

## AN OPEN LABELLED CLINICAL STUDY TO EVALUATE THE EFFECT OF RAKTAMOKSHANA IN LICHEN SIMPLEX CHRONICUS

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### ABSTRACT

Lichen Simplex Chronicus is a skin disorder characterised by Chronic itching, darkened lichenified skin, common in the age group of 20-50 years with 12% incidence rate. Lichen Simplex Chronicus can be correlated to the *Charmakhya Kushta* having features like *Kharasparshata*, skin resembling the skin of Elephant and itching. *Charmakhya Kushta* is one among the eleven *Kshudra Kushta*. *Raktamokshana*: One among the para surgical procedure which answers several ailments produced by disturbed conditions of blood. The methods of *Raktamokshana* includes *Sringa*, *Jaluka*, *Alabu/ Ghati Yantra*, *Pracchana* and *Siravyadha* of which *Ghati Yantra* is advocated

for *Kaphaja Vikaras* and for diseases of *Twak*. As then method of *Raktamokshana* using *Ghati yantra* is becoming extinct now a days, as obtaining the materials for procedure is difficult. So, there is a growing need for research in this arena.

**KEYWORDS** *Charmakhya Kushta*, *Raktamokshana*, *Ghati Yantra*, *Pracchana*, Lichen Simplex Chronicus.

### INTRODUCTION

Skin, also known as the cutaneous membrane, covers the external surface of the body and is the largest organ of the body in both surface area and weight.<sup>[1]</sup> It fulfills a huge number of important functions, all of which are designed to help our body in working properly.

There are many conditions of or affecting the human integumentary system. Clinically, eczematous dermatoses are characterized by variable intensity of itching and soreness, and, in variable degrees, a range of signs including dryness, fissuring, hyperkeratosis, lichenification, papulation, scaling and vesiculation.

Lichen simplex chronicus (LSC) [also known as neurodermatitis] is a skin disorder characterized by chronic itching, darkened lichenified skin. Common between age 20-50 with an incidence of 12% in population. LSC is challenging to treat as recurrence is common and eventually affects the physical, psychological and socio-economic condition of the patient.<sup>[2]</sup>

Skin disorders are related to the disease *Kushta* which is of among the *AshtaMahagada* has been elaborately explained in *Samhithas*. *Maha Kushta* and *Kshudra Kushta* are the two types of *Kushta*, based on the invasiveness. Of which LSC can be related to the *Charmakhya* type of *Kshudra Kushta* with features like *Kandu*, *Kharatwa* and *Rukshatha*.

*Rakta* is one among the seven dhatus, which sustains the body and one has to protect it as one's own life.<sup>[3]</sup> But when it gets vitiated by any *Dosha*, has to be let out through Raktamokshana by methods like *Pracchana*, *Siravyadha*, *Sringa*, *Jaluka*, *Alabu*, *Ghati Yantra*. Selection of which should be based on *Doshik* predominance, site, and extend of the disease.

*Raktamokshana* is one among the *Pancha Shodhana* explained by *Acharya* in which *Ghati Yantra* is mentioned in the treatment of *Kaphaja Vikaras* and in diseases affecting *Twak*.<sup>[4]</sup> The main aim of Raktamokshana is *Dusta Rakta Nirharana*.

*Ghati Yantra* method of *Raktamokshana* is done in this study using cups and suction pump which are available easily and are economical. The study was done to assess the effect of *Raktamokshana* by *Ghati Yantra* in Lichen Simplex Chronicus.

## OBJECTIVE

- To evaluate the effect of Raktamokshana in Lichen Simplex Chronicus using Ghati Yantra.

## METHODOLOGY

### MATERIALS AND METHODS

#### Source Of Data

- Patients diagnosed with Lichen Simplex Chronicus were selected from OPD and IPD of SDM Ayurveda Hospital, Kuthpady, Udupi.

#### Method Of Collection Of Data

- A minimum of 30 patients suffering from Lichen Simplex Chronicus in an age group of 20 to 60 years of either sex selected randomly and were subjected to clinical trial.

#### Design Of Study

- Randomized Open labelled Single Group Clinical study with Pre- test and Post- test design. History, clinical data, subjective and objective criteria were recorded on a specially designed proforma.
- Raktamokshana was done for the selected 30 patients after clinical examination and after recording the vitals.

#### Duration Of Treatment

- One day single sitting.

#### Observation Period

- 30 Days
- Observations will be recorded on 7<sup>th</sup>, 15<sup>th</sup> and 30<sup>th</sup> day.

#### Inclusion Criteria

- Patients aged between 20 to 60 years.
- Patients diagnosed with Lichen Simplex Chronicus irrespective of sex and religion.

#### Exclusion Criteria

- Patients contraindicated for Raktamokshana as per classics.
- Systemic disorders like uncontrolled Diabetes Mellitus, TB, Leukemia, HIV, Bleeding disorders etc.
- Patients who are under medication of Anticoagulants like Aspirin, Warfarin etc.

**Assessment Criteria**

- General condition of patient and localized examination of affected area will be assessed before and after the treatment.
- Subjective and objective parameters will be assessed on before and after the treatment 1<sup>st</sup> Day, 7<sup>th</sup> Day, 14<sup>th</sup> Day and 30<sup>th</sup> Day.
- Obtained data will be analyzed statistically using Paired t test and Wilcoxon signed rank test.

**Subjective Parameters**

- Itching: Kandu
- Roughness: Kharatwa
- Discoloration

**Objective Parameters**

- Size of the lesion

**Investigations**

1. Hb%, TC, RBC count platelet Count.
2. CT and BT.
3. Other investigation if required.

**Intervention****Purva Karma**

- After taking written consent from the patient for Raktamokshana.
- Vitals are checked and recorded. (BP, Pulse, Temperature, Respiratory Rate)
- Local Snehana with Murchita Taila by Bahya Abhyanga followed by Bashpa Sweda prior to the procedure.
- Cups of appropriate size depending on the site and lesion will be taken and are cleaned by gauze using spirit.

**Pradhana Karma**

- The site or affected area is cleaned with spirit.
- Cups are attached to the affected areas to demarcate.
- After 3 to 4 minute all cups are removed and the site is demarcated.
- Pricking of skin is done with the help of disposable sterile needle.

- Again, the cups are applied and vacuum is created on affected area for complete oozing of blood.
- The amount of blood collected is recorded and the area is cleaned with sterile spirit and gauze piece.

### Paschat Karma

- The area will be cleaned and dressed.
- Patients are advised to avoid soakage of dressing.
- Patients are advised t take light diet, milk and milk products and not to take spicy and oily food, day sleep, and cold bath.



**Figure 1: Raktamokshana procedure.**

**OBSERVATIONS****Table No 1: Observations on Area of Lesion after Raktamokshana.**

Parameters	Mean	N	Std. Deviation	Std. Error Mean	Mean difference	%	T	P value	Interpretation
Area BT	11.70	30	6.93	1.26	5.20	44.44 %	-4.61	.00	HS
Area 7 <sup>th</sup> day	6.45	30	3.21	0.58					
Area BT	11.70	30	6.93	1.26	8.40	71.79 %	-7.14	.00	HS
Area 15 <sup>th</sup> day	3.30	30	2.10	0.38					
Area BT	11.70	30	6.93	1.26	11.10	94.87 %	-8.98	.00	HS
Area 30 <sup>th</sup> day	0.60	30	1.22	0.22					

**Final Observations On Size Of The Lesion**

- The area mean before the treatment was 11.70. after the treatment on 7<sup>th</sup> day was 6.45 and the mean difference is 5.20 which is statistically highly significant with p value 0.00.
- The area mean before the treatment was 11.70, after the treatment on 15<sup>th</sup> day was 3.30 and the mean difference is 8.40 which is statistically highly significant with p value 0.00.
- The area mean before the treatment was 11.70, after the treatment on 30<sup>th</sup> day was 0.60 and the mean difference is 11.10 which is statistically highly significant with p value 0.00.

**DISCUSSION****Effect on area of lesion**

Statistical analysis showed that the mean score which was 11.70 before the treatment was reduced to 6.45 after the treatment with 44.4% improvement. After the follow up it became 0.60 with 90% improvement, and there is a statistically highly significant change ( $P < 0.001$ ).

**SUMMARY**

Lesions over the extremities were taken for the study and after Raktamokshana, there was overall improvement in the hyperpigmentation, keratinisation and symptoms of the disease. This suggests that removal of the Dushita Rakta at the vicinity of the disease has significant therapeutic effect on the disease process.

**Effect on itching**

Statistical analysis showed that the mean score which was 2.66 before the treatment was reduced to 1.53 after the treatment with 26.6% improvement. After the follow up it became 0.13 with 94% improvement and there is a statistically highly significant change ( $P < 0.001$ ).

**Summary**

In all patients persistent itching was the initiating event followed by morbid skin changes. It has been observed that severity of the symptom was reduced gradually but persistently from the day after Raktamokshana. Significant reduction in the itching was observed in the second week after the intervention. Ghati yantra effect has been compared with that of Alabu, has effect of Kapha by this technique. Kapha Dushitha Rakta mainly presents with itching in skin disease is eliminated, providing the relief by breaking itch scratch cycle.

**Effect on discolouration**

Statistical analysis showed that the mean score which was 2.36 before the treatment was reduced to 1.53 after the treatment with 44.4% improvement. After the follow up it became 0.33 with 86% improvement, and there is a statistically highly significant change ( $P < 0.001$ ).

**Summary**

Due to reduction in the hyperpigmentation and reduced further lichen formation in the affected area there will be reduction in the discolouration of diseased area which is significantly seen. In Charnakhya elimination of Dushitha Rakta from disease site would arrest the progression of the pathology.

Thus, allowing the body to speed up the healing process. As LSC is a chronic dermatitis and discolouration is blackish brown at the area of involvement. Discolouration is post inflammatory process is suppressed causing inhibition to pigmentation. Hence as the time goes by the repair process would progress back bringing back normal/ near normal pigmentation. Inflammatory disease with the pigmentary changes.

**Effect on roughness**

Statistical analysis showed that the mean score which was 2.40 before the treatment was reduced to 1.60 after the treatment with 32.6% improvement. After the follow up it became 0.26 with 89.3% improvement, and there is a statistically highly significant change ( $P < 0.001$ ).

Summary: Significant reduction in itching due to alleviation of Kapha, leads to the reduction of Kharatwa of the disease and due to the reduced keratinisation and lichenification over the affected area there will be improvement in skin texture.

The pathognomic feature of LSC is lichenification (leathery skin) tough thickened leathery skin. This roughness of skin is caused because of hyperkeratosis associated with



parakeratosis induced by persist inflammation due to intense itching. Chronic inflammatory mediators in the form of granulocytes i.e. eosinophils, lymphocytes, plasma cells dominate in the lesion as the disease becomes chronic. Basically these cells are components of blood but morbidly get accumulated in the sites of injury or inflammation. With Raktamokshana helps removal of morbid substance caused because of inflammation helps in resolution of the illness symptoms and the disease.

## CONCLUSION

- Based on the symptomatology and morphology of Lichen Simplex Chronicus can be corelated with Charmakhya Kushta.
- Raktamokshana using Ghati Yantra has proven effective both clinically and statistically in relieving Kandu (Itching), Vaivarnyatha (Discolouration), Kharatva (Roughnes) with promising results in Lichen Simplex Chronicus.
- No untoward effects were observed in any of the cases during the study.
- Hence, this easily available, economical, hygienic and user-friendly method using cups and suction pump can be adopted instead of Ghati Yantra to treat the diseases produced by Vata Kapha Dushita Rakta in Clinical Practice.

## ➤ LIMITATIONS OF THE STUDY

- ❖ Sample size was small.
- ❖ Duration of intervention was less.

## ➤ FURTHER SCOPE OF THE STUDY

- ❖ Study with larger sample size and longer duration can be taken.
- ❖ Raktamokshana using Ghati Yantra can be tried by the future research scholars in the management of conditions where Rakta is vitiated by Vata alone or along with Kapha with extended study duration.
- ❖ The study can be conducted in large sample and can be taken for multi centric study.
- ❖ Study may be conducted with further modification of Ghati Yantra and with the modification in the procedure too.
- ❖ The specimen of blood collected from Raktamokshana may be subjected to various Assays to find out immunological markers etc.





**Figure 2: Before and After Treatment.**

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