



Research Article

A CLINICAL STUDY OF SWITRAHARA CHURNA IN SWITRA (VITILIGO) AS LEPA

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ABSTRACT

Switra can be compared with Vitiligo of contemporary science. Switra is a pigmentary disorder of great socio-medical importance and defined as, acquired, idiopathic, hypo melanosis of skin and hair. **Aims and objectives:** Therapeutic evaluation of Switrahara Churna on Switra. **Materials and Methods:** In present study, total 32 patients with signs and symptoms of Switra were selected from the OPD, Rasa Shastra and Bhaishjya Kalpana of S.V Ayurvedic hospital T.T.D Tirupati. Out of them 30 patients completed the course of treatment. Follow up was done every 15th day. The assessment criteria were Twak Swetata, Twak Rukshata, Kandu Daha Twak, Vivarnata and margins. Statistical analysis was carried out using "Analysis tool pack add-in of Microsoft Excel- 2019" and "Graph pad Prism Version- 7" by applying paired 't'- Test. **Results:** Among 30 patients, 18 patients (60%) had moderate improvement, 11 patients (36%) had marked improvement, 1 patient (3.33%) had mild improvement. **Conclusion:** The therapy in the form of Lepa i.e., Switrahara Churna is a safe and effective in the management of Switra.

INTRODUCTION

Skin is largest organ of body it forms protective barrier for body. Skin is susceptible to both internal and external environment. Switra is most common Twak Roga in Ayurveda. The word of Switra has its root in Sanskrit word 'Sveta', which means white patches. So it is a disease where white patches appear on body. It is non-infective, non-exudative disease involving Twak. As in Kushta, in Switra also there is involvement of three Dosha and four Dushya. The predominant Dosha involved in this disease is Bhrajaka Pitta.

In modern science Switra can be co-related with vitiligo which is chronic autoimmune disease, where death of melanocytes occur leading to the depigmentation of skin which is expressed as white patches on different areas of the skin.

The medicines like corticosteroid cream, surgical treatment like skin grafting, PUVA therapy are expensive and have their own side effects.

Many Ayurvedic formulations are well known for the management of Switra, among which 'Switrahara Churna' is one of them mentioned in Rasa Tarangini 21st Taranga (Upa-Dhatuvigyanaya) Sloka No. 253^[1]. The present study was carried out to evaluate the efficacy of Switrahara Churna in Switra. The outcome of treatment in 30 cases of Switra vis-a-vis vitiligo Switrahara Churna as a external application were analysed and compared before and after treatment.

AIM AND OBJECTIVES

Therapeutic evaluation of Switrahara Churna on Switra.

MATERIALS AND METHODS

- The patients having classical symptoms of Switra have been selected from OPD of Department of Rasa Shastra and Bhaishajya Kalpana S.V Ayurvedic Hospital, Tirupati.
- A special detailed clinical proforma has been prepared incorporating signs and symptoms based

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on both classical description. A detail history has been taken and complete physical examination has been carried out.

- Total 32 patients with sign and symptoms of *Switra* were registered. Out of them 30 patients completed the course of treatment.

Criteria for inclusion of the patients

- Patient with symptoms of *Switra roga* as per Ayurvedic classics were selected.

Criteria for exclusion of the patients

- *Switra* due to *Agnidhagda*
- *Shveta roma* (hair turned to white colour in *Switra* affected area)
- White patches in nose, lips, genital organs
- *Switra* history more than 5 years

Posology

- External application: *Switrahara Churna*
- Dose: According to size of patch
- *Kala*: One time (morning time)
- Duration of treatment: 60 days
- Follow up: 15th, 30th, 45th, 60th day
- Contraindications: *Pitta prakruti* persons

Diet

- *Pathya*- *Laghu anna*, *Purana anna*.

- *Apathya* - *Guru ahara*, *Naveena anna*, *Amla rasa* dominating food, *Dadhi*, *Matsya Mamsa*, *Guda*, *Tila*, *Pisthanna* and *Masha* etc.

Criteria for Assessment

- Patients were examined clinically and details regarding disease starting from history taking, physical examination, signs and symptoms as mentioned in our classics and allied sciences.
- Special clinical proforma for the assessment of subjects were prepared, based on criteria of selection and follow up assessment. Informed consent of all the registered subjects was duly taken before starting investigations.

Demographic Parameters

General assessment of patients was carried out basing on various parameters like age, education, sex, location, religion, marital status etc.

Parameters

Criteria for assessment were kept based on relief in signs and symptoms of *Switra* before and after treatment. For this purpose, cardinal signs and symptoms were given scores. The results of therapy were assessed after completion of treatment on the basis of two considerable parameters.

- Subjective parameters
- Objective parameters

Table 1: Showing grading of parameters

Subjective Parameters

Twak Swetata

Grade 0	Normal	Normal Skin colour
Grade 1	Mild	1-5 patch, diameter of patch up to 5cm.
Grade 2	Moderate	5-10 patch, diameter of patch up to 10cm limbs involved
Grade 3	Severe	Maximum area is involved specially limbs, trunk and epithelial surfaces

Twak Rukshata

Grade 0	Normal	No dryness
Grade 1	Mild	Slightly Dryness [+]
Grade 2	Moderate	Dryness present [+ +], no discomfort to the patient
Grade 3	Severe	Dryness present [+ + +], sometimes causing itching to the patient

Kandu

Grade 0	Normal	No itching
Grade 1	Mild	Slightly Itching [+]
Grade 2	Moderate	Itching present particular time [+ +]
Grade 3	Severe	Itching present more than one time in a day [+++]

Daha

Grade 0	Normal	No burning sensation
Grade 1	Mild	Slightly <i>Daha</i> [+]
Grade 2	Moderate	Burning sensation present only when exposed to sun light
Grade 3	Severe	Burning sensation associated with redness

Objective Parameters**Colour of skin (*Twak vivarnata*)**

Grade 0	Normal	Normal colour
Grade 1	Mild	Pale white
Grade 2	Moderate	Pinkish white
Grade 3	Severe	Reddish white colour

Margins

Grade 0	Normal	Normal skin colour attributed
Grade 1	Mild	Circumscribe spread margin (circular)
Grade 2	Moderate	Margins present in different shape and near to each other
Grade 3	Severe	Margins coalesce with each other

Table 2: Showing assessment on basis of percentage relief obtained by the therapy

S.No.	Effect	Percentage of relief
1	Marked improvement	76% - 100%
2	Moderate improvement	51% -75%
3	Mild improvement	26% -50%
4	No improvement	Less than 25%

Statistical Evaluation of Results

The obtained information was analysed statistically in terms of mean scores (X), Standard Deviation (S.D), Standard Error (S.E). Paired 't' test was carried out at the level of 0.05, 0.01 and 0.001 of P levels. For the more effectiveness of therapy Paired 't' test was carried out. The results were interpreted as.

Insignificant= $P > 0.05$

Significant= $P < 0.05$

Highly Significant= $P < 0.01$, $P < 0.001$

Extremely Significant= $P < 0.0001$

Assessment of Clinical Trial**Effect of *Switrahara Churna* on Subjective parameter in Patients****Table 3: Showing effect of *Switrahara Churna* on Subjective parameters in 30 Patients**

Parameters	N	Mean		Mean Difference	Relief %	SD		SE		t value	P value
		B.T	A.T			B.T	A.T	B.T	A.T		
<i>Twak Svetata</i>	30	2.90	0.90	2.00	68.96%	0.31	0.48	0.06	0.09	24.08	< 0.0001
<i>Twak Rukshata</i>	30	2.47	0.53	1.94	78.54%	0.68	0.63	0.12	0.11	13.49	<0.0001

NOTE- Subjective parameters *Kandu* and *Daha* were not present in only patient

In the present study *Switrahara Churna* showed statistically extremely significant relief ($p < 0.0001$) in *Twak Svetata* and *Twak Rukshata*.

Effect of *Switrahara Churna* on Objective parameters in 30 patients**Table 4: Showing Effect of *Switrahara Churna* on Objective parameters in 30 patients**

Parameters	N	Mean		Mean Difference	Relief %	SD		SE		t value	P value
		B.T	A.T			B.T	A.T	B.T	A.T		
<i>Twak Vivarnata</i>	30	2.97	0.77	2.2	74.07%	0.18	0.43	0.03	0.08	29.61	< 0.0001
Margins	30	2.47	0.83	2	70.67%	0.68	0.63	0.12	0.11	13.49	<0.0001

In the present study *Switrahara Churna* showed extremely significant relief ($p < 0.0001$) in *Vivarnata* and Margin.

Note: n- number of patients suffering with symptoms, B.T: Arithmetic mean of scoring Before Treatment, A.T: Arithmetic mean of scoring After Treatment, S.D: Standard deviation, S.E: Standard Error, p-value: Indicates significance of treatment on specific symptom.

S.D, S.E, t value are calculated substituting 'n' value as actual number of patients suffering from specific symptom (But not the total number of patients).

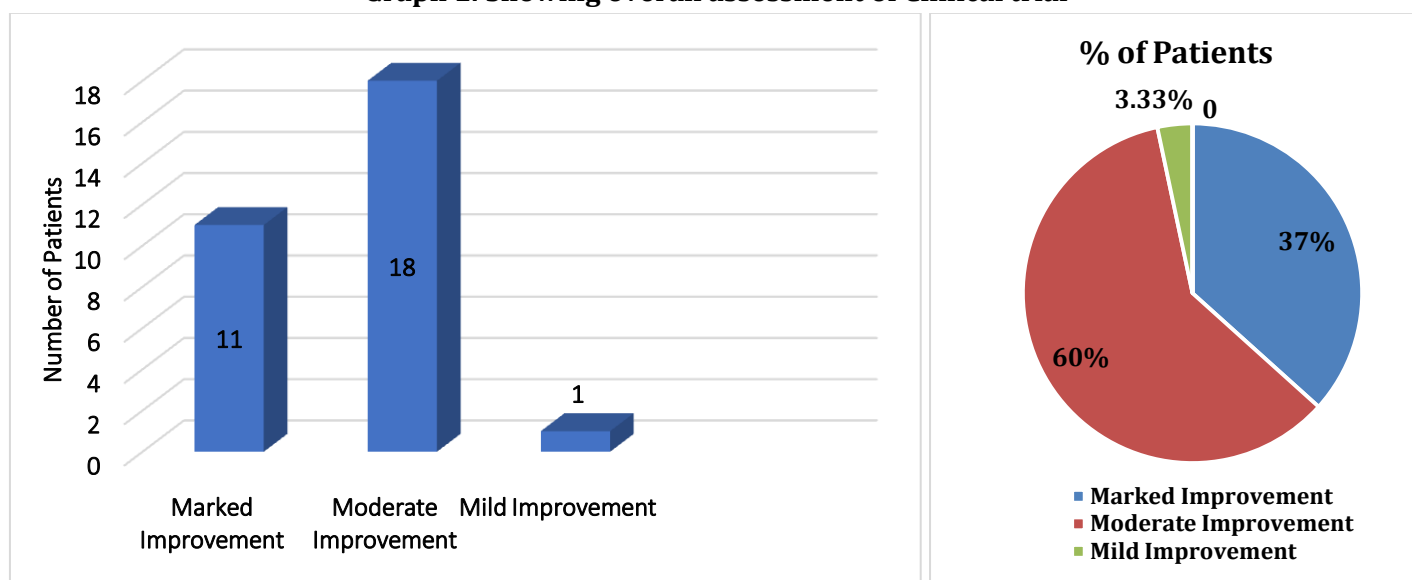
Overall Assessment of Results

S.No.	Result	Number of Patients	Percentage of Patients
1.	Marked Improvement	11	36.66%
2.	Moderate Improvement	18	60%
3.	Mild Improvement	01	3.33%
4.	No Improvement	00	0%

Among 30 patients, 18 patients (60%) had moderate improvement, 11 patients (36%) had marked improvement, 1 patient (3.33%) had mild improvement.

From this observation, it is clear that patients who are treated with *Switrahara Churna* have favourable response in regards to the clinical parameters of *Switra*.

Graph 1: Showing overall assessment of Clinical trial



Images of Patients





Before Treatment After Treatment

Switrahara Churna Nirmana Images



Ashudha Kasisa



Bringharaja Swarasa Bhawana



Shudha Kasisa



Ashudha Gairika



Go-Grihtam Bharjana



Shudha Gairika



Bakuchi Bijja



Bakuchi Churna



**Shudha Kasisa, Shudha Gairika
Bakuchi Churna**



Mixing all ingredients



Switrahara Churna

DISCUSSION

Mode of Action of Switrahara Churna

Table 5: Showing Rasa Panchaka of Switrahara Churna

Ingredients	Rasa	Guna	Virya	Vipaka	Karma
Kasisa ^[2]	Kashaya	Grahi	Ushna	Katu	Vata-Kaphahara Ranjka, Kushtaghna, Switraghna
Gairika ^[3]	Madhura, Kashaya	Snigdha, Vishada	Sheeta	Madhura	Kandughna, Vrana ropana, Vishapaha
Bakuchi ^[4]	Tikta, Madhura	Sara, Ruksha	Sheeta	Katu	Grahi ^[4] , Varnapaha ^[4] , Twachya ^[5]

Based on this, the Probable Rasa panchaka for Switrahara Churna is

Rasa: Kashaya, Madhura

Guna: Grahi, Snigdha

Virya: Sheeta

Vipaka: Katu, Madhura

Karma: Vata-Kaphahara, Varnyaka, Ranjaka, Kushtaghna, Kandughna, Switraghna
Hetu prathyanikatva i.e., by the specific Vata-Kaphahara properties of ingredients the drug might be acting against the Hetu of the Switra (Pitta pradhana Tridoshaja Vyadhi).

Vyadhi Pratyantikava i.e., by the *Switraghna*, *Kushtaghna*, *Kanduhara*, *Twachya*, *Varnya*, *Ranjaka* properties of the ingredients, it may be acting against the *Switra*.

Probable Mode of Action

- *Lepa* therapy is included under *Bahir Parimarjana chikitsa* and is especially meant for the *Twakgata vikara*.
- The *Lepa chikitsa* also facilitates expulsion of the *Dosha* locally.
- The ingredients of *Switrahara churna* are *Shuddha Kasisa*, *Shuddha Gairika* and *Bakuchi churna*.
- *Kasisa* has *Ranjana* and *Switraghna guna* and because of its *Grahi guna* the active ingredients of the drug penetrates into the skin and aids in melanogenesis.
- *Bakuchi* is a renowned herb and is a rich source of naturally occurring psoralens. On exposure of sunlight in early morning on affected area it helps in absorption of ultraviolet rays leading to favourable milieu for promoting the growth of melanocyte migration and stimulates its proliferation.
- *Gairika* has *Kashaya rasa* and *Vranahara* property which helps in healing the blisters caused due to the irritant action of *Bakuchi*.
- When this *Lepa* is applied over the surface of a skin opposite to the direction of hairs on it through a proper base (i.e., *Usnajala*) the active principles of this *Lepa* are released into the base, enters the *Romakupa* and further gets absorbed through the *Svedavahi Srotas* and *Siramukha*.
- Thereafter, it is subjected for *Pachana* by *Bhrajaka pitta* i.e., aided by exposure of sunrays. In due

course of the above transformation, these drugs show synergetic action which pacifies the provoked *Dosha* locally and thus breaks the pathogenesis cycle leading to the alleviation in the symptoms.

CONCLUSION

From the present study, it can be concluded that *Switrahara Churna* is effective in the management of *Switra*. No side effects were reported during the treatment.

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