

## THE AYURVEDIC MANAGEMENT BY KSHARA SUTRA AND JALAUKAWACHARANA IN GANGRENOUS TOE: A CASE REPORT

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### ABSTRACT

Gangrene is a condition characterized by necrosis of a body part due to lack of circulation, injury or infection. The tissue becomes depleted of oxygen and eventually dies. Gangrene and its associated amputations are clinically challenging but *Ayurveda* offers options. In this case, the *Ayurvedic* treatment prevented amputation of a body part and enhanced the body ability to achieve wound healing. By focusing on the local phenomenon of gangrene pathology and establishes the circulation. In *Ayurveda* there is no detail explanation of gangrene. According to *Acharya Charaka (Kotha)* means putrefied and dead part, it is considered as complications of *Vrana*. *Acharya Sushruta* advised many Para-surgical techniques in treatment of *Vrana* viz. *Kshara Sutra* in *Nadi Vrana*, *Vrana Prakshalana*, *Rakta Mokshana* etc. hence forth the *Ayurvedic* treatment modalities are utilized according to presentation of disease.

**Keywords:** Gangrene, *Dushta Nadi Vrana*, *Kshara Sutra*, *Rakta Mokshana*, *Prakshalana*

### INTRODUCTION

Gangrene is death of a portion of the body with putrefaction. It must be remembered that gangrene is not just necrosis or infraction but in every case of gangrene should be infection with saprophytic putrefying bacteria which add rottenness to death of the part.<sup>1</sup>

The cause may be ischemic deprived arterial blood supply and infection. It presents pain, colour change;

part is cold, foul smelling discharge and demarcation.

We find scattered reference or least references in ayurvedic texts regarding gangrene but *Sushruta Samhita* explains different types of wounds and their management in an elaborated way. Surgical incisions, their alignment, suturing and dressing are well described.<sup>2</sup>

There is a reference regarding muscular wound which is fatal type and condition resembles with gas gangrene.<sup>3</sup>

### Case Report

A 38 year old male patient came to *Shalya Tantra* OPD at S.J.G *Ayurvedic* medical college and Hospital, Koppal, Karnataka. With complaints of severe pain, ulcer, mild discharge, loss of function of the left head toe. And patient has history since 8 months. He underwent various diagnostic and therapeutic measures. However Atrial Doppler test revealed that the plantar arch was involved in ischemic changes and patient was treated with anti-coagulants and antibiotics. His toe was painted daily with betadine and his foot was off loaded and still the ulcer was not healing properly and doctors advised for amputation. But the patient refused for amputation because of his occupation as he was lorry driver. Patient adopted various other systems of medicine for treatment but no any recovery seen. Finally patient approached for *Ayurvedic* treatment at our hospital. Hence we thoroughly examined before planning the treatment other etiologies like T.B, HIV, HbsAg, DM were ruled out. The complete details of the diagnostic reports and previous treatment were collected and studied. During local examination we found the sinus present below the large toe which was having another opening at dorsal side where sinus was converted into fistula. There was complete loss of function of toe, stiffness, discoloration and demarcation was present and on needle pricking there was no bleeding or capillary oozing from the tip of the toe.

By considering the ulcer as *Dushta Nadi Vrana* we planned for *Kshara Sutra* ligation and *Rakta Mokshana* by *Jalaukacharana* (leech) and the patient was asked to take daily *Triphala Kashaya Vrana Prakshalana* (wound washing) twice a day. And orally *Gandhaka Rasayana* 2 BD, *Mahamanjishtadi Kadha* 10 ml with equal quantity of water twice after food for one month.

According to treatment plan probe was inserted along with *Apamarga Kshara Sutra* and it was

changed weekly for 2 sitting and for every 3 days of interval *Rakta Mokshana* was done by *Jalouka* (leech). 10-15 ml of bloodletting was done for about 5 sittings and the treatment was continued. After 4 weeks the sinus tract was cut through and healed simultaneously along with colour change. By needle pricking over the tip of the toe capillary oozing was found.

This incredible changes in wound healing made patient happy and restoration of function.

### DISCUSSION

The whole treatment procedure was planned according to signs and symptoms mainly focusing on local pathological changes. By considering *Upadrava* of *Dushta Nadi Vrana* we treated it by *Kshara Sutra*. It is medicated caustic herbal thread. Alkaline drugs like *Apamarga* (ash of *Achtranthes aspera*), *Snuhi* (*Euphorbia nerifolia*) latex and *Haridra* (*Curcuma longa*) powder which help in debridement of necrosed tissue slough and act locally as antibacterial, anti-inflammatory and enhances the growth of healthy granulation tissue. initially the tract was about 3cm length after one week of change in *kshara sutra* the unit cutting rate was so good that the length reduced to less than 2cm and for second week the tract was cut through completely

When we consider the *Srotho Dushti Lakshana*, there is *Sangha* i.e. obstruction. Here we can consider *Sangha* to *Raktavaha Srotas* i.e. obstruction to the blood supply. Hence *Raktamokshana* was planned by *Jalauka* (Hirudo therapy). Leech saliva contains several bio-active substances including prostaglandin, vasodilators, anesthetics and anti-coagulants. Hirudin a potent anti-coagulant found in leech saliva inhibits conversion of fibrinogen to fibrin.<sup>4</sup>Wound care was done by *Triphala Kashaya* which is considered as *Shodhana* (Cleaning) and *Ropana* (Healing) which maintains wound hygiene and enhances healing. Because of circulatory restore and wound healing changed the of foot colour from dry blackish blue to normal healthy skin colour.



Before



Probing a Fistula



Kshara sutra Ligation



Leech Application



Capillary oozing from tip



After 4th week

## CONCLUSION

The Approach of *Ayurveda* therapy was satisfactory in the management of gangrene. It not only cures the gangrene but also minimizes rate of complication, reoccurrence and prevents amputation. And enables the patients to work and participate in normal livelihood social activities and it is a good therapy in terms of cost of treatment.

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