

**AYURVEDIC MANAGEMENT OF CELLULITIS DUE TO SNAKE BITE  
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**ABSTRACT**

Cellulitis is a commonly occurring infection of the skin and subcutaneous tissues <sup>[1]</sup>. It is commonly caused by streptococci, staphylococci, or clostridium organisms. It also occurs due to the bite of various insects and snakes. As per Ayurveda *saptopakrama* (seven methods of treatment) is mentioned as a line of treatment for *Vranshophya* and according to modern it is managed by antibiotics, anti-inflammatory, antipyretic, and analgesic drugs as per symptoms. But these drugs need time to recover and have various adverse effects. A case of 47 yrs old male patient with a history of snakebite who previously took treatment for snakebite now came for treatment of post-developed cellulitis. He presented with features of *Vranshophya* (Cellulitis) and was treated by *Jalaukavacharana* and showed marked improvement in symptoms such as pain, oedema, tenderness, discoloration, and local temperature.

**Keywords:** *Vranshophya*, *Jalaukavacharana*, cellulitis, snakebite.

## INTRODUCTION

Cellulitis is a common condition seen in both outpatient departments as well as in emergencies [1]. Cellulitis patients comprise 1-14% of emergency room visits and 4 to 7% of hospital admissions. It is poorly localized inflammation of the skin and subcutaneous tissues, but infection may lead to life-threatening complications when it is associated with blood, bone, heart, or brain infection. Cellulitis is commonly caused by Streptococci, Staphylococci, or clostridia organisms [2]. Therefore, management of cellulitis should be aimed to give quick relief and avoid further complications like sepsis, osteomyelitis, lymphangitis, endocarditis, and meningitis. In modern medicines, cellulitis is usually treated with antibiotics, anti-inflammatory antipyretic and analgesic drugs, and other supportive management as per symptoms. But it takes almost 3 to 7 days or more to get the actual results besides all these drug management only glycerine + magnesium sulphates dressing is recommended by many physicians and surgeons [3]. This Dressing minimizes edema due to its hygroscopic action and helps to reduce inflammatory changes, and due to its warmth nature pain reduces. In Ayurveda cellulitis is co-related with *Vranshophā*. *Vranshophā* is prodromal symptom or earlier stage of *vrana*. As per Ayurveda *saptopakrama* is mentioned as a line of treatment for *Vranshophā* [4]. Ayurveda advocates five bio-purificatory methods namely *Vaman*, *Virechan*, *Basti*, *Nasya*, and *Raktamokshan* for treating various diseases in which *Raktamokshana* viz. bloodletting is one of the ancient and important para-surgical procedures described in Ayurveda in treatment of various skin diseases. In Ayurveda, it is mentioned that despite all treatments. *Raktamokshana* is first choice of management over *Snehan Chikitsa* and *Lepa*. *Raktamokshana* is not only a treatment but also a prevention for various diseases. Diseases that are caused due to impure blood i.e., *Raktapradoshaja Vikara* have *Raktamokshan* as the only choice of treatment. A study has been performed regarding the efficacy of *Jalaukavacharana* supremacy over other methods like *Pralepa* in reducing symptoms of *Vranshophā* like pain, redness, swelling, and tenderness. Diseases

which are of them *Jalaukavacharana* have gained greater attention globally because of their therapeutic value. In the management of cellulitis, *Jalaukavacharana* plays a very important role. *Jalaukavacharana* not only minimizes local inflammation, infection, oedema, redness, and temperature rapidly but also avoids further complications. So, for this study *Jalaukavacharana* method is used to analyze the therapeutic effect in the management of cellulitis.

**Aim and Objectives:** To estimate the efficacy of ayurvedic management i.e., *Jalaukavacharana* in *Vranshophā* w.s.r to cellulitis.

**Materials and Methods:** Type of Study - A single case study., Study Centre - Y.M.T Ayurvedic medical college and Hospital, Kharghar, Navi Mumbai.

### Case Report

A 47-year-old male patient came to Y.M.T Ayurvedic medical college and hospital with a history of snakebite and complaints of pain, swelling, difficulty in standing and walking, and discoloration of the right foot. Patients also have raised local temperature and tightness of the skin. He took treatment for snakebite at other hospitals. From the previous 9 days patient have symptoms but due to the gradual increase in severity of symptoms patient came for further management.

- The general condition of the patient was good and afebrile
- Pulse-86 / min
- Blood pressure-140 / 90 mmHg
- Respiratory rate- 20 / min
- Pallor -Absent
- Systemic examination -CVS- S1 S2 normal
- CNS -Well oriented, conscious
- RS -AEBE clear
- P/A -Soft, non-tender

**Local Examination:** Flang marks present on medial aspect of right foot, Discoloration +++ swelling +++ local temperature +++ toes movements not possible pain and tenderness ++

**Vikruta Strotas Parikshan:** *Rasavaha Stotas* - Shoth, *Aruchi*, *Raktavaha Strotas* - Local temperature raised, Discolouration of the skin, skin tightened.

**Past History:** H/o snakebite before 9 days, K/C/O DM since 10 yrs. on regular treatment No H/O HTN/IHD/PTB/BA/Jaundice/Typhoid

**Investigation**

1. Hb %- 12.1gm %
2. TLC- 6600 cu/mm
3. DLC – N 55%, L-40%, E- 2%, M-3%, B-0%
4. ESR-41 mm at the end of 1 hr
5. Blood Sugar Level: F= 132.5 mg/dL, pp= 141.9 mg/dL
6. HbA1C- 9%
7. BT- 2 min 55 sec
8. CT- 6 min 10 sec
9. Arterial Doppler of Rt lower limb- changes of cellulitis
10. Creat – 1.10 mg/dl

**Treatment:** Firstly, informed written consent was taken. The entire procedure was explained to the pa-

tient. A site of cellulitis was observed. The site of cellulitis was cleaned. Areas with maximum pain and redness were marked and 6 *Jalauka* were applied for *Jalaukavacharana*. The patient was examined for any weakness during the procedure. The patient was observed during and after the procedure for assessment of the symptoms. After *Jalauka* left the wound *Haridra Churna* was applied and loose bandaging was done.

**Results:** The patient was symptomatically improved. The subjective parameters show improvement in clinical symptoms. So, we can state that this treatment is effective in cellulitis and a study can be done on a large-scale population. There were no adverse events throughout the management. The mode of treatment was found to be cost-effective, safe, and easy to implement.

**Table 1:** Parameters before treatment and after treatment

Symptoms	Before treatment	After treatment
<i>Vedana</i>	Grade 3	Grade 1
<i>Shotha</i>	Grade 3	Grade 1
<i>Sprashashayata</i>	Grade 2	Grade 1
<i>Daha</i>	Grade 1	Grade 1
<i>Twak Vivarnata</i>	Grade 3	Grade 1
<i>Ushnata</i>	Grade 3	Grade 1
Temperature	99.1 F	98.6 F

**DISCUSSION**

The treatment applied for the management of this diseased condition is *Shodhan* and *Pittaghna Chikitsa*. The probable mode of action can be explained as follows. According to Ayurveda in the early stages of *Vranshophya* i.e., *Amavastha* and *Pacyamana Avastha* there is *Dushti* of *Rasa* and *Rakta Dhatu* along with *Pitta Dosha*. So *Raktamokshan* is important treatment in *Rasa* and *Rakta Pradoshja Vikara*. *Jalaukavacharana* is a type of *Raktamokshan*. With this treatment, we can directly minimize *Dushti* of *Rakta Dhatu* and *Pitta Dosha*. Because of this it helps to reduce local inflammation in *Vranshophya* and will help to minimize symptoms of *Vranshophya*. Clot dissolving effect of leeches- The action of destabilizing involves the breakup of fibrins

that have been formed. It also has a thrombolytic effect, which can also dissolve clots of blood that have formed. Anti-inflammatory effect of leeches - *Bdellins* is a compound in the leech’s saliva that acts as an anti-inflammatory agent by inhibiting *Trypsin* as well as *Plasmin*. It also inhibits the action of *Acrosin*. Another anti-inflammatory agent is the *Eglins*. Vasodilating effects of leeches - There are 3 compounds in the leech saliva that act as vasodilator agents, and they are the histamine-like substances the *acetylcholine* and the *carboxy peptidase A* inhibitors. All of these acts to widen the vessels thus causing the flow of blood to the site. Bacteriostatic and Anesthetic effect of leeches - The saliva of leeches contains anesthetic substances which relieve pain on the site and also bacteria inhibiting substances that inhibit the

growth of bacteria<sup>[5]</sup>. The case studies and research trials showed very good results in the reduction of all the symptoms of *Vrana Shopha* like Pain, Redness, Swelling, and Tenderness in *Vranshopha* (Cellulitis) by *Jalaukavacharana*<sup>[6]</sup>. Due to the above-mentioned properties, *Jalaukavacharana* is useful in reducing symptoms of cellulitis. This single case study highlights the use of *Jalaukavacharana* therapy in cellulitis. To know more about its benefits, this should be performed on several patients.

## CONCLUSION

Cellulitis is a condition of inflammation of localized skin and subcutaneous tissues, but if it goes deeper, it can be life threatening. Other than modern line of treatment ayurvedic treatment of *Jalaukavacharan* can be very effective in less period of time due Anti-inflammatory, vasodilating effect, bacteriostatic and anesthetic effect of *Jalaukas*. This is a single case study. To understand further effects and benefits of this treatment large number of patients should be evaluated.

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