

## ORIGINAL RESEARCH ARTICLE - CLINICAL STUDY

**A clinical study of *shodhana ropana lepa* in *dushta vrana***

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**ABSTRACT**

*Dushta vrana* is an unsolved problem faced by health care professionals in India and abroad. A clean wound in normal body heals earlier with minimum scar as compared to contaminated wound. Therefore in present concept all efforts are directed to keep the wound clean during various stages of wound healing. Such healing process is called Shodhana and Ropana. Acharya Sharangdhara explained Shodhana Ropana Lepa in the management of Dushta vrana<sup>1</sup>. So the present study is planned to evaluate the efficacy of Shodhana Ropana Lepa. 15 patients were selected from O.P.D/I.P.D of Shalya Tantra, N.I.A., Jaipur. The treatment was accessed with observation and results for a period of eight weeks. After this therapy, significant result was observed. It was observed that the results achieved are effective and stable during follow up period.

**Keywords :** *Dushta Vrana, Shodhana, Ropana, Shodhana Ropana Lepa.*

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Assistant Professor,  
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**Email ID :** kalpanaverma637@gmail.com**Contact No :** 09549812650**Introduction**

According to the *Ayurveda*, vrana is the discontinuation of lining membrane that after healing leaves a scar for life closely resembling the modern definition of wound<sup>[2]</sup>. A wound which refuses to heal or heals very slowly in spite of best efforts is known as *Dushta vrana*<sup>[3]</sup>.

Advance technologies and Medicare system are still unsatisfactory in the process of healing and bringing down the aggravated clinical problems of an ulcer. Healing of chronic ulcer is paradoxical. The present approaches fail to respond adequately in certain types of pathological conditions of an ulcer. Advancement in science, technology and antibiotics has improved a lot in wound healing but still understanding its pathology and management is in phase of evolution.

The aim of surgical practice is to heal wound. Various attempts have been made to overcome the condition

since vedic era to date. Dushta vrana<sup>[4] [5]</sup> a typical non-healing chronic ulcer conglomerated with various signs and symptoms is a problem to the patient and surgeon.

Even after development of different techniques and methods for the treatment of wound, still problems are persisting in the management. With review and references of ancient approaches to vrana<sup>[6],[7],[8]</sup> treatment, it is convinced that the Ayurvedic approaches to the treatment of vrana can be better a supplementation to satisfy all the above problems.

Ayurveda the age old and holistic system of medicine offers various tools for management of Dushta vrana<sup>[9],[10],[11]</sup>. Many times patients remain untreated and that may lead to death due to secondary and systemic infections. Under these circumstances it is a great need of hour to reproduce the modalities for patients of Dushta vrana which will be available everywhere, with minimum cost. Hence a search for more effective and safe method vrana shodhana and ropana is a demand for management of vrana.

### **Aims and Objectives:**

The main aim of the study is to evaluate the efficacy of Shodhana Ropana Lepa in the management of the Dushta vrana.

### **Materials and methods:**

**Materials-** The formulation selected for this study is Shodhana Ropana lepa explained by Acharya Sharangdhara, in the management of Dushta Vrana<sup>12</sup>.

Method of preparation of shodhana ropana lepa:

- The fine powder of danti, nishoth, saindhava lavan and kalka of nimba patra and krishna til was taken in equal quantites. Sufficient quantity of madhu was
- mixed to the above said ingredients and did mardhana till it reached a semisolid state.
- This is shodhana ropana lepa and is stored in an airtight glass container.

For the study, total 15 subjects with the classical signs and symptoms of Dushtavrana were selected randomly from O.P.D/I.P.D, Department of Shalya tantra,

N.I.A, Jaipur, ages ranging from 15- 70 yrs., irrespective sex, religion and socioeconomic status. The study was clearly explained to the subjects and their signed, written informed consent was taken before starting the trial. Routine blood investigations (Hb gm%, TLC, DLC, BT, CT, ESR, RBS, HIV & HBsAg.) were done to every patient before starting the trial. Application of Shodhana Ropana Lepa was done. Total time frame of the study was 12 weeks, with trial period for 8 weeks and a follow up for 4 weeks.

The protocol was approved by the Institutional Ethics committee at National Institute of Ayurveda, Jaipur and **the ethical approval letter's ref. number is F10 (5)/EC/2014/7217, dated: 7/11/2014.**

### **Selection criteria:**

#### **➤ Inclusion criteria:**

- Age 15 - 70 years
- Patients having clinical features of Dushta Vrana will be included
- Those ready to give written informed consent

#### **➤ Exclusion criteria:**

- Malignancy
- Tubercular ulcers
- Syphilitic ulcers
- Soft sores
- Actinomycosis, Meleney's ulcers
- Immuno compromised or unstable patients
- HIV, immune deficiency syndrome
- Immunosuppressive medications users
- Who are not willing to give written informed consent
- Previous participation in trial

### **Assessment criteria:**

Effect of therapy was evaluated before, during & after the course of treatment by using parameters as stated below with standard grading.

**a) Primary Outcome Measures:**

- Circumference of the wound ( Length, Width & Depth)
- Exudate quantity
- Pain (VAS scale)
- Odour
- Granulation Tissue

**b) Secondary Outcome Measures:**

- Patient satisfaction
- Recurrence

Subjects were assessed for above said variables, were recorded and stored in specific case record proforma. Privacy and confidentiality of the patients was maintained. The collected data was subjected to statistical analysis by using Stat Graph Pad 3 software (Trial version), Wilcoxon matched-pairs signed ranks test, One Way ANOVA test, Chi- Square test, were used to bring out the level of significance i.e. P value.

Photographs were taken before starting the trial, during and on 8th week follow up or after complete healing of the wound, whichever is the earlier.

**Effect of therapy in individual parameters:**

**Exudate:** The mean Score before treatment was 1.53 which lowered down to 0.33 after treatment, with  $SD \pm 0.4140$  giving a relief of 78.43% and p value is  **$P < 0.0001$**  which is statistically **highly significant**.

**Odour:** The mean Score before treatment was 0.4 which lowered down to 0.27 after treatment, with  $SD \pm 0.3519$  giving a relief of 32.5% and is statistically Non significant with  $P > 0.05$

**Granulation tissue:** The mean Score before treatment was 2.6 which lowered down to 0.47 after treatment, with  $SD \pm 0.8338$  giving a relief of 81.92% and is statistically highly significant with  $P < 0.0001$

**Pain:** The mean Score before treatment was 3.86, with  $SEM \pm 0.91$  which lowered down to 0.06 after treatment, with  $SEM \pm 0.06$  giving a relief of 98.29% and is statistically highly significant with  $P < 0.0001$

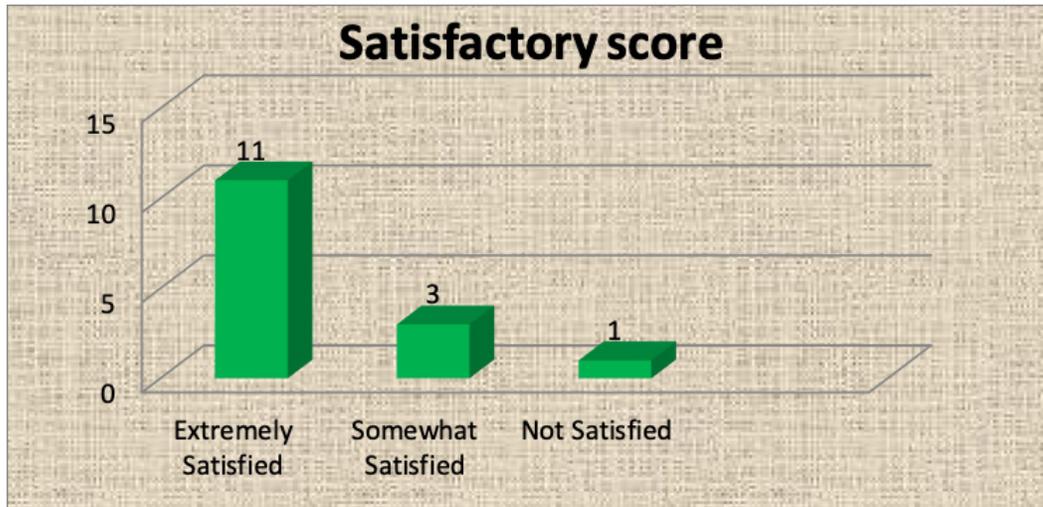
**Circumference of wound:** The mean Score before treatment was 25.90, with  $SEM \pm 14.71$  which lowered down 10.07 after treatment, with  $SEM \pm 9.49$  giving a relief of 61.11% and is statistically **non significant** with  **$P > 0.05$**

**Results:**

**Table No. I: Post procedure complications in 15 Patients**

Complications	Shodhana ropana lepa	
	Count	%
Pain	06	40%
Bleeding	00	00%
Burning Sensation	07	46.66%
Infection	03	20%

**Graph No.1: Satisfactory Score given by patients**



**Recurrence:** The patients who got cured completely didn't have a recurrence after a follow up for one month after the trial.

**Table No. II: Total effect of therapy in 15 patients**

Treatment response	Shodhana ropana lepa	
	No.	%
Complete relief	07	46.66%
Marked relief	04	26.66%
Moderate relief	01	6.66%
Mild relief	03	20%
No relief	00	00

Table no.2 shows the total effect of therapy in 15 patients. Out of 15 patients complete relief was seen in the 07(46.66%) patients, marked relief in 04 (26.67%) patients, moderate relief in 01(6.66%) patients, mild relief in 03(20%) patients and no patient was seen with no relief.

**Discussion:**

The patients treated with application of Shodhana ropana lepa had yielded better outcome with more percentage of relief in exudate, pain, granulation with highly significant p values in each parameter.

It suggests that shodhana ropana lepa influences in

decreasing exudates, pain and odour to limited extent and stimulated granulation tissue in the wound bed and this implies that it have good wound healing properties or vrana shodhana and ropana properties.

At the end, by assessing the P value and percentage of relief in different variables shown better result in wound healing where in odour and circumference of wound it

decreases.

### Probable mode of action of Shodhana Ropana Lepa

The ingredients of Shodhana ropana lepa are having vrana shodhana and vrana ropana properties as per the literature and their chemical constituents are proven to be having antibacterial, antiviral, debriding properties with established pharmacological anti ulcer activity thus enabling wound healing and was clinically observed and especially, Madhu or Honey, the base of the lepa is having antimicrobial property and is supported by recent studies which shown the anti inflammatory property, inhibitory property on many species of aerobes, anaerobes, gram-positive and gram negative organisms, stimulatory effect on proliferation of peripheral blood cells, B-Lymphocytes,

T-Lymphocytes and phagocytes to release cytokines, tumor necrosis factor, interleukin, IL-1 and IL-6 which activate the immune response to infection.

### Conclusion:

Out of 15 patients, complete relief was seen in the 07(46.66%) patients, marked relief in 04 (26.67%) patients, moderate relief in 01(6.66%) patients, mild relief in 03(20%) patients and no patient was seen with no relief.

The patients treated with Shodhana ropana lepa had yielded better outcome with more percentage of relief in exudate, pain, granulation with highly significant p values in each parameter, where in odour and circumference of wound its percentage of relief decreases.

### Method of preparation of shodhana ropana lepa



**NIMB KALKA**



**MIXTURE OF DANTI, TRIVRIT,**



**WITH MADHU**



**MARDHANA**

SANDHAV, TIL



SHODHANA ROPANA LEPA



**BEFORE TREATMENT**



**DURING TREATMENT**



**AFTER TREATMENT**



BEFORE TREATMENT



DURING TREATMENT



AFTER TREATMENT

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### सारांशः

व्रण जो सामान्य उपक्रमों द्वारा रोपित न हो एवं चिरकालिक हो और उत्तम उपकरणों द्वारा रोपित न हो रहा हो ऐसा व्रण, दुष्ट व्रण की श्रेणी में आता है। आधुनिक चिकित्सा पद्धति तकनीकी द्वारा भी अभी तक व्रण रोपण प्रक्रिया के बारे में संतोषप्रद परिणाम नहीं है। आचार्य सुश्रुत ने व्रण को प्रमुख स्थान दिया है। आचार्य सुश्रुत ने व्रण शोधन, रोपण तथा व्रणवस्तु के लिए षष्ठी उपक्रम का वर्णन किया है। अतएव यहाँ आवश्यकता है, आयुर्वेद से इसका उपचार। आचार्य सुश्रुत ने दुष्टव्रण की चिकित्सा में शोधन बताया है, एक शोधित व्रण स्वस्थ व्यक्ति में शीघ्र भरता है एवं निशान भी कम होता है, एक संक्रमित व्रण की तुलना में, अतः इस प्रस्तुत संकल्पना में सारे प्रयास व्रण को शोधित एवं रोपित करने के लिए है। यह व्रण रोपण की प्रक्रिया शोधन एवं रोपण कहलाती है। दुष्टव्रण की चिकित्सा में आचार्य शारंगधर ने शोधन रोपण लेप का वर्णन किया है। वर्तमान अध्ययन में शोधन रोपण लेप को व्रण को चिकित्सा के चिकित्सीय मुल्यांकन हेतु लिया गया है। इस अध्ययन में 15 विषयों का चयन किया गया है, जिसमें शोधन रोपण लेप का प्रयोग किया गया। आठ सप्ताह के उपरान्त सांखिकी के आधार पर परिणाम का मुल्यांकन किया गया। जिसके अनुसार सभी वर्गों में उत्तम एवं प्रभावशाली परिणाम लक्षित हुए हैं।