+S_{arms}+T_{arms})×A_{arms}×0.2=Total_{arms}
- Body:(I_{body}+E_{body}+S_{body}+T_{body})×A_{body}×0.3=Total_{body}
- Legs:(I_{legs}+E_{legs}+S_{legs}+T_{legs})×A_{legs}×0.4=Total_{legs}

Finally, the PASI is Total_{head}+Total_{body}+Total_{legs}Thats it. This PASI will range from 0 (no Psoriasis) to 96 (covered head -to-toe, with complete itching, redness, scaling and thickness).PASI score varies in step of 0.1 units from 0-72. The highest score represents complete erythroderma of severest possible degree.Percentage of improvement in initial PASI scores of each individual is noted in every follow up. General assessment of investigation and Photograph had taken at regular intervals. If any adverse effect has been noted and also noted if any extra sign and symptoms occurred in the patients of psoriasis during clinical trial.

Relief in sign & symptoms

No improvement/unchanged	0-24% Relief in Sign & Symptoms
Improvement	25-49% Relief in Sign & Symptoms
Mark Improvement	50-74% Relief in Sign & Symptoms
Complete remission	75-100% Relief in Sign & Symptoms

Significant improvement 60-80%

Moderate improvement 30-60%
Mild improvement up to 30%
No improvement 0%

Reports of patients own observation.

Overall assessment of therapy

On the basis of percentage relief in signs and symptoms and investigations the overall result of therapy was assessed.

Statistical Analysis

Paired t-test was carried out at level at 0.05, 0.01, and 0.001 of p level.

The result of the therapy was assessed after accomplishment of the treatment All the available data was statically analyzes by applying "paired test " The calculated value was compared with tabulated value and the Sequel assessed at various probabilities The results obtained were interpreted as :-

Improvement - p<0.05
Significant-p < 0.01
Highly Significant -p < 0.001

Follow-up-study

After the completion of the above therapeutic procedures all the patients were kept under observation for further 3months as follow-up- study.

Objective (Laboratory) Parameters

Investigation

The following investigation was carried out during the course of the disease.

Haematocrit value

Hb%, TLC, DLC, and ESR.

Biochemical Values-

Serum Urea, Serum Cholesterol, Serum calcium, and Blood Sugar.

Table 1: PASI Score in all Groups.

Groups	B.T.	A.T. ₁ /FU ₁	A.T. ₂ /FU ₂	A.T. ₃ /FU ₃	Mean difference. (B.T.-A.T.)	Significant t value with in group.
Group A	19.94	19.91	19.97	19.80	0.49	t=1.65
	10.54	10.23	10.14	10.06	0.94	P>0.05
Group B	16.14	14.19	13.06	9.57	6.64	t=3.75
	14.55	12.17	11.74	9.06	5.62	P>0.05
Group C	20.56	20.00	19.73	19.28	1.28	t=2.90
	14.69	14.14	13.83	13.91	1.40	P>0.02

Effect of PASI Score(mean score) on Group A(2&3),Group B(4&5) and Group C (6&7)

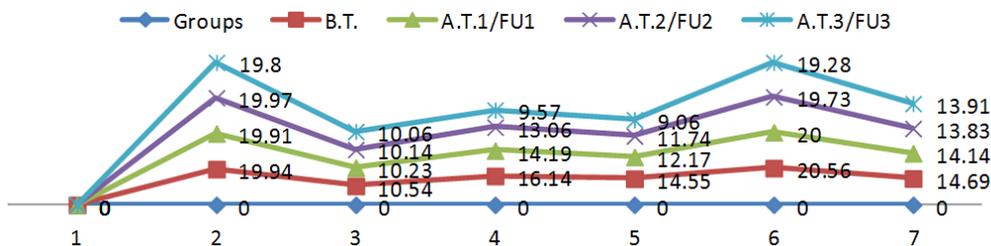
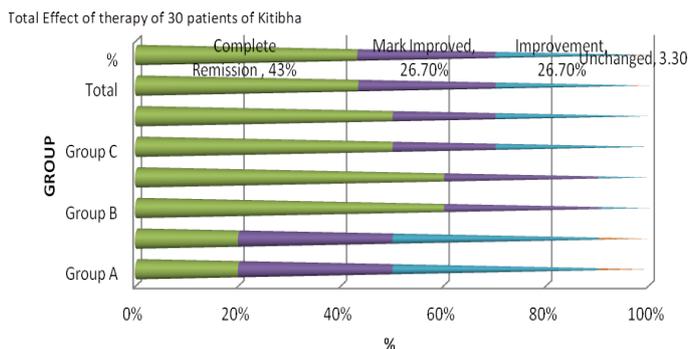


Table 2: Total Effect of therapy of 30 patients of Kitibha.

Total effect	Group A		Group B		Group C		Total	%
	No of Patients	%	No of Patients	%	No of Patients	%		
Complete Remission	2	20	6	60	5	50	13	43%
Mark Improved	3	30	3	30	2	20	8	26.7%
Improvement	4	40	1	10	3	30	8	26.7%
Unchanged	1	10	0	00	0	00	1	3.3%



Criteria of assessment

To bring objectivity score were assigned to all signs and symptoms of kitibha or psoriasis the details of which are as follows'

Symptom	Score
1. Scaling	
No scale	0
Scaling off between 15-28 days	1
Scaling off between 7-15 days	2
Scaling off between 5-7days	3
Scaling off between 1-5 days	4
2-Erythema/Vruttam	
Normal	0
Faint or near to normal	1
Blanching Red color	2
No Blanching red color	3
Red color +Subcutaneous	4
3. Rukshata/Dryness	
No line on scrubbing with nail	0
Faint line on scrubbing with nail	1
Lining and even wood can be written	2
Rukshata causing Kandu	3
Rukshata leading to crack formation	4
4. Srava	
No srava	0
Mild Srava	1
Moderate Srava	2
5. Ghanam/Epidermal thickening	
No Ghanam/thickening	0
Mild thickening	1
Moderate thickening	2
Very thick	3
Very thick with indurations	4
6. Shyava	
Normal	0
Faint or near to normal	1
Blenching Blue color	2
No blenching+ Blue color	3
Blue color + subcutaneous	4
7. Krishna	
Normal	0
Light black	1
Moderate black	2
Severe black	3
Black Subcutaneous	4
8. Parusham/Hard to touch	
Normal	0
Mild Hard to Touch	1

Moderates hard to touch	2
Severe hard to touch	3
9. Vruttam/Circular plaque	
No plaque	0
Plaque at the level of skin	1
Mild elevation from skin level	2
Moderate elevation from skin level	3
Profuse elevation from skin level	4
10. Kinkharsparham/rough lesion	
Normal	0
Mild roughness to Touch	1
Moderates roughness to touch	2
Severe roughness to touch	3
11. Ugra Kandu/severe itching	
No itching	0
Mild/Occasional itching	1
Moderate/infrequently	2
Severe/very frequent itching	3
Very severe itching which disturbs sleep & activities	4
12. Anhydrosis	
Normal	0
Improvement	1
Present few lesion	2
Present all lesion	3
Aswedanam in lesion &in uninvolved skin	4
13. Burning	
No burning	0
Mild burning	1
Moderate burning	2
Severe burning	3
Severe burning affecting sleeps	4
14. Candle grease sign	
Absent	0
Improved	1
Present	2
15. Auspitz Sign	
Absent	0
Improved	1
Present	2
16. Koebner sign	
Absent	0
Improved	1
Present	2

OBSERVATION AND RESULTS

All the results obtains of subjective and objective parameter of the psoriasis during before treatment and after treatment of clinical trial has been noted and assess the effect of given drug Navasyas Rasayan Yog Dose 5 gm. BID with lukewarm water on the patients of group B after Snehana Svedan Puravak Virechan karma was performed (Shodhan puravak shaman therapy) . Where as in the patients of Group A Snehana Svedan Puravak Virechan karma was performed. After that dispensing of capsule of placebo in forms of Godanti Bhasma Dose – 2 Capsules BID (125mg=1capsules) has been given in the patients of Group A. Only Shaman Therapy Navasyas Rasayan Yog Dose 5 gm. BID with lukewarm water on the patients of Group C has been given without Snehana Svedan Puravak Virechan karma was performed in the patients of psoriasis of Group C. Each and every results of subjective and objective parameter obtains before and after clinical trial of 30 days has been noted, tabulated, diagram mated and statistically calculated has been given below.

Table 3: Shows the effect subjective parameter found in 30 patients of Kitibha/Psoriasis.

Symptom's	Group A		Group B		Group C		Total	%
	No of patients	%	No of patients	%	No of patients	%		
Shyava	09	90	08	80	09	90	26	86.67
Kinakhar Sparsh	10	100	09	90	10	100	29	96.67
Parusham	08	80	07	70	07	70	23	76.67
Sravi	05	50	07	70	06	60	18	60.00
Vruttam	08	80	06	60	07	70	21	70.00
Ghanam	09	90	08	80	08	80	25	83.33
Ugra Kandu	10	100	10	100	10	100	30	100
Krishna	09	90	08	80	09	90	26	86.67
Ruksham	10	100	09	90	10	100	29	96.67

Fig. 1: Show subjective parameter found in 30 patients of Kitibha/Psoriasis.

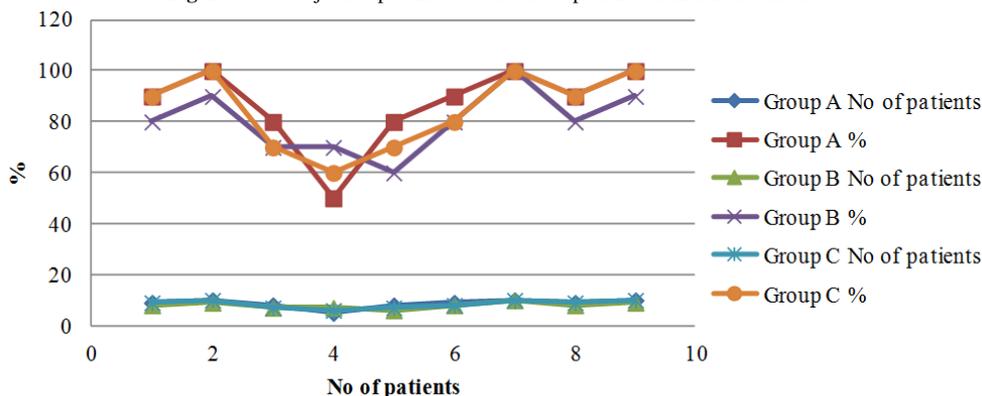


Table 4: Show cardinal sign and symptoms found in 30 patients of Psoriasis or Kitibha.

Symptom's	Group A		Group B		Group C		Total	%
	No of patients	%	No of patients	%	No of patients	%		
Silver white scaling	10	100	10	100	10	100	30	100
Plaque	08	80	06	60	07	70	21	70
Thickness	09	90	08	80	08	80	25	83.33
Itching	10	100	10	100	10	100	30	100
Burning	08	80	05	50	07	70	20	66.67
Dryness	08	80	09	90	10	100	27	90
Erythematous papule	07	70	04	40	00	00	00	00
Auspitz sign	10	100	10	100	10	100	30	100
Candle grease sign	09	90	08	80	09	90	26	86.66
Koebners Phenomenon	08	80	09	90	07	70	24	80
Nail deformity	03	30	03	30	04	40	10	33.33

Fig. 2: Show cardinal sign and symptoms found in 30 patients of Psoriasis or Kitibha.

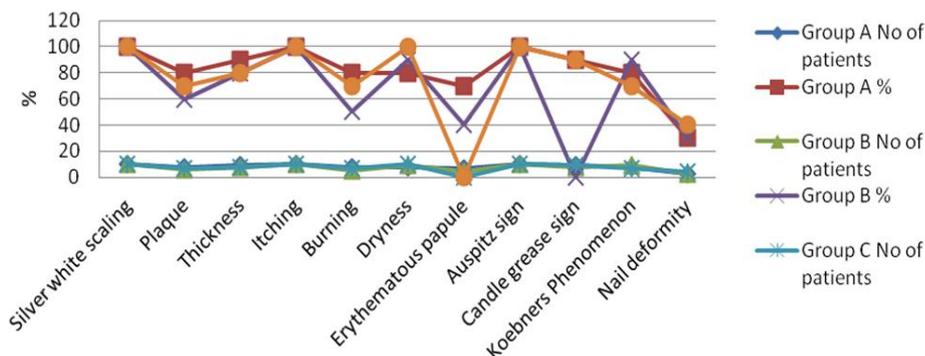


Table 5: Total effect on subjective parameter of 10 patients of Kitibha/Psoriasis in Group A.

Sign & symptoms	B.T.	A.T.	Difference	% of Relief	S.D.±	S.E.±	t	p
Shyava	3.2	1.3	1.9	59.38	0.738	0.233	8.143	<.001
Kinakhara Sparsh	3.1	0.8	2.3	74.19	0.675	0.213	10.776	<.001
Parusham	2.0	0.4	1.6	80.00	0.966	0.306	5.237	<.001
Sravi	3.7	0.8	2.9	78.38	1.101	0.348	8.333	<.001
Vruttam	1.8	0.6	1.2	66.66	0.788	0.249	4.811	<.001
Ghanam	0.6	1.1	1.9	63.33	0.316	0.1	19.00	<.001
Ugra kandu	3.0	1.2	1.8	60.00	0.632	0.2	9.00	<.001
Krishan	2.8	1.1	1.7	60.71	0.675	0.213	7.965	<.001
Ruksham	3.0	1.3	1.7	56.67	0.675	0.213	7.965	<.001

Fig. 3: Total effect on subjective parameter of 10 patients of Kitibha/Psoriasis in Group A.

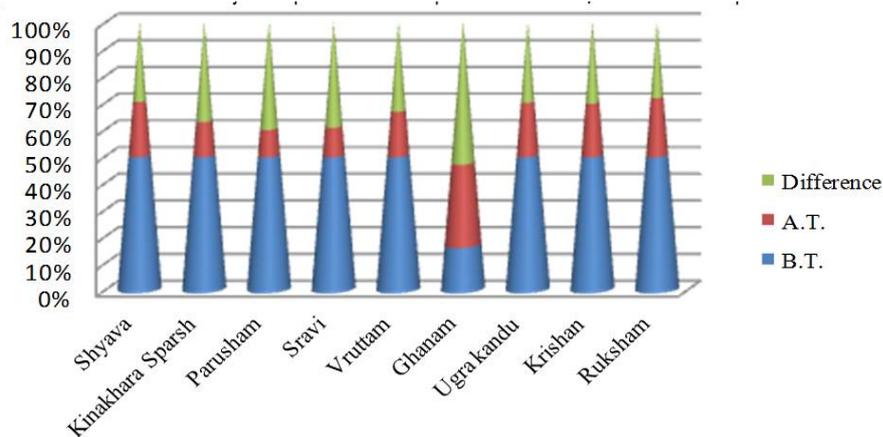


Table 6: Total effect on subjective parameter of 10 patients of Kitibha/Psoriasis in Group B.

Sign & symptoms	B.T.	A.T.	Difference	% of Relief	S.D.±	S.E.±	t	p
Shyava	3.1	1.00	2.1	67.74	0.316	0.1	21.00	<.001
Kinakhara Sparsh	3.4	0.6	2.8	82.35	0.632	0.2	14.00	<.001
Parusham	2.4	0.1	2.3	95.83	0.483	0.152	15.06	<.001
Sravi	3.4	0.4	3.0	88.25	0.667	0.210	14.23	<.001
Vruttam	0.9	0.0	0.9	100.0	0.737	0.233	3.86	<.001
Ghanam	0.8	0.0	0.8	100.0	0.632	0.2	4.00	<.001
Ugra kandu	3.0	1.1	1.9	63.33	0.316	0.1	19.00	<.001
Krishan	3.2	1.2	2.0	62.50	0.667	0.211	9.487	<.001
Ruksham	2.7	0.4	2.3	85.18	0.823	0.260	2.835	<.02

Fig. 4: Total effect on subjective parameter of 10 patients of Kitibha/Psoriasis in Group B.

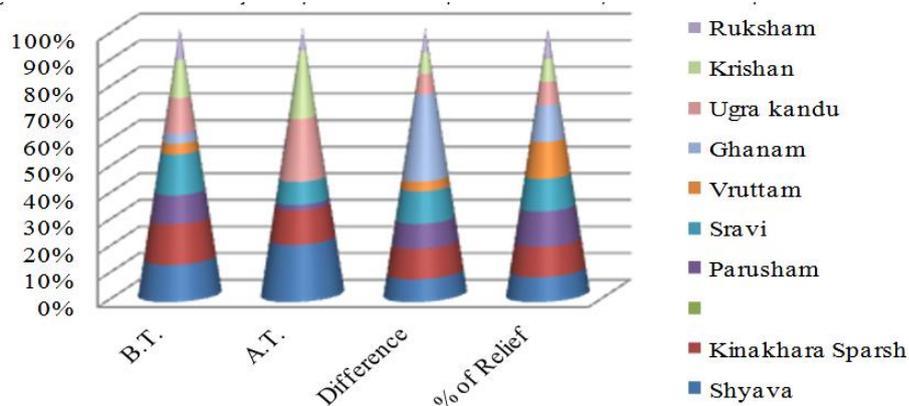


Table 7: Total effect on subjective parameter of 10 patients of Kitibha/Psoriasis in Group C.

Sign & symptoms	B.T.	A.T.	Difference	% of Relief	S.D.±	S.E.±	t	p
Shyava	3.7	1.5	2.2	59.46	0.422	0.133	16.5	<.001
Kinakhara Sparsh	3.2	0.6	2.6	81.25	0.699	0.221	11.76	<.001
Parusham	2.7	0.4	2.3	85.18	0.823	0.260	8.83	<.001
Sravi	3.6	0.6	3.0	83.33	0.81	0.258	11.61	<.001
Vruttam	1.3	0.2	1.1	84.62	0.568	0.179	6.12	<.001
Ghanam	1.0	0.1	0.9	90.00	0.568	0.179	5.01	<.001
Ugra kandu	3.2	1.2	2.0	62.5	0.667	0.211	9.47	<.001
Krishna	3.7	1.4	2.3	62.16	0.823	0.260	8.83	<.001
Ruksham	2.8	0.6	2.2	78.57	0.789	0.249	8.19	<.001

Fig. 5: Total effect on subjective parameter of 10 patients of Kitibha/Psoriasis in Group C.

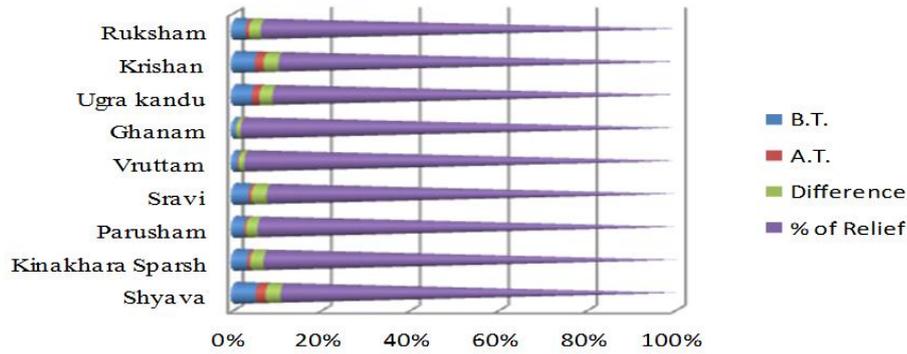


Table no-8. Show the effect on cardinal sign and symptoms in 10 patients of Psoriasis or Kitibha in Group A.

Sign & symptoms	B.T.	A.T.	Difference	% of Relief	S.D.±	S.E.±	t	p
Silver white scaling	2.0	0.4	1.6	80.00	0.966	0.306	5.23	<.001
Plaque	1.8	0.6	1.2	66.67	0.789	0.249	4.81	<.001
Thickness	0.6	0.1	0.5	83.33	0.707	0.224	2.23	<.001
Itching	3.0	1.2	1.8	60.00	0.632	0.2	9.00	<.001
Burning	3.2	1.3	1.9	59.38	0.738	0.233	8.14	<.001
Dryness	2.9	0.8	2.1	72.41	0.737	0.233	9.00	<.001
Erythematous papule	3.1	0.8	2.3	74.19	0.675	0.213	10.77	<.001
Dryness	3.0	1.3	1.7	56.67	0.675	0.213	7.97	<.001
Anhydrrosis	2.8	1.1	1.7	60.70	0.671	0.213	7.96	<.001
Candle grease sign	2.2	0.7	1.5	68.18	0.707	0.224	0.71	<.001
Auspitz sign	2.3	0.9	1.4	60.87	0.516	0.163	8.57	<.001
Koebners sign	1.4	0.1	1.3	92.86	0.675	0.213	6.09	<.001

Fig. 6: Show the effect on cardinal sign and symptoms in 10 patients of Psoriasis or Kitibha in Group A

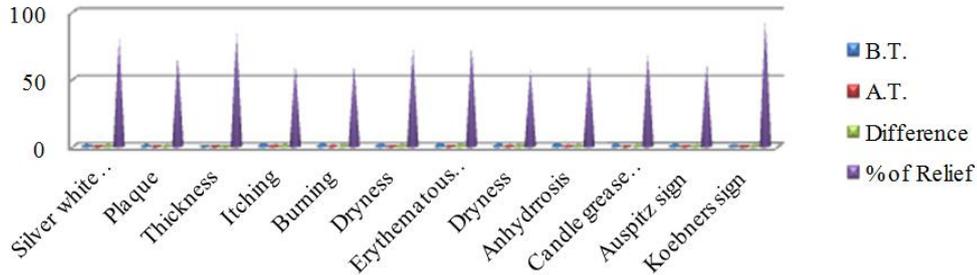


Table 9: Show the effect on cardinal sign and symptoms in 10 patients of Psoriasis or Kitibha in Group B.

Sign & symptoms	B.T.	A.T.	Difference	% of Relief	S.D.±	S.E.±	t	p
Silver white scaling	2.4	0.1	2.3	95.83	0.483	0.152	15.06	<.001
Plaque	0.9	0.0	0.9	100.0	0.737	0.233	3.86	<.001
Thickness	0.8	0.0	0.8	100.0	0.632	0.2	4.0	<.001
Itching	3.0	1.1	1.9	63.33	0.316	0.1	19.0	<.001
Burning	3.1	1.0	2.1	67.74	0.316	0.1	21.0	<.001
Dryness	2.3	0.6	1.7	73.91	0.483	0.152	11.13	<.001
Erythematous papule	3.4	0.6	2.8	82.35	0.632	0.2	14.0	<.001
Dryness	2.7	0.4	2.3	85.18	2.823	0.260	2.84	<.002
Anhydrrosis	3.2	1.2	2.0	62.5	0.666	0.210	9.49	<.001
Candle grease sign	0.9	0.0	0.9	100.0	0.316	0.1	9.0	<.001
Auspitz sign	0.8	2.1	2.2	72.41	0.738	0.33	9.0	<.001
Koebners sign	0.3	0.0	0.3	100.0	0.483	0.153	1.96	<.05

Fig. 7: Show the effect on cardinal sign and symptoms in 10 patients of Psoriasis or Kitibha in Group B

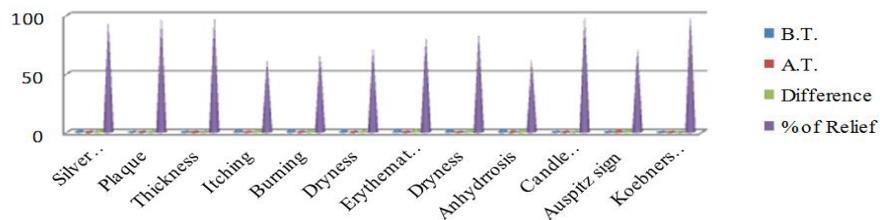


Table 10: Show the effect on cardinal sign and symptoms in 10 patients of Psoriasis or Kitibha in Group C.

Sign & symptoms	B.T.	A.T.	Difference	% of Relief	S.D.±	S.E.±	t	p
Silver white scaling	2.7	0.4	2.3	85.19	0.823	0.260	8.83	<.001
Plaque	1.3	0.2	1.1	84.64	0.568	0.179	6.12	<.001
Thickness	1.0	0.1	0.9	90.0	0.568	0.179	5.01	<.001
Itching	3.2	1.2	2.0	62.5	0.666	0.210	9.49	<.001
Burning	3.7	1.5	2.2	59.46	0.422	0.133	16.5	<.001
Dryness	2.5	0.7	1.8	72.0	0.632	0.20	9.0	<.001
Erythematous papule	3.2	0.6	2.6	81.25	0.699	0.221	11.76	<.001
Dryness	2.8	1.1	1.7	73.91	0.483	0.152	11.13	<.001
Anhydrrosis	3.7	1.4	2.3	62.16	0.823	0.260	8.83	<.001
Candle grease sign	0.7	0.0	0.7	100.0	0.675	0.213	3.28	<.001
Auspitz sign	2.0	0.6	1.4	70.0	0.516	0.163	8.57	<.001
Koebners sign	3.2	0.2	0.3	100.0	0.483	0.152	1.96	<.05

Fig. 8: Show the effect on cardinal sign and symptoms in 10 patients of Psoriasis or Kitibha in Group C.

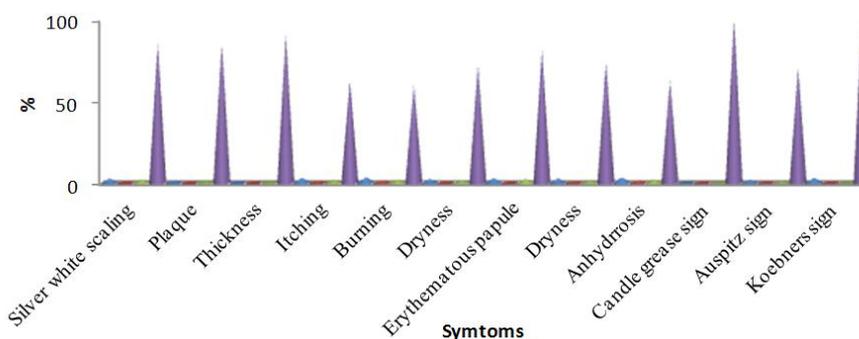


Table 11: Total effect of therapy on Hematocrit and Biochemical values of 10 patients in Group A.

Hematological value & Biochemical value	B.T.	A.T.	Difference	% of Relief	S.D.±	S.E.±	t	p
Hb	13.45	13.7	-0.25	1.859↑	1.318	0.4167	-0.6	>0.10
TLC	8040	7730	2310	3.856	769.48	243.33	1.274	>0.10
PCV	43.4	44.8	-1.4	3.225↑	6.883	2.1766	-0.643	>0.10
ESR	10.3	11.0	-0.7	6.796↑	5.677	1.795	-0.389	>0.10
Serum Calcium	8.31	8.346	-0.033	0.3969↑	0.4862	0.1537	-0.2146	>0.10
Serum Cholesterol	197.1	188.0	9.1	4.6169	13.543	4.282	2.1247	>0.05
Fasting blood sugar	93.0	91.7	1.3	1.3978	9.393	2.970	0.4377	>0.10
Serum urea	29.0	31.5	-2.5	8.6206↑	6.5362	2.066	-1.2095	>0.10

Fig. 9: Total effect of therapy on Hematocrit and Biochemical values of 10 patients in Group A.

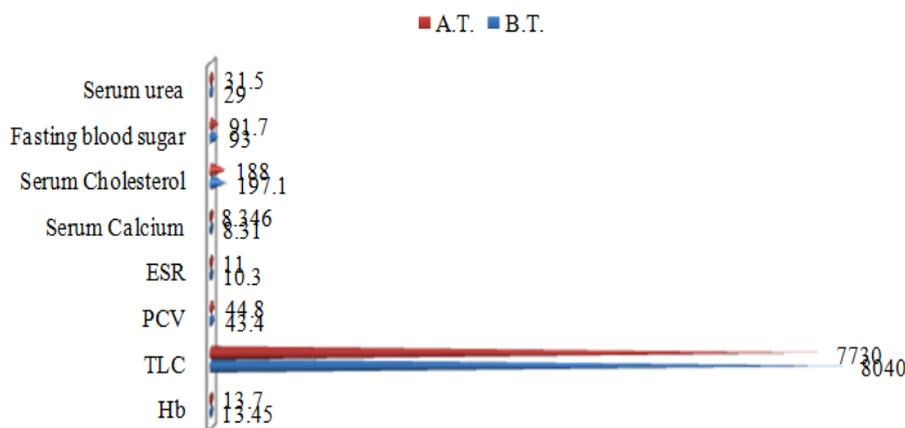


Table 1: Total effect of therapy on Hematocrit and Biochemical values of 10 patients in Group B.

Hematological value & Biochemical value	B.T.	A.T.	Difference	% of Relief	S.D.±	S.E.±	t	p
Hb	13.3	13.95	-0.65	4.88↑	1.415	0.447	-1.452	>0.10
TLC	7420	7860	-440	5.92↑	840.899	265.91	-1.654	>0.10
PCV	44.4	42.7	1.7	3.82↑	6.549	2.071	-0.820	>0.10
ESR	11.2	10.9	0.3	2.67↑	6.037	1.909	-0.157	>0.10
Serum Calcium	8.22	8.51	-0.29	3.527↑	0.78803	0.2492	-1.6137	>0.10
Serum Cholesterol	189.8	199.7	-2.9	1.5279↑	16.756	5.2987	0.547	>0.10
Fasting blood sugar	102.8	90.5	13.5	13.0350	26.442	8.3615	1.60257	>0.10
Serum urea	28.2	28.0	0.2	0.70922	4.6619	1.474	0.1356	>0.10

Fig.10: Total effect of therapy on Hematocrit and Biochemical values of 10 patients in Group B

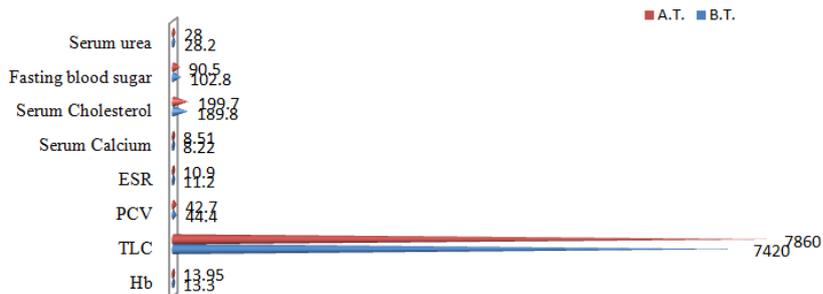
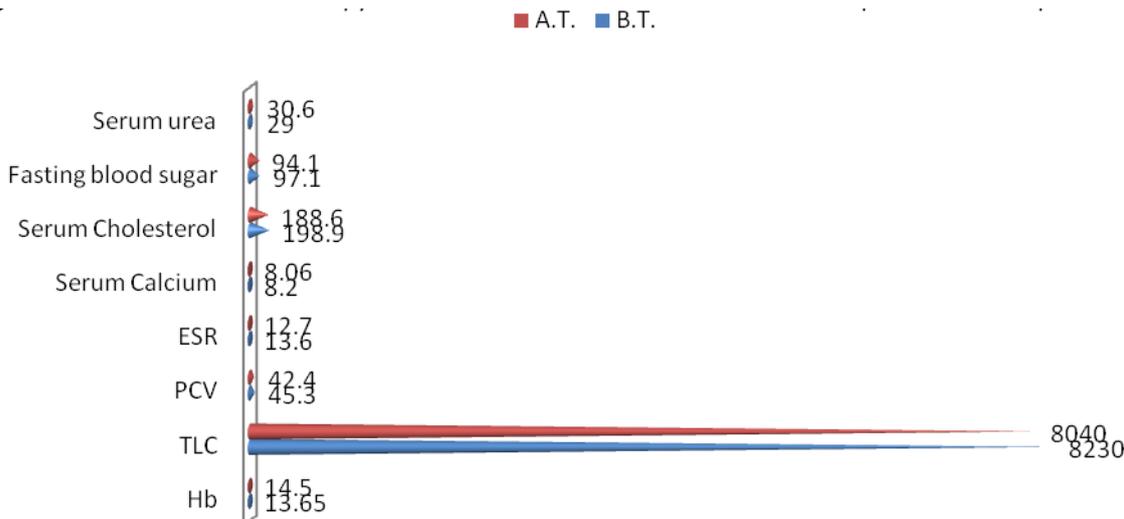


Table 13:Total effect of therapy on Hematocrit and Biochemical values of 10 patients in Group C.

Hematological value & Biochemical value	B.T.	A.T.	Difference	% of Relief	S.D.±	S.E.±	t	p
Hb	13.65	14.5	-0.85	6.2271↑	1.415	0.4475	-1.899	>0.05
TLC	8230	8040	190	2.3068	1189.26	376.07	0.505	>0.10
PCV	45.3	42.4	2.9	6.40176	6.64078	2.1	1.338	>0.10
ESR	13.6	12.7	0.9	6.61764	5.97122	1.888	0.476	>0.10
Serum Calcium	8.2	8.06	0.24	2.89156	0.8884	0.2809	0.8542	>0.10
Serum Cholesterol	198.9	188.6	10.3	5.17848	11.035	3.4898	2.9514	>0.02
Fasting blood sugar	97.1	94.1	3.0	3.0895	8.0	2.5298	1.18585	>0.10
Serum urea	29.0	30.6	-1.6	5.5172↑	3.6270	1.1469	-1.3949	>0.10

Fig.11: Total effect of therapy on Hematocrit and Biochemical values of 10 patients in Group C.



DISCUSSION OF RESULTS

TYPE OF PSORIASIS

1- Pustular 2-Plaque (also called Psoriasis vulgaris). 3- Guttate Psoriasis. 4-Inverse (also called flexural psoriasis or Intertriginous Psoriasis). 5-Erythrodermic (also called Exfoliative Psoriasis)



Fig.1:Pustular Psoriasis



Fig.2:Plaque Psoriasis



Fig.3:Plaque Psoriasis



Fig.4:Guttate Psoriasis



Fig.4: Inverse Psoriasis

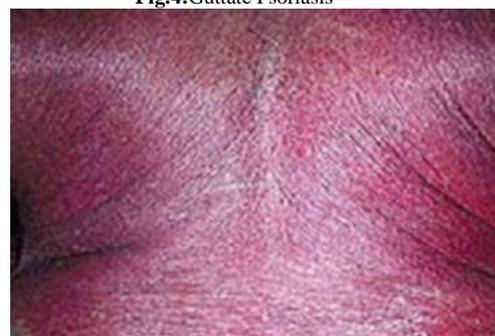


Fig.5:Erythrodermic Psoriasis

Effect of therapy on the results of subjective parameters

Effect on Shyava

After treatment shyava was reduced by 59.38% in Shodhana + placebo Shodhana poorvak Shaman Group B and in Shaman Group C it was reduced by 59.46%. Thus result was statistically highly significant in all three groups. It can thus be inferred that shodhana poorvak Shaman only Shaman and Shodhana + placebo all therapies curb the character / sign of Shyava.

Effect on Kinakharasparsha:

The patients of Shodhana + placebo therapy divulged 74.19% relief in the sign of Kinakharasparsha and shodhana poorvak Shaman therapy gave 82.35% to the patients. The results shown by all these therapies are statistically highly significant. It can be surmised that all these therapies are effective in curbing the sign of Kinakharasparsha.

Effect on Parusham:

80.00% relief was discerned in patients of Group A while 95.83% relief was observed in Group B and it was decreased by 85% in GPC the result was statistically highly significant in all Groups three A, B & C. It can be conjectured that although both therapies diminish the character of parusham but shodhana poorvak shaman therapy is more potent.

Effect on Sravi:

In Group A sravi was reduced by 78.38% and 88.25% reduced in Group B while in Group C it was decreased by 83.332%. The result was statistically highly significant in all three Group A, B and C. It is deduced that shodhana poorvak shaman therapy is more effective in sign of sravi.

Effect on Vruttam (Plaque):-

Patients of shodhana + placebo group presented 66.66% reduction patients of shodhana poorvak shaman group portrayed 100% reduction in sign of Vruttam where patients of Shaman group presented 84.62% reduction. Thus the results of all these therapies are statistically highly significant. The above observation clinches that all these therapies gave relief in this cardinal symptoms but shodhan poorvak shaman therapy was more cogent.

Effect on Ghanam (Thickness):-

Ghanam was relieved by 83.33% in shodhana + placebo group which was statistically insignificant ($P > 0.05$), while in shodhana poorvak Shaman group ghanam was relieved by 100% which was statistically 90.00% which was statistically highly significant. So it can

be gathered that shodhana poorvak Shaman therapy is more beneficial in allaying ghanam.

Effect on Ugra Kandhu (Itching)

60% relief was observed in Group A and 63.33% relief was spotted in Group B while it was observed 62.5% relief in Group C all the results were statistically highly significant. The above observation proves that all these the therapeutic measures palliate the Ugra Kandhu but shodhana poorvak Shaman therapy is more effective.

Effect on Krishna

Krishnata was reduced by 60.71 in Group A and reduced by 62.5% in Group B while it was reduced by 62.16% in Group C all the results were statically highly significant. It can be presumed that all these three therapies shodhana + placebo, shodhana poorvak Shaman and only Shaman alleviate this symptom equally.

Effect on Ruksham (Dryness)

Rukshata was reduced by 56.67% in Group A and in Group B reduced by 85.15% while in Group C it was reduced by 62.5% all the result were statistical highly significant in all the group. Though all these therapies succeeded in culminating the symptoms yet shodhana poorvak Shaman therapy was more efficacious.

Effect of Therapy and Result on cardinal sign and symptoms:

Effect on silver white scaling

Patients of Group A showed 80% case in their symptom and patients of Group B displayed 95.83% relief, while in Group C scaling was relieved by 85.19% all the results were statistically highly significant all these three groups gave very good relief to the patient, though symptoms was assuaged more in Group B shodhana poorvak Shaman.

Effect on Burning

Patients of Group A showed 59.38% relief in symptoms and patients of Group B showed 67.74% while Group C showed 59.46% relief in symptoms. This entire Group showed statistically highly significant results. It can be cleared that shodhan poorvak Shaman as well as Shaman palliates burning but shodhan poorvaka Shaman verbs more effectively.

Effect on Discoloration

Discoloration was reduced by 72.19% in Group A, It was reduced by 72% all the results were highly significant. The observation brings out that all the therapies are effective in curbing the symptoms although shodhan poorvak shaman therapy brings out better results.

Effect on Erythematous papules

Erythematous papules were reduced by 74.19% in Group A, It was reduced by 82.35% in Group B while in Group C it was decreased by 81.25% all the results were statistically highly significant hence shodhan poorvak shaman therapy was more effective in dwindling this symptom.

Effect on Anhydrosis

60.7% relief was seen in patients of Group A and 62.5% in patient of Group B while 62.16% in Group C all the results fare statistically highly significant and all the therapies are effective in curbing the symptom of Anhydrosis.

Effect on candle grease sign

Patient of Group A showed 68.18% relief in their symptoms and patients of Group B displayed 100% relief while Group C showed 100% all the groups showed statistically highly significant results. It can be deduced from the above that.

Effect on Auspitis sign

Patients of Group A it 60.87 relief in this symptoms and patients of Group B received 72.41% relief while patients of Group C perceived 70% relief in their symptoms. All these groups group B statistically highly significant results. The observation brings out that all the therapies are effective in curbing the symptoms although shodhan poorvak shaman therapy brings out better results.

Effect on Koebners sign

The therapy was effective in curbing symptoms of Group A by 92.86%, 100% symptoms subsided in Group B while in Group C it was subsided by 100%. The sequel was statistically highly significant in shodhana + Placebo Group A and insignificant in shodhan poorvak shaman and Shaman group.

Effect on no of Patches

In Group A no. of patches were reducing by 46.21% and 54.4% no. of patches reduced in Group B while in Group C it was reduced by 48.5% all the result were highly significant. All three groups gave very good relief to the patients, though very good relief to the patients, though symptom was assuaged more in Group B shodhan poorvak shaman group.

CONCLUSION

Effect on Hematological values

Hb: - Hemoglobin was increased by 1.86% in Group A and 4.89% in group with 6.22% in Group C the result of all these groups were statistically significant. However all the therapies culminated in increasing the hemoglobin the outcome was better in Shaman group and shodhan poorvak shaman group.

TLC: Total leucocytes count was decreased in Group A as well as C 3.86% decrease was spotted in Group A and 2.31% reduction was discerned in Group C. But the result was statistically insignificant in Group B TLC was increased by 5.93% that was not statistically significant.

PVC: Pocked cell volume was increased by 3.225% in Group A which was not statistically significant while in Group B and in Group C it was decreased y 3.83% and 2.31% statistically results of both Group B & C are not statistically significant.

ESR: Erythrocyte sedimentation rate was increased by 6.79% in Group A and decreased in both Group B and c and 2.685%, 6.22%. The result was not statistically significant in all three groups.

Effect on Biochemical Values

Serum Calcium: Serum calcium was increased by 0.39% in Group A and 3.53% in Group B while it was decreased by 2.89% in Group C. Though results in all three groups were insignificant.

Serum Cholesterol : Serum cholesterol was decreased by 4.62% in Group A and it was increased by 1.53% in Group B while in Group C it was decreased by 5.18 % in group results were statistically insignificant but A & B in Group C the results was statistically significant.

Fasting blood sugar – F.B.S. was decreased by 1.34% in Group A & 13.03% in Group B, while in Group it was decreased by 3.09%. The results in three Groups A, B & C were statistically insignificant.

Blood urea : Blood urea was increased by 8.62% in Group A and it was decreased by 0.7% in Group C results of both, both Group A and C were statistically insignificant but it was statistically significant in Group B.

Effect on subjective parameters of Kitibha:

Shodhan Poorvaka Shaman therapy and individual shaman therapy and shodhan + placebo therapy played remarkable role in culminating the subjective and the objective parameters.

Shodhan poorvak shaman was more effective in dwindling frequency of the all sign and symptoms of Kitibha i.e. Shyava, Kinakharasparsha, Parasham sravi, Vruttam, Ghanam, Ugra Kandru, Krishna, Rukshata, Silver white scaling, plaque thickness itching, burning, Discolouration, Anhydrosis, Dryness, Erythematous papules were abated better by shodhana poorvaka shaman therapy TLC, was more curtailed due to shodhan poorvak shaman therapy.

Navayas rasayan yoga plunged, Ugrakandru, rukshata, scaling, thickening more potently, TLC, ESR, FBS, serum cholesterol blood urea were more diminished in patients of Group B and Group C and Group A.

However the therapies showed almost similar outcomes in sign & symptoms of Kitibha i.e. Parusham, Vruttam, Erythematous papules, Plaques, Burning, Scaling, Dryness, Anhydrosis, Ghanam, Krishnata, Shyava, Kina Kharasparshata, Kulshta, Hemoglobin and serum Ca presented the similar results in all the therapies.

Effect on PASI Score

Response of the patients to the therapeutic trial has been assessed through clinical and functional parameters, they include mainly PASI score, Grading for itching and burning sensation. PASI score was completed on the basis of its severity index such Erythema, Induration and scaling, and for Area. Score by percentage grading as mentioned in materials and methods.

Mean changes in PASI score in different groups after therapy with trial drugs by Navayas Rasayanas, Virechan and Shodhan Poorvak Shaman group though produced a statically significant change the over all reduction of PASI score only 1.28 + 1.40 and by Navayas rasaya and 6.64 + 5.62 by Shodhan Poorvak Shaman group. Group C suggests that Navayas rasayan has got small but consistent effect of PASI score, while C Shodhan Poorvak Shaman group has good result.

In group A Shodhan + Placebo group, patients over all response brought was insignificant ($P > 0.05$) but in inter group comparison Group A Shodhan + placebo was statistically significant.

Total effect on Clinical Trial

Complete remission was found in 20% in Group A, 60% in Group B and 50% Group C. As a whole of 30 pt. studied, complete remission was found in 43%. Markedly improvement was obtained in 30% in Group A, 30% pt of Group B and 20% pt. of Group C. Of the 30 pt. studied, markedly improvement was found in 26.7%. Improvement was found in 40% of Group A, 30% of Group B and 30% Group C pt. of the 30 pt. studied improvement was found in 26.7%. 10% of pt. of Group A only remains unchanged.

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