



## ROLE OF JALAUKA AVACHARANA IN THE MANAGEMENT OF VRANA SHOPHA: A CASE REPORT

Rabiya Shaikh\*<sup>1</sup> and Mukund S. Dhule<sup>2</sup>

<sup>1</sup>PG Scholar, Department of ShalyaTantra, Parul Institute of Ayurveda, Vadodara, Gujarat-391760.

<sup>2</sup>Professor & HOD, Department of ShalyaTantra, Parul Institute of Ayurveda, Vadodara, Gujarat-391760.

\*Corresponding Author: Rabiya Shaikh

PG Scholar, Department of ShalyaTantra, Parul Institute of Ayurveda, Vadodara, Gujarat-391760.

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### ABSTRACT

*Vrana Shopha* is defined as elevation caused by *Doshas*, localised and situated between skin and muscles which may be even or uneven, other than that of inflammatory swelling seen in cyst, abscess etc. type of disorders. *Vrana Shopha* is also the premonitory stage of *Vrana* (wound). If left untreated, leads to the manifestation of *Vrana* (wound). *Aachaarya Sushruta* has given immense importance to the concept of *Vrana* (wound) and for that he has explained Sixty procedures i.e. *Shasti Upakrama* for its management. Out of these *Apatarpana* (fasting or low diet) to *Virechana* (purgation) were mentioned for *Vrana Shopha* and rest for *Vrana* (wound). *Rakta mokshana* (Bloodletting) is one amongst them, it is the ancient and important parasurgical procedure described in *Ayurveda*. Of them, *Jalaukavacharana* or leech therapy has gained greater attention globally, because of its medicinal values. The medicinal leech (*Jalauka*) is known as "Hirudo Medicinalis." *Jalauka Avacharana* (Leech Application) is defined as a gentle method for the removal of *Pitta Dosh*a vitiated blood. The present paper is the case presentation of a 20 yrs. old male patient who came to *Shalya Tantra* OPD at Parul Ayurved Hospital Limda, Vadodara, with the complaint of *Dakshin Pada Pradeshe Shopha* (swelling on left leg), *Kandu* (itching), *Suchi Vada Vedana* (pricking pain) since one day. The treatment planned was of *Jalaukavacharaa* (Leech Application) with regular dressing and concomitant medicine for seven days. Complete healing was obtained within 7 days. This single case manifests that *Vrana Shopha* can be treated well with *Jalaukaavacharana* (Leech Application). Follow up was continued and within six month we didn't found recurrence.

**KEYWORDS:** - *Vrana Sopha*, *Jalauka Avacharana*, *Hirudo Medicinalis*.

### INTRODUCTION

*Vrana Shopha* is considered as the premonitory stage of *Vrana* (wound). It is an unnatural elevation in a part of the body. If left untreated, leads to the manifestation of *Vrana* (wound). *Shopha* as a clinical entity was very well known from the period of *Samhita*. *Aachaarya Sushruta* enhanced the topic by explaining the surgical aspects of *Shopha* (an inflammatory condition/ localized swelling) and *Vrana* (wound). He defined *Shopha* as localized swelling involving the skin and the underlying flesh which may be even or uneven.<sup>[1]</sup> Whereas inflammation, it is a part of the complex biological response of body tissue to harmful stimuli, such as pathogens, damaged cells or irritants and is a protective response involving immune cells, blood vessels and molecular mediators.<sup>[2]</sup>

The function of inflammation is to eliminate the initial cause of cell injury, clear out the necrotic cells and tissue damage from the original insult and the inflammatory process and to initiate tissue repair.

*Vrana Shopha* is been classified into 3 progressive stages.

These are<sup>[3]</sup>:-

1. *Amavastha* (just early stage of inflammatory process),
2. *Pachyamanawasth* (true inflammatory stage) and
3. *Pakwawastha* (suppurative stage) respectively.

Based on the vitiation of *Dosha*, *Sushruta* has described *Vrana Shopha* into 6 types<sup>[4]</sup>: *Vatika*, *Paittika*, *Kaphaja*, *Shonita*, *Sannipattaja* and *Agantuja*. *Acharya* has differentiated them based on their *Laxanas* (symptoms), such as colour, pain etc. while considering the concept of *Shatkriyakalai* (six main stages of disease manifestation), it was explained for the first time in this context by *Aachaarya Sushruta*. Sixty procedures for management of *Vrana Shopha* and *Vrana* (wound) were told by *Sushruta*. Out of these *Apatarpana* (fasting or low diet) to *Virechana* (purgation) were mentioned for *Vrana Shopha*<sup>[5]</sup> and rest for *Vrana*. *Avasechana* is one amongst them which is been considered as *Rakta mokshana* (bloodletting) which eliminates the vitiated *doshas* and

leads to early reduction in the disease, *Jalaukavacharana* (Leech Application) is considered as the best methods for the removal of *Pitta Dosha* vitiated blood.<sup>[6]</sup>

## MATERIAL AND METHODS

**CASE HISTORY:-**A 20 yrs. old male patient, reported to *Shalya Tantra* OPD at Parul Ayurved Hospital Limda, Vadodara, with the chief complaints of *Dakshin Pada Pradeshe Shopha* (swelling on left leg), *Daaha* (burning sensation), *Suchivada Vedana* (pricking pain) since one day.

According to the patient before 2 days small boil was developed on his right lower limb, later on it increased in size with swelling, redness, burning and pricking pain. He took symptomatic treatment but had no relief so for proper treatment he came to *Shalya Tantra* Opd at Parul Ayurveda Hospital.

### Oral medications

Sr.no	Oral medication	Dosage	Anupana
1.	<i>Triphala guggulu</i>	500mg BD	<i>Ushnodaka</i>
2.	<i>Gandgak rasayan</i>	250 mg TID	<i>Ushnodaka</i>
3.	<i>Manjisthadi ghanavati</i>	500 mg BD	<i>Ushnodaka</i>

Patient was advised to have normal diet and regimen. Assessment on the subjective and objective changes with the treatment was made on alternate day for 7days. Follow up observation of 15 days for the development of any post complications at the site of lesion like formation of hypertrophied scar was done.

### Procedure

The procedure of *Jalauka Avacharana* (Leech Application) was carried out in following three steps:-

**Purva Karma (Pre-Procedure Preparation):** The material used for the procedures were; bowls, surgical gloves, *Haridra Churna*, (*Curcuma longa*), *Gairik powder* (red ochre), kidney tray, gauze piece, bandage, disposable needle were kept ready. *Jalauka* (Leech) were placed in the water mixed with *Haridra Churna* (turmeric powder) for two to three minutes so that leech gets active. The affected region was cleaned with normal saline then dried up and rubbed with dry gauze piece. After wearing the surgical gloves, *Jalauka* (leech) was held nearer to the anterior sucker with the help of gauze piece.

**Pradhan Karma (Procedure of leech application):** Leech was applied at the region of *Vrana Shopha*. Leech bites the affected area spontaneously and sucked the blood. Once leech started to suck the blood, its neck part looks elevated that indicates that sucking was well and in progress. During sucking gradual distension were

Patient was examined; both systemic and local examination was done. While inspecting the local part it was found that there was:-

1. Swelling at right lower limb.
2. Discolouration of the region was found (redness).
3. On palpation mild temperature raise at the sight was found.
4. Tenderness was there.

**His vital status was:-**Pulse:-72/min, Respiratory rate:-20/min, Bp:-110/70 mm of Hg Temperature:-99 F.

## METHODOLOGY

### TREATMENT GIVEN

*Jalauka Avacharana* (Leech Application) was done on the day of examination. Followed by daily wound dressing. The Oral medication was administered for 7 days as follow:-

observed at its body centre and wavy movement / pulsation was visible throughout its body. The body part was covered with a wet swab except his mouth to create a natural atmosphere and it was maintained throughout the process by pouring of some water on it.

**Paschat Karma (post procedure):** Immediately after removal of leech the local part was cleaned with betadine solution and then *Haridra churna* (turmeric powder) and *Gairik churna* (red ochre) was applied and was bandaged tightly. When *Jalauka* (leech) give up automatically, then it was kept in a kidney tray and *Haridra churna* was sprinkled on its mouth. *Jalauka* (leech) automatically vomit the ingested blood. Finally leech was squeezed smoothly to remove all the remnant part of ingested blood from its body. It is very important to remove all ingested blood otherwise leech will die or get diseased as mentioned in classic. *Jalauka* (leech) were kept in clean vessel and clean water separately.

## CRITERIA FOR THE ASSESSMENT OF RESULT

### Subjective parameters

- Pain
- Burning sensation

### Objective parameters

- Oedema

- **Subjective Parameters**

- **1. Pain**

The changes in the pain with the treatment were considered as follows.

Sr. No	Criteria	Grade
1	The absence of pain is considered as nil	0
2	The pain which was tolerable, negligible considered as mild	1
3	Constant, tolerable pain and subject can wait even for some days in seeking medical help was considered as moderate	2
4	The pain which was intolerable, constant and makes to seek medical help as early possible was considered as severe	3

- **2. Burning sensation**

- The change in the burning sensation during the treatment was considered as follows

Sr. no	Criteria	Grade
1	The absence of burning sensation is considered as nil	0
2	The burning sensation which was tolerable, negligible considered as mild.	1
3	Constant, tolerable burning sensation and subject can wait even for some days in seeking medical help was considered as moderate.	2
4	The burning sensation which was intolerable, constant and makes to seek medical help as early possible was considered as severe.	3

**Objective parameters**

- **1. Oedema**

Sr.	Criteria	Grade
1	Absence of oedema	0
2	Presence of oedema	1

**OBSERVATION AND RESULT**

Sign and symptoms	Before treatment	1st day	3 <sup>rd</sup> day	5th day	7th day	%
<b>Pain</b>	3	3	2	1	0	100
<b>Burning sensation</b>	3	3	1	0	0	100
<b>Oedema</b>	1	1	1	0	0	100



*Vrana Sopha*



*Jalauka Avacharana*



Application of *Haridra Churna* and *Gairik Churna* after *Jalauka Avacharana*



*Vamana Karma* of *Jalauka*

Fig No. I: *Jalaukavacharana In Vrana Sopha.*



1<sup>st</sup> Day



3<sup>rd</sup> Day



5<sup>th</sup> Day



7<sup>th</sup> Day

## DISCUSSION

This single case which reported to *Shalya Tantra* OPD at Parul Ayurveda Hospital, Limda, Vadodara was a clear case of *Vrana Sopha* (cellulitis) especially *Pitta Prakopa* (provocation of *Pitta Dosha*) and *Rakta Dushti* (vitiation of *Rakta Dhatu*) and *Vaata Avarodha* was seen, hence the management which is supposed to be planned should

do *Pitta Shaman* and *Rakta Prasadana* (purification of *Rakta*) along with *Vaatanulomana*. With this motto *Vistravana* with the help of *Jalauka Avacharana* (leech application) was selected as the treatment protocol, Leech as an effective method of bloodletting even in infected wounds and in abscess management.

Leech therapy is considered as most unique and effective method of bloodletting. It can be tried in all mankind including females, children, old and patients having poor threshold to pain. It drains impure blood, useful in *Pitta Dushitha Rakta* diseases (disease manifested due to vitiated of *pitta and rakta dosha*), various skin disorders and all types of inflammatory conditions. *Acharya Sushruta* has advocated that bloodletting by Leech can be practiced in all inflammatory, suppurative and painful conditions to relieve pain & inhibit suppuration. Here patient came with the complaint of severe pain and burning sensation and as been known, pain doesn't occur without vitiation of *Vata, Dhatu Kshaya* (depletion of *Dhatu*) or *Strotorodha* or *Marga Avarodha* (obstruction) which was seen due to stangulation of *Pitta, Rakta. Jalaukavachrana* will remove vitiated *Rakta* and or other *Dosha* from the site and leads to *Strotosodhana* through *Anulomana of Vata* (downward movement of *vata*). Hence early reduction in the symptoms such as pain and burning sensation was found which later on lead to the early reduction of the oedema.

Leech application not only removes blood from the site but also inject biologically active substance which helps to manage various ailments. It injects anti-inflammatory, analgesic and bacteriostatic substance. Like Hirudin, Hyaluronidase, Histamine, acetylcholinelike Vasodilators inhibitors of Kallikerin, superoxide products, Eglins and Bdelins have anti-inflammatory properties. and many Anesthetic and Analgesic compounds with its saliva which can be help full in subsidizing inflammation and pain.<sup>[7]</sup>

## CONCLUSION

*Jalaukavacharana* provides significant relief in the symptoms of *Vrana Sopha* like *Shopha* (swelling on left leg), *Daaha* (burning sensation), *Suchivada Vedana* (pricking pain). Also Leech saliva is reported to have many therapeutic contents like hirudin, bdelins, Hyaluronidase, etc; among them, Eglins and Bdelins have anti-inflammatory properties. More over review of components of leech saliva reveals that the inhibitors increase the inflow of blood at the bite site, histamine like substance, acetylcholine act as vasodilators and anaesthetic substance anaesthetises the site, which suggest that leech application reduce the inflammation and pain to a significant level and improves the quality of life. *Jalaukavacharana* is safest and scientific method among *Raktamokshana*. The goal of leech application was to avoid the need for surgical intervention. This leech therapy proves to be effective, time saving, affordable and acceptable treatment.

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