

CLINICAL STUDY OF DASHANG LEPA IN VRANASHOPHA (ACUTE  
INFLAMMATORY SWELLINGS)Dr. Kumar Ravindra\*<sup>1</sup> and Dr. Gupta S. J.<sup>2</sup><sup>1</sup>Assistant Professor Department of Shalya Tantra, Institute of Ayurveda, Parul University, Limda Vadodara, Gujarat.<sup>2</sup>Professor Department of Shalya Tantra, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University Varanasi 221005.

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## ABSTRACT

**Background/Purpose:** *Vrana* and *Vranashopha* have been a topic of interest for the surgeons since ancient times. *Vranashopha* occurs either as a result of vitiated *doshas* or may be of traumatic origin. This has been emphasized in classics of *Ayurveda* in various contexts. The father of surgery *Acharya Shushruta* has explained the *Vranashopha* as: swelling like a thick, elevated mass, even or uneven, residing in the skin and muscles, having accumulation of the *doshas* and arising in any one part of the body (localised). It is entirely different from other swellings like *granthi* (tumour), *vidradhi* (abscess), *alaji* (a kind of skin disease) and such other disease of many shapes. As per symptomatology *Vranashopha* is very close to surface inflammatory swelling. Inflammatory swellings such as – cellulitis, erysipelas, boil, carbuncle etc. are major issue in health sciences. **Methods:** *Dashang Lepa* contains 10 commonly and easily available and very cost affective indigenous drug which all having good effect in reducing the *Vranashopha*. For the clinical study, 20 patients of inflammatory swelling after detail clinical history and investigatory findings as per designed proforma, were registered from OPD/IPD of the Department of *Shalya Tantra*, *Sir Sunderlal hospital I.M.S. B.H.U. Varanasi (U.P.)*. Patients were divided in two groups (IA & IB) based on *Total Leukocyte Count [TLC]*. **Results:** Total percentage reliefs in sign and symptom of inflammatory swellings in 20 patients. The data reveals relief in *pain* was 77.77% and 100% in Group IA and IB respectively. Relief in *oedema (swelling)* was 66.66% and 90.00% in Group IA and IB respectively. Relief in *tenderness* was 75.00% and 83.33% in Group IA and IB respectively. Relief in *erythema* was 83.33% and 91.66% in Group IA and IB respectively. Relief in *fever* was 100% in both Groups respectively. **Conclusion:** The present study showed that the trial drug (*Dashang Lepa*) possessed significant effect against acute inflammation in comparison to standard group (Sumag).

**KEYWORDS:** Dashang Lepa, Sumag, Vranashopha, inflammatory swellings, inflammation.

## INTRODUCTION

*Vrana* and *Vranashopha* have been a topic of interest for the surgeons since ancient times. *Vranashopha* occurs either as a result of vitiated *doshas* or may be of traumatic origin. This has been emphasized in classics of *Ayurveda* in various contexts. The father of surgery *Acharya Shushruta* has explained the *Vranashopha* as: swelling like a thick, elevated mass, even or uneven, residing in the skin and muscles, having accumulation of the *doshas* and arising in any one part of the body (localised). It is entirely different from other swellings like *granthi* (tumour), *vidradhi* (abscess), *alaji* (a kind of skin disease) and such other disease of many shapes (S.S.Su. 17/3).<sup>[1]</sup> As per symptomatology *Vranashopha* is very close to surface inflammatory swelling.

Inflammatory swellings such as – cellulitis, erysipelas, boil, carbuncle etc. are major issue in health sciences.

Inflammatory swellings are a part of body's inflammatory process, which helps the body when it becomes injured. Our body undergoes the inflammatory process virtually any time an injury or tissue damage occurs. The principle of management of inflammatory swelling is to localize the infection avoid the toxic substance/bacterial growth, to go in systemic circulation.

In inflammatory swellings, many systemic and local drugs are used. Systemic drugs are effective but not safer from side effect, similarly the local drugs also causes some unwanted effects like contact dermatitis, staining, hypersensitivity etc. In *Ayurveda*, inflammatory swellings well managed by medical along with surgical interventions. *Acharya Shushruta* has described seven *upkrama* for the management of *Vranashopha*. In these *upkrama*, first is *Vimlapan* (Softening by kneading with fingers), second *Avasechan* (Blood letting), third *Upnaha*

(Warm poultices), fourth *Patana* (Cutting/Incision), fifth *Shodhana* (Cleaning), sixth *Ropana* (Healing) and seventh *Vaikrtapaha* (Removing/warding off the abnormalities)<sup>[2]</sup> (S.S.Su. 17/22-23).

So keeping these things in mind the drug *Dashang Lepa* is selected for study. *Dashang lepa* one of the mixtures of ten very effective and common indigenous drugs for local application in many superficial inflammatory conditions as described in many *Ayurvedic* texts. However, it is very effective to reduce the inflammatory process after local application over inflammatory swelling.

## MATERIALS AND METHODS

### Selection of the drug

*Dashang lepa* is mentioned in many *Ayurvedic* texts like: Chakradutta in *Visarpa-Visphota Chikitsa* 23; Sharangdhar, *Madhyam Bhag*, *Uttarkhand* 11/4-6; Bhavprakash, *Uttardh*, *Dwitiya Bhag* 56/32; Yogaratnakar, *Uttardh*, *Visarpa Chikitsa*; Bhaishjyarnavali 57/18.(Pg-58).

Although, there are many indigenous preparations which reduce inflammation either by external application or by systemic use. But *Dashang lepa* is thought to be easily available drug, practically well experienced and effective drug in the management of *Vranashopha* (inflammatory condition).

### Preparation of Drug

**A. Source of Drug:** Some drugs were collected from periphery of Varanasi and some were obtained from local market. With the help of Department of Dravyaguna, Faculty of Ayurveda, IMS, BHU all the drugs were clearly identified.

**B. Preparation of powder:** All the 10 drugs taken in equal amount of 1kg and thoroughly washed in running tap water and dried in the natural shading about on Temperature 26°C. After some days, dried drugs were grinded in a mixer and a powder was obtained. Then filtered through the sieve no. 85 and it become fine powder. The powder was kept in a dry and airtight container.

### Method of Study

#### 1. Selection of the patient

All patients of inflammatory swellings were registered from OPD/IPD of the Department of Shalya Tantra, Sir Sunderlal hospital I.M.S. B.H.U. Varanasi (U.P.). Detailed clinical history and primary investigations was done as per designed proforma for the clinical study of the patient.

## 2. Criteria for the selection of the patient

Inclusion Criteria	Exclusion criteria
Inflammatory swelling of extremities, with sign and symptoms of pain, tenderness, oedema, redness, local temperature and fever.	1. Diabetes mellitus 2. Hypertension 3. Chronic Renal Failure 4. Malignancy 5. HIV positive patients

## 3. Assessment Criteria

Local	Generalised
1. Colour (Erythema)	1. General Condition[G.C.]
2. Oedema	2. Pulse
3. Temperature	3. Blood Pressure
4. Induration	4. Respiration
5. Tenderness	5. Pain
	6. Fever

## 4. Investigation Criteria

1. TLC (Total Leucocytes Count)
  2. DLC (Differential Leucocytes Count)
  3. ESR (Erythrocyte Sedimentation Rate)
- Weekly assessment of investigation was done.

### Clinical study of *Dashang lepa* in patients of inflammatory swelling

In present study 20 patients of inflammatory swellings, after detail clinical history and investigatory findings as per designed proforma were registered for the study.

They were divided in two subgroups on basis of *Total Leucocyte Count* [TLC]:

**Group I-** In this group 20 patients with  $<15,000$  cells/mm<sup>3</sup> TLC were registered. These were further divided in two sub group:

- **I A.** Control - These were treated by local application of Su-mag.
- **I B.** Trial - These were treated by local application of *Dashang Lepa*.
- **Sumag** - combination of dried magnesium sulphate 58%, urea 1%, sulphacetamide sodium 2.5%, proflavine and glycerine.

Total duration of treatment were given as per require. However, for clinical study the data were collected and analysed for 15 days at the interval of 5 days. So first fallow up (F1) after 5 days, second fallow up (F2) after 10 days and third fallow up (F3) after 15 days.

## 5. Method of Application of *Dashang Lepa*

1. Consent from patient and his/her attendants were taken before application of drug.
2. Patient was asked to lie in comfortable position and diseased area was properly exposed.
3. A pre photograph was taken after permitting the patient in different view.
4. Cleaning of affected area was done with cotton and Normal Saline 0.9%.

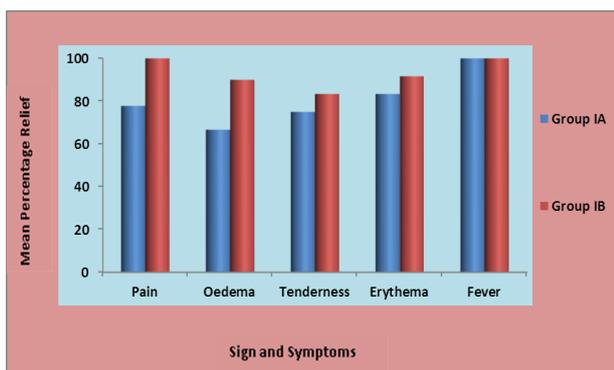
5. Required amount of powder was taken according to involve area in a kidney tray.
  6. Cow's butter (Ghee) was taken in 1/5th part of powder and was heated about 40°C.
  7. Both were mixed with 3 fingers and a uniform paste was made.
  8. Then thick paste was applied to whole affected area in opposite direction of hairs.
  9. Wound (if present) was spared from paste.
  10. Cover with gauze and cotton and bandage was done not too tight not too loose.
- The drug was applied for 12 hrs. However, the time depends upon site, severity and other factors. Reapplication of Dashang lepa was done after cleaning the affected area with Normal Saline.

**RESULTS**

**Total relief in Sign and Symptoms of Inflammatory swellings during treatment**

**Relief percentages on the signs and symptoms of Inflammatory swellings (n = 20).**

S.N.	Symptoms	Groups	Symptom Score			% Decrease in symptom score after treatment
			BT	AT	Difference	
1.	Pain	IA	9	2	7	77.77
		IB	9	0	9	100.00
2.	Oedema	IA	9	3	6	66.66
		IB	10	1	9	90.00
3.	Tenderness	IA	12	3	9	75.00
		IB	12	2	10	83.33
4.	Erythema	IA	12	2	10	83.33
		IB	12	1	11	91.66
5.	Fever	IA	9	0	9	100.00
		IB	8	0	8	100.00



**Total reliefs in sign and symptoms of inflammatory swelling during treatment with all groups**

Table and graph showing total percentage reliefs in sign and symptom of inflammatory swellings in 20 patients. The data reveals relief in *pain* was 77.77% and 100%, in Group IA and IB respectively. Relief in *oedema (swelling)* was 66.66% and 90.00% in Group IA and IB respectively. Relief in *tenderness* was 75.00% and 83.33% in Group IA and IB respectively. Relief in *erythema* was 83.33% and 91.66% in Group IA and IB respectively. Relief in *fever* was 100% in all Groups respectively.



Day 1. Before Treatment



Day 5. After Treatment



Day 1. Before Treatment



Day 5. After Treatment

## DISCUSSION

In present clinical study, we selected major cardinal feature of *Vranashopha* (inflammatory swelling) to evaluate anti-inflammatory action of *Dashang lepa*.

**1. Pain:** The present study revealed that the *Dashang lepa* is very effective and shown statistically highly significant ( $p < 0.001$ ) in terms of pain when compare to ointment Sumag. Pain is caused by increasing in level of prostaglandins during inflammatory reaction. Study on phytochemical flavonoids (by *Ana Garcia-Lafuente et al, 2009*) and tannin (*Watson ED et al, 1992*) suggest strong analgesic effect. Therefore, it assumed that the drug *Dashang lepa* has analgesic effect during inflammation.

**2. Oedema:** Local oedema increases due to elevation of local hydrostatic pressure and accumulation of transuded fluid. In present study the drug *Dashang lepa* is showing statistically highly significant ( $p < 0.001$ ) in terms of reducing oedema. In Group IB relief in oedema is 90.00% respectively.

**3. Tenderness:** Present study revealed that the mean before treatment is 2.40 and after treatment is 0.40 in Group IB respectively. *Dashang lepa* has shown statistically highly significant ( $p < 0.001$ ) in terms of reduction in tenderness.

**4. Erythema:** Erythema in inflammatory process is due to increase blood supply over injured area due to vasodilatation. In present study *Dashang lepa* has shown statistically highly significant ( $p < 0.001$ ) in terms of reduction in erythema (redness).

**5. Fever:** Temperature is regulated by hypothalamus. A trigger of the fever, called a pyrogen, causes a release of prostaglandin E2 (PGE2). PGE2 then in turn acts on the hypothalamus, which generates a systemic response back to the rest of the body, causing heat-creating effects to match a new temperature level. *Dashang lepa* has shown antipyretic effect. It is statistically highly significant ( $p < 0.001$ ) in terms of reducing generalized temperature. It also reduces local temperature.

## CONCLUSION

- There was highly significant reduction in pain found by all groups. In group IB the relief was 100% after three follow up. *Dashang lepa* was found more effective than ointment Su-mag in terms of pain.
- There was highly significant reduction in oedema found by group IB. Significant reduction was found in group IA. Between the group comparisons revealed *Dashang lepa* is more significant than Su-mag in terms of oedema.
- All groups were highly significant in reduction of tenderness. *Dashang lepa* is more significant than sumag in relation to reduction of tenderness.
- There was highly significant reduction in erythema found in group IB. The relief in erythema was 83.33, 91.66 in group IA, IB respectively. *Dashang lepa* is very effective to reduce erythema than compare to Su-mag.
- There was highly significant reduction in fever found in all groups. But *Dashang lepa* is more significant than sumag in relation to reduction of fever and local body temperature.

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