

A study of Jalaukavacharana (medicinal leech therapy) in context of Vranashopha (Cellulitis) Described in sushrutsamhita

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ABSTRACT

Cellulitis is a spreading inflammation of the skin and subcutaneous tissue that is usually caused by a bacterial infection. *Cellulitis is characterized by inflammatory symptoms such as pain, redness, tenderness, and swelling. Vranasopha is Raktapradoshajavyadhicharacterized by spreading, nodular, equal or unequal elevation, seated in Twacha or MamsaDhatu with vitiated Doshas present in one part of body which resembles to features of Cellulitis in modern science.*

Cellulitis is associated with Vranashopha in Cellulitis is associated with Vranashopha in Ayurveda ekadesaupakrama is recommended as a course of treatment.

The VranaShopha is described as earlier phase of Vrana. Acharya Sushrutawas well aware about

importance of *Vranashopha*, *Vrana*(wound) and their management in surgical practice, along with its unfavourable and untreated complications. The surgical aspects of *Shopha* and *Vranais* explained in *Sushruta Samhita*. *vrnashopha* explained by acharyasushurta resemble in inflammatory swelling like cellulitis.

cellulitis appear as a swollen, red area of skin. It is spreading inflammation of swelling like cellulitis explained as an infection of deeper layer of skin and underlying tissue.

Aacharya Sushruta has given immense importance to the concept of *Vrana*(wound) and for that he has explained Sixty procedures i.e. ShastiUpakrama for its management. Out of these Apatarpana(fasting or low diet) to Virechana (purgation) were mentioned for *VranaShopha* and rest for *Vrana*(wound).

Raktamokshana (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.

Conclusion: it was concluded that Jalaukavacharana shown significant improvement in reducing pain, swelling, redness, local temperature and healing of wound at affected site without any side effect. Hence, it can be concluded that this Jalaukavacharana is useful in the treatment of *Vranashopha* (Cellulitis).

KEYWORDS:- *VranaShopha*, *JalaukaAvacharana*, cellulitis, *leech therapy*

INTRODUCTION

ShalyaTantra is one of the eight important branches of Ayurveda and describes surgical and semi-surgical techniques for the treatment of various diseases. Vranashopha is the predecessor of NijaVrana. VranaShopha is considered to be the predecessor of *Vrana*(scar). If left untreated, *avrana* (scar) manifestation occurs.

Acharya sushruta has mentioned a detailed description of inflammatory swelling under the heading of *vrnashopha*. According to sign & symptoms of *vrnashopha* it can be correlated with cellulitis. SthanikaShopha is termed as Vranashopha which occupies a significant place in surgical practices. Vranashopha is characterized by EkdeshiyaShotha, Twakvivarnata, Osha, Chosha, Paridaha like Vedana.

VranaShopha has **3 progressive stages**. These are

Amawastha (just early stage of inflammatory process)

तत्र, मन्द्रोष्मतात्वक्सवर्णताशीतशोफता स्थैर्णमन्द्वेदनताऽल्पशोफताचामलक्षममणद्दष्टः। सम.सू.17/3

In this condition *KaphaDosh* may be predominant due to which swelling is produced, hence it has symptoms as slight swelling with mild increase of temperature, colour is same as that of the skin, swelling being cold to touch, immovable and mild pain is noted

Pachyamanawastha (true inflammatory stage)

सूचकद्वयवचनस्तमिद्यते, दशतइवचपीचलकाद्वचतः, ताद्वचश्वसत्सवर्तइव, द्दचघतइवशस्तेि, द्दचतणइवशद्वचद्वचतः, ताड्यतइवदण्डेन, पौड्यतइवपाचनान, घट्यतइवचाङ्गमलर्ा, दह्यतेप्त्तइवचाद्वचक्षाद्दाम्, ओषचोषद्वपीदाहाद्वश्वचन्दत, वृचश्वकचवद्दइवचस्थानासनशनेषमनशाचन्दतममपैचल. आध्मातबचस्तरिवाततश्वशोफोद्दावचतत्वग्वैवप्प्रशोफाद्वचवृ चद्दज्विदाहचपपासाद्दाद्दाम्।सम.सू. 17/8

Pain as if pricking or bitten by ants or cutting pain, burning pain, locally and all over the body, swelling resembles the bag of air, patient doesn't find comfort on sitting or lying down, change in skin colour, increase in swelling, fever, thirst, loss of appetite

Pakwawastha (suppurative stage) respectively

वेदनोपशाचन्दतः पाण्डम ताड्यशोफतावलीप्रादमद्दाम्।वस्त्वकपरिपमटनटचनम्रदर्शनमामलर्ा।वपीचडतेप्रत्राम त्रमनट, बस्ताचववोदकस दितणपूर्स्णप्रपीडन्नािकमन्दतमन्दतेचावपीचडते, मम्हमर्हस्तोदतः कण्डूरुत्रतताव्याधेरुपिवशाचन्ददद्वर्ाद्वचकाक्ष्ाचपकचलाम्।सम.सू. 17/9

Pain subsides, appearance of wrinkles, cracking of skin, itching, subsiding of complications

mainly six types. The six types are as Vataja, Pittaja, Kaphaja, Sannipatika, Raktaja and Agantuja Vranashopha Sign and symptoms of *Vranashopha* are more or less similar to cellulitis. Cellulitis is a sort of spreading inflammation of the subcutaneous tissue that is usually caused by a bacterial infection. The skin findings in cellulitis follow the classic signs of inflammation: dolor (pain), calor (heat), rubor (erythema) and tumor (swelling). The basic principle of *Vranashopha* management is to prevent onset of *Pakwawastha*. considering the concept of *Shatkriyakala* (six main stages of disease manifestation), it was explained for the first time in this context by *Aachaarya Sushruta*. Sixty procedures for management of *VranaShopha* and *Vrana* (wound) were told by *Sushruta*. Out of these *Apatarpana* (fasting or low diet) to *Virechana* (purgation) were mentioned for *VranaShopha* and rest for *Vrana*. *Avasechana* is one amongst them which is been considered as *Raktamokshana* (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. Jalaukavacharana is an ancient method mentioned in *Ayurveda* used for purification of the body by removing deeply seated toxins in the blood and pacifying vitiated *Doshas*.

Management of *vranshopha*

Jaloukavcharana therapy:- Since ancient time, leeches

were used to treat many diseases through bloodletting as a method. Impure blood out to remove to treat the disease. Mostly they are used in skin disease, hypertension & varicosity.

METHODS

Fresh leeches, storage pot, purification trays, turmeric powder, rice, *Saindhava* salt, sterile needle, dressing materials.

1. *Jalauka*

(Leech and Leech lab)

2. *Haridra Churna*

3. Sterilized Gauze pieces

, dressing pad, cotton, gloves

4. Kidney tray, distilled water, needle

5. Container of sterile water, for placing leeches after they have been fed.

These are the basic requirements for leech therapy.

Methodology of *Jalaukavacharana* (Leech Therapy) As Described by *Sushrutacharya***A) Purva karma**

2-3 *Jalaukas* (according to size of *Vranashopha*) of moderate size was first prepared for Raktamokshana by keeping it in *HaridraJala*. Affected site cleaned by distilled water prior to leech therapy and then by dry gauze.

B) Pradhan Karma (Procedure of leech application):

Leech was applied at the region of *VranaShopha*. 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 was 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.

C) Paschat Karma (post procedure):

Immediately after removal of leech the local part was cleaned. *Haridrachurna* (turmeric powder) and was applied and was bandaged tightly. When *Jalauka* (leech) give up automatically, then it was kept in a kidney tray and *Haridrachurna* 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.

INDICATION

classical indications mentioned in *Ayurveda* is *Gulma* (abdominal lump), *Arsha* (piles), *Vidradhi* (abscess), *Kustha* (skin diseases), *Vatarakta* (gouty arthritis), *Netraroga* (eye disorders), *Visarpa* (erysipelas), *Koshtuka-Shirsha* (Infective Arthritis), *SandhigataRoga* (Osteo-Arthritis), *Kantharoga* (goiter), *Granthi* (Nodular Swelling), *Arbuda* (Cancer), *Shlipada* (Filaria), *Vidarika* (Cracks), *Vishadamsha* (Insect Bite)

Jaloukavacharana is also indicated in

Raktapradoshajavikara as *jalouka* is indicated in treating the vitiated *rakta*.

Venous disease, varicose veins (*siragranthi*): Leech therapy is seen effective in the management of complicated varicose veins, It treats post phlebitis syndrome in which venous valves are obliterated by deep vein thrombosis.

Peripheral vascular diseases: Leech therapy is effective in management of Burger's disease as it relieves the inflammation and thrombosis. It is also effective in other peripheral vascular diseases.

Haemorrhoids: Found to be very effective in the management of thrombosed haemorrhoids.

DISCUSSION

Leech therapy is considered as most unique and effective method of bloodletting. It drains impure blood, useful in *PittaDushithaRakta* diseases (disease manifested due to vitiation of *pitta* and *raktadosha*), various skin disorders and all types of inflammatory conditions. It can be tried in all mankind including females, children, old and patients having poor threshold to pain. Acharya Sushruta has explained *Shashti Upakramas* (sixty types of treatment procedures) in *Dwivraniya Adhyaya of Chikitsasthana* for comprehensive management of *Vrana* out of them first eleven (*Apatarpana to Virechana*) is described for treatment of *Vranashopha* Acharya Sushruta also mentioned *Shodhana by Raktamokshana* (bloodletting) in acute inflammatory conditions, indurate, cyanosed, painful swellings and many inflammatory conditions like *Vidhradhi*, *Granthi*, *Arbuda* etc. It contains various bioactive constituent which possesses anti-inflammatory, analgesic, thrombolytic, antioxidant, vasodilator, anti-coagulant and blood circulation enhancing properties and advised *Jalaukavacharana* (Leech therapy) in *Vranashopha* (Cellulitis).

Vrana Sopha (Cellulitis) with *Pitta Rakta Dushti* and *Vata Avarodha*, hence *Pitta Shaman*, *Rakta Shuddhi* and *Vatanulomana* were targeted for treatment. The therapeutic protocol included *Jalaukavacharana* (leech application). Leech therapy is thought to be the most distinctive and effective way of bloodletting in infected wounds and cellulitis treatment.

CONCLUSION

Jalaukavacharana is adopted mainly in Pitta Doshapredominant diseases.

Jalaukavacharana is one of the best Anushastra.

Chikitsa used mainly in RaktaPradoshajaVyadhis.Jalaukavacharana gave tremendous relief from VranaSopha(Cellulitis) symptoms such as Vedana(pain),Daha (burning sensation), and Shopha (swelling on leftleg).

Leech application is the best one because it's delicate easily applicable, easily available, quickreliever and purificatory nature.

During the whole study, we found that there was no adverse reaction of Jalaukavacharana

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