



## COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF RAK-TAMOKSHANA BY CUPPING AND AVALGUJADI LEPA IN THE MANAGEMENT OF SHWITRA W.S.R TO VITILIGO.

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### ABSTRACT

**Background:** *Shwitra* is one among the *Kilasa Kushta* characterized by the appearance of *Shweta Mandala* (white patch) over the skin. Vitiligo is the pigmentary disorder of unknown cause is characterized by depigmented or hypopigmented patches that result from the absence or reduction in melanocytes. In *Ayurveda*, *Avalgujadi Lepa* considered as standard *Lepa* in management of *Shwitra*. *Acharya Sushruta* has given utmost importance to *Raktamokshana* in many skin disorders. Cupping therapy is used to induce *Raktamokshana*. Hence, in this comparative clinical study, *Raktamokshana* by Cupping and *Avalgujadi Lepa* along with *Vidangadi Churna* internally were used in two separate groups. **Methodology:** A Total 40 subjects suffering from *Shwitra*, fulfilling the diagnostic and inclusion criteria were selected from OPD and IPD of Department of Shalyatantra Ayurveda Mahavidyalaya & Hospital Hubballi. They were randomly categorized into two groups of 20 subjects in each, Group A received *Raktamokshana* by Cupping while Group B received *Avalgujadi Lepakarma*. *Vidangadi churna* was common internal medicine for both the groups. Assessment of results was done by considering the base line data of subjective and objective parameters. **Results:** Statistically both groups proved to be equally significant. But according to the relief got by the patients, Group -B proved to be more effective than Group - A. The therapy provided 55% relief in Group A and 71% relief in Group B.

**Keywords:** Shwitra, Vitiligo, Raktamokshana, Cupping Therapy, Avalgujadi Lepa, Vidangadichurna

## INTRODUCTION

Skin is one of the most sensitive and largest organ of the body which plays an important role in health, disease as well as beauty. The skin is unique in many ways, but no other organ demands so much attention and concern in both states of disease and health. There is a huge focus on skin health with fierce competition to have glowing, clearer, healthier, younger and fresher skin. And this focus can cause secondary problems with self-esteem and mental health. *Shwitra* is one among the *Kilasa Kushta* in which the aggravated *Kapha dosha* takes *Sthanasamshraya* in *Medodhatu* characterized by the appearance of *Shweta Mandala* over the skin.<sup>1</sup> According to clinical manifestations of *Shwitra*, it is more similar to Vitiligo. Vitiligo is the pigmentary disorder of unknown cause is characterized by depigmented or hypopigmented patches that result from absence or reduction in melanocytes. It has an estimated prevalence of 0.5-2% of the population worldwide.<sup>2</sup>

In modern management of Vitiligo includes topical steroids, topical photochemotherapy, immigrating and depigmentation techniques. The drawback of those treatments is having side effects like phototoxicity, hyperpigmentation, solar elastosis, squamous cell carcinoma etc<sup>3</sup>. So, people are looking towards the *Ayurvedic* system of medicines for better management.

In *Ayurveda* various treatment modalities have been explained to treat *Shwitra* such as *Shodhana*, *Virechana*, by *Malapurasa*(*Bakuchi*), *Suryasnan*, *Khadirodakapana*, *Raktamokshana*, & various *Lepa* which are having no side effects with no reoccurrence<sup>4</sup>. So, amongst these *Raktamokshana* and many topical /systemic drug administrations are practiced mediating mind and body *Acharya Chakrapani datta*, explained the use of *Avalgujadi Lepa* as standard *Lepa* in management of *Shwitra*.<sup>5</sup> *Acharya Sushruta* the embodiment of surgery has given utmost importance to *Raktamokshana* and its applicability in many disorders.

Cupping therapy is used to induce *Raktamokshana*. It activates and stimulates the reaction of body system which increases brain attention to the injurious part of skin and also stimulates the pituitary gland which is responsible for secretion of melanocyte stimulating hormone responsible for melanin formation. It helps to regulate the normal color of skin. Hence, in this comparative study, *Raktamokshana* by Cupping and *Avalgujadi Lepa* along with *Vidangadi Churna* internally are used in two separate groups. An effort is made in this study to find simple, safe and cost-effective procedure in the management of *Shwitra*.

## METHODOLOGY

The present clinical study entitled " Comparative Clinical study to evaluate the efficacy of *Raktamokshana* by Cupping and *Avalgujadi Lepa* in the Management of *Shwitra* w.s.r. to Vitiligo" was undertaken.

## SOURCE OF THE DATA

Subjects attending Shalyatantra OPD and IPD of Ayurveda Mahavidyalaya and Hospital , Hubballi were selected.

## METHOD OF COLLECTION OF DATA

40 patients fulfilling the diagnostic criteria were selected irrespective of sex, religion, marital status, socio-economic status and were randomly distributed in to two groups.

## INCLUSION CRITERIA

1. Patients presenting with the clinical features of *Shwitra* (Vitiligo).
2. Patients with single or less than 5 localised white patches having surface area less than 6sq.cm.were selected.
3. Patients of either sex between age group of 20-60 years.
4. Patients with normal limit of bleeding time and clotting time.
5. Patients fit for *Raktamokshana* by Cupping

## EXCLUSION CRITERIA:

1. Patient having patch over the sites like lips, glans penis, ear lobes and nail bed.
2. Patient associated with Leukoderma and other skin diseases.

3. Patients suffering from systemic disorders like Diabetes Mellitus, Hypertension HIV, HBsAg positive etc.
4. Patients with anaemia, where Hb% less than 8 gm%.
5. Pregnant women
6. Patients contraindicated for Raktamokshana by Cupping and Lepa karma.

#### ASSESSMENT CRITERIA

The subjective and objective parameters in Subjects were assessed before and after the treatment.

##### Subjective parameters:

- *Kandu* (Itching)

##### Objective parameters:

- Colour of Patch (*Shweta Mandala*)
- Size of Patch
- Number of Patch

#### CRITERIA FOR ASSESSMENT OF RESULTS

The Assessment of the result was made based on data collected as per subjective and objective parameters in all patients before and after treatment. Separate gradings were given for the assessment of parameters.

#### STATISTICAL ANALYSIS

The assessment parameters like *Kandu*, Size of patch & Color of the patch were subjected to **Wilcoxon Signed Rank Test** to compare the mean rank within the group and **Mann Whitney U test** to compare the Mean Rank difference Values between the groups & draw conclusion. The assessment parameter Number of Patches were subjected to **Student 't' test** to compare the mean within the group and in between the groups to compare the values between the groups & draw conclusion.

**Table no.1: P value results interpretation**

INTERPRETATION	P VALUE
Nonsignificant	>0.05
Significant	<0.05
Highly significant	<0.01, <0.001

#### STUDY DESIGN:

A Randomized Comparative Clinical Study

#### SAMPLE SIZE AND GROUPING

40 Subjects fulfilling the inclusion criteria were randomly divided into two groups as Group A and Group B consisting of twenty patients each.

**Group A** - Patients were subjected to *Raktamokshana* by Cupping

**Group B** - Patients were subjected to *Avalgujadi Lepa*

Total number of subjects registered for the study - 40.

Total number of subjects completed the study - 40.

No dropouts or excluded from the study.

#### INTERVENTIONS

In Group A Cupping Therapy was done for 4 sittings i.e. once a week. In Group B *Avalgujadi Lepa* application was advised once in day for 28 days, follow up once in week. On 28<sup>th</sup> day it was considered as an observational day to see the effect of procedure after completion of treatment. *Vidangadi churna* 1tsf BD

with *Madhu*, after food was given as an internal medication in both the groups.

#### Procedure of Raktamokshana by Cupping

Detailed procedure was explained to the patient and written consent was taken. Under aseptic precautions cups were applied on the affected area of lesion and vacuum was created by pump. It was kept for three minutes. After that cups were removed. Multiple pricks on skin were made with the help of sterile lancet at the site of cupping. Cups were again placed over bleeding points and vacuum was created then bleeding was observed in the cups. After blood stops oozing, then the vacuum was released, and cups were removed. The collected blood was wiped off with sterile gauze piece. Dusting of *Haridra churna* was done on the site of Cupping.

#### Procedure of Avalgujadi Lepakarma

Written informed consent of the patient was taken. Fine Paste of Avalgujadi Lepa was prepared by Rubbing a Lepa Varti over Rubbing stone. Prepared Lepawas applied over the affected area in Pratilomagati. Patient was made to expose the part in sun rays for 30 minutes. Lepa applied was nor too thick nor too thin. Lepa was removed before it dries. Part was washed with normal saline. Patient was advised to follow same procedure in home once in day.

### OBSERVATION PERIOD

- Initially on first day before treatment
- On 7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> day after treatment
- On the 28thday.

### RESULT

Statistically both groups proved to be equally significant. But In Group-B results were highly significant in all parameters than group -A. At the end of 28 days duration of treatment. Overall, the therapy provided 55% relief in Group A and 71% relief in Group B.

**Table no. 2: Showing the effect of therapy on parameter wise.**

Sl.no.	Parameters	Percentage of relief after treatment in Group A	Percentage of relief after treatment in Group B
1.	Kandu	57.15%	90%
2.	Color of patch	62.5%	76.93%
3.	Size of Patch	57.15%	75.52%
4.	Number of Patch	32%	44.45%

**Table No. 3: Overall Result Assessments in Both Groups**

% Relief	No. of Patients in group A	No. of Patients in group B	Remarks
(100%)	2	1	Complete relief
(75% - 99%)	1	6	Marked relief
(50% - 74%)	11	13	Moderate relief
(25% - 49%)	6	0	Mild relief
(Below 25%)	0	0	No relief

**Table No.4: Total effect of therapy in both groups**

Group A			Group B		
BT	AT	PERCENTAGE	BT	AT	PERCENTAGE
137	62	55%	138	40	71%

### DISCUSSION

References of word Shwitra is available since from Vedic period. Shwitra is considered as “Tridhatu Samshrayam” which means involvement of Tridhatu (Rakta, Mamsa, and Medodhatu). In our study

we have considered Kaphapradhana Tridoshaja Shwitra where vitiated Kapha dosha takes Sthana Sanshraya in Medodhatu. Bhrajaka pitta and Udana Vata are held responsible in maintenance of Twak

Varna. Shwitra is also one among the Raktapradoshaja Vikara. The clinical presentation of the disease Shwitra is almost similar to the clinical presentation of Vitiligo. In which appearance of whitish macules are seen in both Shwitra & Vitiligo. In present study Group A received Raktamokshana by Cupping and Group B received Avalgujadi Lepakarma.

### Probable Mode of Action of Raktamokshana by Cupping<sup>7</sup>

In Raktapradoshaja Vyadhi, Raktamokshana is one of the choice of treatment. Cupping therapy draws blood to the affected areas and thus energizes the skin tissues. This flow of blood brings oxygen and fresh

nutrients while the lymphatic system that produces the necessary antibodies needed to cause healing are also stimulated. In this study cupping activates and stimulates the body's response to the injurious section of the skin, as well as the pituitary gland, which is responsible for the secretion of melanocyte stimulating hormone, there by augment the secretion of melanin and regulate the normal colour of skin. So, Cupping removes the accumulated *Doshas* from the lesion in the form of blood and stimulate melanogenesis in management of *Shwitra*.

#### **Probable mode of action of Avalgujadi Lepakarma**

The contents of *Avalgujadi Lepa* are *Avalguja*(*Bakuchi*), *Shuddha Haratala* and *Gomutra*. Contents of *Bakuchi* increases the rate of synthesis and amount of melanin and hence encouraging skin to recover from a vitiliginous state<sup>8</sup>. Essential oil in *Bakuchi* has irritant properties and specific effect on the skin does stimulation of melanocytes which leads them to exude pigment which gradually diffuse into the decolorized areas. *Haratala* by its *Snigdha*, *Ushna Guna*, *Katu Rasa* and *Ushna Veerya* acts as *Kaphashamaka*. Due to its *Ushna Veerya* it is *Srotoshodhaka*. Along with *Bakuchi* it initiates the *Bhrajaka Pitta* at the skin level and it is indicated in *Kilasa*, *Shwitrakushta* and *Krimi*. In the present study in preparation of *Avalgujadi Lepa*, *Gomutra* is used as *Bhavanadravya*. *Gomutra* is 'Bioenhancer', substances that increases the bioavailability and bioefficacy of active substance with which they are combined<sup>9</sup>. In our present study all ingredients of *Avalgujadi Lepa* Shown combined effect on *Shwitra* by *Sthanika Kaphashaman* and *Bhrajaka Pitta* stimulation to perform their normal function and held responsible for repigmentation

#### **Probable mode of action of Vidangadi Churna**

It contains *Vidanga*, *Amalaki*, *Vibhitaki*, *Haritaki* and *Pippali*. *Vidangadichurna* has *krumighna*, *Vishaghna*, *Deepana*, *Rasayana*, *Anulomana*, *Tridoshaghna* properties. *Vidangadi Churna* when taken along with *Madhu*, *Mandagni* is corrected by the *Deepana* qualities. As Vitiligo is having autoimmune disease pathology which is get corrected by *Rasayana* properties of *Vidangadi Churna*. *Shwitra* is *Kaphapra-*

*dhana Tridoshaja Vyadhi* so *Doshas* get corrected by the *Tridoshaghna* and *Vatashleshmahara* properties of *Churna*. *Krumighna* and *Vishaghna* properties of *Vidanga* help in correcting the amoebiasis pathology of vitiligo. So *Vidangadi churna* acts on gut flora and increases absorption of nutrients of food thus helps in management of Vitiligo.

## **CONCLUSION**

The prognosis of *Shwitra* depends upon the early diagnosis and prompt treatment. Here we can cite a quotation as told by *Acharya Vagbhata*, the meaning of which runs as "Shwitra is considered as more *Bibhitsa* than that of *Kushta*." *Twacha Shwetata* i.e., whitish discoloration of the skin and. '*Aparisravi*' i.e. non exudative or non-oozing type of lesion both are considered as cardinal features of *Shwitra*. Some scholars have included *Kandu* in it. The affected people feel isolated from society and get depressed psychologically. *Acharya Charaka* has explained stages of *Kilasa kushta* based on *Dhatu gatatwa* and involvement of *dosha* i.e *Daruna*, *Aruna* & *Shwitra*. But *Acharya Sushruta* & *Vagbhata* explained these stages as 3 types of *Kilasa kushta* with few more symptoms. The color of the *vataja*, *pittaja* & *kaphaja kilasakushta* are as same as color of *Daruna*, *Aruna* & *Shwitra* of *Charaka's Kilasa kushta*. So, in our study we have limited to *Shwitra* of *Charaka* i.e *Kaphaja* variety of *Kilasa kushta*. *Raktamokshana* is also indicated in the treatment of *Kushta* especially in *Shwitra*. Cupping is a safe and inexpensive technique used to ease bloodletting function. It is very simple, result oriented, cost effective OPD based treatment and can be employed in the majority of diseases. Cupping removes the accumulated *doshas* from the lesion in the form of blood and stimulates melanogenesis in management of *Shwitra*. *Lepa chikitsa* is one of the main components of *Bahirparimarjana Chikitsa*. In our present study all ingredients of *Avalgujadi Lepa* Shown combined effect on *Shwitra* by *Sthanika Kaphashaman* and *Bhrajaka Pitta* stimulation to perform their normal function and held responsible for repigmentation.

In the present study a total of 40 patients were selected, which is a satisfactory sample size in short-term research work. Result showed there is no significant difference in both groups statistically but there was a little difference in percentage of relief. Group A subjects were treated with Raktamokshana by Cupping got 55 % relief after treatment. Group B subjects were treated with Avalgujadi Lepakarma and got 71 % relief after treatment. Vidangadi Churna Itsf BD with Honey given as internal medicine in both groups which is Deepana ,Tridosahara, Rasayana and Krumighna thus helps in breaking the pathology of vitiligo All the subjects Co-operated during the procedure well and no complications were observed during the study Raktamokshana by cupping helps in removing the vitiated blood from affected lesion so takes more time for stimulation of melanocytes but Avalgujadi Lepa by its Prabhava and irritant nature, easily permeates in to the skin and target melanocytes to secrete melanin. Thus, in the present study Avalgujadilepa shown better results than Raktamokshana in Management of Shwitra.

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Figure no1. Raktamokshana by Cupping

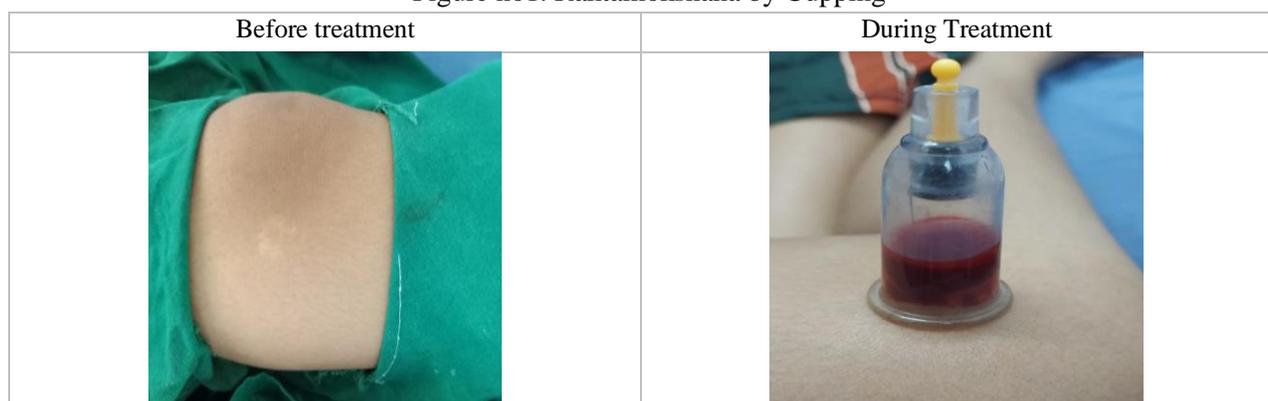




Figure no. 2 : Avalgujadi Lepakarma

