

## AYURVEDIC MANAGEMENT OF CELLULITIS BY JALAUKAVACHARANA: A CASE STUDY

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### ABSTRACT

Cellulitis is an acute inflammatory condition of the skin that is characterized by localized pain, erythema, swelling and heat.[1] It is a common bacterial skin infection affecting the dermal and subcutaneous tissues, and poses significant challenges to modern medical treatments due to its recurrent nature and potential complications. In this case study, we explore the efficacy of Ayurvedic interventions in the management of cellulitis, presenting a comprehensive analysis of a single patient's experience. "Vranashoph" is the term from Ayurveda that refers to the inflammation or swelling of wounds or injuries. In Ayurvedic terminology, "Vrana" means wound or injury, and "Shotha" means swelling or inflammation. Here a case of a 32-year-old patient has been presented having cellulitis changes over left lower extremity. The patient had history of Accident 4 years back and after that inflammation and pain and difficulty in movement have been recurrent features. *Jalaukavacharan* was the choice of treatment. The procedure was done over 8 weeks which reduced the signs and improved the discoloration of the affected part. The case will be discussed here in detail.

**Keywords:** *Vrana shoph*, *Jalaukavacharana*, Cellulitis, Leech Therapy.

### INTRODUCTION

Acharya Sushruta has explained the clinical aspect of *Vranashoph* more in detail than any other Acharya

in Ayurveda. There are two causes clearly mentioned *Nija* (Internal) and *Agantuja* (External).<sup>[2]</sup> *Agantuja*

causes can be correlated with Trauma, injury, and unhealed wounds like those presented in this case. The signs are similar to Cellulitis, Abscesses, Fasciitis and other inflammatory changes. *Dushya* involved are *Twak* and *Mamsa* which exhibit the clear signs in *Pachymanavastha*. *Doshas* involved are *Pitta Pradhan Tridosha*. Treatments like *Apatarpana*, *Abhyanga*, *Aalepa*, *Vimlapana*, *Parisheka* and *Upanaha* are indicated in *Amavastha* for *Doshaprashamana* and *Upanaha* and *Pachana* are employed in *Panchymanavastha*<sup>[3]</sup>. The decision for interventions like *Darana* and *Patana* in *Pakwavastha* is made based on patients *Satvabala*, *Vaya*, *Sthana* and *Pakwavastha* of *Vranashopha*.<sup>[4]</sup> When *Pakwa* and *Apakwavastha* of *Vranashopha* are wrongly interpreted and mismanaged it leads to complications.

### The Rationale of the Study

According to *Acharya Sushruta*, *Jalaukavacharana* can be practiced in all inflammatory, suppurative and painful conditions where *Pitta Dosha* is increased as it relieves pain & inhibits suppuration.<sup>[5]</sup> Here main complaints of the patient were pain, Discolouration of the affected part and oedema as we know without *Vata* pain doesn't occur and without *Pitta* and *Rakta* burning sensation doesn't occur. Also, even with the needle aspiration of the leading edge or a punch biopsy of the cellullitic tissues itself, cultures are positive in only 20% of cases. This observation suggests that relatively low numbers of bacteria may cause cellulitis and that expanding area of erythema within the skin may be a direct effect of extra cellular toxins or of the soluble mediators of inflammation elicited by the host.<sup>[1]</sup> These extracellular toxins are removed by *Jalaukavacharana*. Vitiated *Rakta* and other *Dosha* from the site containing these toxins are removed by *Jalaukavacharana* and leads to *Strotoshodhana* i.e., detoxification of body channels and *Vata Anulomana*.

### AIMS AND OBJECTIVES:

To evaluate the efficacy of *Jalaukavacharan* in *Vranashopha* with special reference to cellulitis

### MATERIALS AND METHODS:

#### CASE HISTORY: -

A 32 yrs. old male patient presented with the Chief complaints of

1. Pain (*Vedana*),
  2. Swelling on left leg, (*Pada Shopha*), at left foot region (for 10 days and chronicity of 4 years)
  3. Discolouration at the site of swelling
- Patient had taken Allopathic Medication –NSAIDS, AND Low dose of Steroids earlier but, there was no relief in the symptoms.

#### Vital parameters: -

Pulse: -78/min, Weight – 75 kgs

Respiratory rate: - 20/min,

Bp: -130/90 mm of Hg

Temperature: -98.2 F.

#### Local inspection (Left lower limb): -

1. Pitting Edema on Left Lower Leg extending from upper calf region till Toes.
2. Discolouration all over the Edematous region (Blackishness).
3. Tenderness - Present.
4. Few varicosities were noted too on the Left Leg

#### PAST HISTORY:

Patient is K/C/O –RTA 4 Years back.

#### INVESTIGATIONS:

##### (A)Blood Investigations:

Complete Blood count –

- Hb- 14.4gm/dL
- ESR-88 mm at the end of one hour

All other parameters were found to be under normal limits.

##### (B)Colour Doppler left lower limb:

- Diffuse subcutaneous edema at the calf.
- Few Sub centimetric lymphnodes noted in Left Inguinal Region.

#### METHODOLOGY TREATMENT GIVEN:

*Jalaukavacharana* (Leech Therapy) was done on Left leg followed by dressing. The oral medication was administered for 60 days as follow: -

1. Tab *Gokshuradi Guggul* (250mg) 3-3-3 Before Food with warm water
2. Tab *Kamdudha Rasa* (125mg ) 2-0-2 Before Food with Warm water
3. Syrup *Punarnavasava* 20ml-0-20ml After food with equal amount of warm water
4. *Gandharva Haritaki Churna* 0-0-1 gm at Night after food with warm water

5. *Dashang Lepa* for local Application Twice a Day Patient was advised to special diet regimen as per *Ayurveda Pathya* and *Apathya Sankalpana*.

Assessment on the subjective and objective changes with the treatment was made on every sitting 0th, 7th, 14th, 21st day. Follow up observation of 7 days for noticing any recurrence of sign and symptoms.

**Procedure:**<sup>[6]</sup>

**1. Purva Karma (Pre-Procedure Preparation):**

1. *Sambhar Sangrah* (Equipment Arrangement):- SURGICAL GLOVES, KIDNEY TRAY, BOWLS, HARIDRA CHURNA, GAUZE PIECE, BANDAGE, DISPOSABLE NEEDLE were kept ready.

2. BP/P / RR of the patient was checked and found to be within normal limits.

3. It was made sure that the affected part is shaved, cleaned and dried before applying leeches.

4. Leeches were kept in water mixed with *Haridra Churna* two to three minutes prior to application *Jalauka* (leech) were then again placed in clean water container and applied over the affected area.<sup>[7]</sup>

**2. Pradhan Karma (Procedure of leech Application):**

1. After the selection of the points over the affected area leeches are brought near the skin.

2. Leeches start sucking the blood after fixing their mouth at selected sites over the skin. If they are properly fixed there are two signs, which confirm this-1. Their neck gets elevated, 2. There is peristaltic movement seen over the rest of the body of leeches.

3. Once fixed wet gauze was kept over the leeches and its moisture was maintained by pouring water over the gauze in between.<sup>[8]</sup>

**3. Paschat Karma (post procedure):**

1. Leeches when leave the site over the skin, immediately gauze mixed with turmeric is applied over the wound and pressure is applied as to stop the excessive bleeding.

2. Dressing of the wound is done immediately after removal of leeches. Leeches were kept in a kidney tray and *Haridra Churna* was sprinkled on to its mouth after which *Jalauka* (leech) vomited the sucked blood. All the parameters BP/P/RR were checked again and found to be within normal limits.

3. Leeches were squeezed smoothly using left hand Index finger and thumb and right thumb to remove all the remnant part of ingested blood.<sup>[9]</sup>

4. *Jalaukas* (leeches) were shifted in clean water containers. *Jalaukas* were used at the intervals of 7 days.<sup>[10]</sup>

**RESULT:**

**Table -1 presenting the results after Jalaukavacharana.**

Signs & Symptoms	0 <sup>th</sup> Day	7 <sup>th</sup> Day	14 <sup>th</sup> Day	21 <sup>st</sup> Day	28 <sup>th</sup> day
Pain	++++	++	++	++	++
Tenderness	+++	++	++	+	+
Discolouration	++++	+++	++	++	++
Oedema (Pitting)	Lt Leg	Lt Leg	Lt leg	Lt Leg	Lt leg
Mid-Calf	15.8 cms	15.7cms	15.7 cms	15.6 cms	15.5cms
Ankle joint	10.7 cms	10. 4cms	10.1cms	10. 0cms	9.8 cms
Arch of Foot	11.7 cms	11.6cms	11.5cms	11.3cms	11.1cms

Note:--nill Sign /Symptom, ++-Mild Sign /Symptom, +++-Moderate Sign /Symptom, ++++-Severe Sign /Symptom

Thus as shown in the above table Pain and Tenderness reduced after *Jalaukavacharan*. There was Improvement in Discolouration. Oedema overall reduced and movement of the limb improved.

**DISCUSSION**

The case reported to OPD was of *Vranashopha* (cellulitis) with vitiation of *Pitta Dosha* and *Rakta Dushti*

and *Vatavarodha*, so treatment planned for do *Pitta Shamana*, *Rakta Shuddi* and *Vatanulomana*. Keeping this in mind *Avasechana* i.e., *Raktamokshana* (blood-

letting) with the help of *Jalaukavacharana* (leech application) was selected as the treatment protocol. Reduction in symptoms like pain and Tenderness was found and later reduction of oedema noticed. Slight high temperature then body temperature leads to vasodilation and profuse more blood to local tissue and pave the way for repair.) The jaws of the leech pierce the skin so that the potent biologically active substances can penetrate into the deeper tissues. Leech of saliva having many therapeutic contents like hirudin, bdelins, Hyaluronidase have anti-inflammatory properties.<sup>[11]</sup>The persistent bleeding largely potentiates tissue decongestion and also relieve capillary network which decrease venous congestion. Positive changes of local hemodynamic and improvement of hemorheology will increase oxygen supply, improve the tissue metabolism, and eliminates the tissue ischemia. Few Varicosities seen were greatly reduced too.

## CONCLUSION

Cellulitis is a recurrent condition If not treated properly and leads to severe complications including necrosis. Thus, it requires aggressive management. The present study throws light on the importance of *Jalaukavacharana* in the management of *Vranashopha* (cellulitis) which is done to avoid surgical measures. Antibiotics have a significant effect on evolved infection still dominates and play a crucial role in morbidity and mortality rate, but here *Jalaukavacharana* provided significant relief in the symptoms of *Vranashopha* (cellulitis) like *Vedana* (pain)and *Shopha* (swelling on left foot) and Tenderness. Thus, leech therapy proves to be an Effective treatment.

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