

## POST SNAKE BITE ULCER MANAGEMET - A CASE STUDY

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### ABSTRACT

Venomous snake bites can produce an array of symptoms including localised pain swelling convulsions and even paralysis. According to WHO protocol, first aid steps include reassuring the patient and immobilising the affected area. However, it is essential to get a medical intervention for emergency treatment. In many cases, patient who survives the bite end up with non-healing ulcers. In the event of recovery, surviving patients may develop necrosis of skin, muscles, tendons and even bones. In order to avoid further complications arising from a snake bite, it becomes obligatory to take proper care of the suppurative lesions. This article highlights the management of post snake bite ulcer with *Ayurvedic* medicines.

**Keywords:** post snake bite ulcer, *Ayurvedic* medicines, non-healing ulcers

### INTRODUCTION

India is habitats for around 216 species of snakes out of which 60 are considered venomous which contribute 50,000 deaths per year<sup>1</sup>. To a large extent, the manifestation of snake bite depends upon the species of snake and potency of venom. Venomous snake bites can produce an array of symptoms including localised pain, swelling, convulsions and even paralysis.

Snake venoms are mainly characterized as neurotoxic and hemotoxic. Neurotoxic venom acts at the molecular level disrupting the neuromuscular junctions limiting muscular activity while hemotoxic venom causes tissue destruction in body system besides their effect on circulatory system.

Improper tourniquet tying and delay in accessing medical emergencies are practically found to be the cause for post snake bite ulcers. If these ulcers not

treated properly or if left untreated, there can be infection of wound which causes increased pain and swelling along with pus secretion. It can also lead to septicaemia and associated problems. Therefore, in such cases, effective management should be done in order prevent the occurrences of malignancies.

Ayurveda has got very effective medicines in the management of snake bite ulcers. Acharyas has explained various formulations which are *vishahara* (antipoisonous) and capable of managing *vishajanya vrana* (ulcers produced due to poisonous bites). The unique combination of Ayurvedic medicines and their systematic administration helps in complete cure of snake bite ulcers. This paper highlights the role of Ayurvedic medicines in the management of post snake bite ulcers.

**COMPLICATIONS OF VENOMOUS SNAKE BITES:**

The complications of venomous snake bites can range from mild to severe. Complications include pain, swelling of the bite, compartment syndrome, infection, gangrene, sepsis, internal bleeding, cardiac damage, respiratory compromise and even death.

**MANAGEMENT OF SNAKE ENVENOMATION:<sup>2</sup>**

In India, the high morbidity and mortality due to snake bites could be attributed to traditional, harmful first aid measures like application of tight tourniquets, cutting, suction etc. which may cause delay in carrying the patient to nearest health centre. In view of this, Ministry of Health and Family Welfare, Government of India has drafted National snake bite management protocol to provide guidelines for proper management of snake bites.

**ANTISNAKE VENOM:**

The most effective antidote against snake venom is the Antisnake venom. It is usually pepsin refined F(ab) fragments of IgG purified from the serum or plasma of a horse that has been immunised with the venom of one or more species of snakes. In India, horses are hyper immunised against the venom of four common poisonous snakes the “Big Four” (Cobra, Krait, Russell’s viper, Saw-scaled viper), to produce polyvalent anti snake venom.

**CASE REPORT:**

A male patient of age 49 years came to OPD with complaints of ulcer with pain, swelling and secretions over dorsum of right big toe since one week. The history of the patient revealed an incidence of snake bite three weeks before. The bite was diagnosed to be that of Russell’s viper as the snake was brought to the hospital and identified. The patient underwent Allopathic medication from a hospital nearby. ASV administration was done and he sur-

vived the bite. But the ulcer at the site of bite was not healing and was increasing. For this, he came to *Pappinisseri Visha Chikitsa Kendra* OPD, Kannur, Kerala.

Considering the history and clinical manifestations following treatments were done-

1-7 days - *Patolakaturohinyadi kashaya*<sup>3</sup>- 15ml *kashaya* +45ml boiled and cooled water, twice daily, given orally before food (7days)

*Vilwadi gutika*<sup>4</sup>- 1 *gutika* with *kashaya*, given orally twice daily (7 days)

*Avipathi choorna*<sup>5</sup>- 10gm with hot water, given orally at 10AM (1 day)

*Aragwadhadi gana kashaya dhara*<sup>6</sup>- luke warm *kashaya* used for *dhara*(pouring of liquid) locally over ulcer, externally for 15 minutes, twice daily.

7-14 days - *Guggulu tiktakam kashaya*<sup>7</sup>-15ml *kashaya* +45ml boiled and cooled water, twice daily, given orally before food (7days)

*Guggulu panchapala choorna*<sup>8</sup>- 5gm with honey, orally at night (7days)

*Aragwadhadi gana kashaya dhara*<sup>6</sup>- luke warm *kashaya* used for *dhara*(pouring of liquid) locally over ulcer, externally for 15 minutes, twice daily.(7 days)

**RESULT:**

With Ayurvedic therapeutics, the ulcer completely healed within 15 days i.e., the patient was cured from snake bite ulcer. On the first day patient had pain, swelling, secretions and burning sensation over the area which reduced after the first week of treatment. Also granulation tissue developed. After the treatment for two weeks significant changes were seen and the ulcer got healed.

The changes noticed in the ulcer (subjective and objective) are given below:

**Table 1**

| Parameters | Before treatment | After one week | After two weeks |
|------------|------------------|----------------|-----------------|
|------------|------------------|----------------|-----------------|

|                   |             |                                  |         |
|-------------------|-------------|----------------------------------|---------|
| Pain              | Grade 3     | Grade 0                          | Grade 0 |
| Tenderness        | Grade 1     | Grade 0                          | Grade 0 |
| Swelling          | Grade 1     | Grade 0                          | Grade 0 |
| Burning sensation | Grade 2     | Grade 0                          | Grade 0 |
| Ulcer             | Non-healing | Appearance of granulation tissue | Healed  |

## DISCUSSION

In this case, there is involvement of *pitha* and *rakta*. *Patolakaturohinyadi kashaya* pacifies *pitha* and hence *rakta dhatu* also gets normalised. Also it is indicated in *visha* (poison). This unique formulation in combination with *Vilwadi gutika* which is excellent *vishahara yoga* (antipoisonous formulation) reduces poisonous symptoms along with the ulcer manifestations. *Virechana* (purgation) with *Avipathi choorna* also normalises *pitha* and expels the aggravated *doshas* out of the body. *Aragwadhadi gana* is indicated as *dushta vrana vishodhana* (cleanses chronic ulcers).

*Guggulu tiktakam kashaya* and *Guggulu panchapa choorna* helps in reducing the ulcer dimensions and helps in *vrana ropana* (ulcer healing).

## CONCLUSION

With *Ayurvedic* therapeutics, the snake bite ulcer in this case ot completely healed within 15days. On the basis of this study, we can conclude that *Ayurveda* has got effective medicine in the management of post snake bite ulcers. Also the treatments adopted are cheap, reliable and easily available.

Treatment of snake bite ulcers is a matter of great concern that if proper treatment is not done at right time or if left untreated, it can lead to many complications. Hence, a systematic and effective treatment should be carried out. *Ayurveda* has proved its efficacy in this concern. More research works should be carried out to explore new formulations which are effective, economical and easily available.



**BEFORE TREATMENT**



**AFTER TWO WEEKS**

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