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Case Report

A case report: a very rarely occurring snakebite

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ABSTRACT

Snake bite is one of the most neglected public health issues in poor rural communities living in the tropics. The venomous bites and stings during pregnancy are very rare and it cause significant adverse effects on fetus and mother. Multiple snake bites to two different individuals by a same snake at the same time are rarely reported in literatures. In present case report, husband and wife with two and half month of pregnancy were bitten with multiple bites by same snake at the same time. This unusual and interesting case occurred in a rural area of Ahmedabad, Gujarat. It is also believed that snake discharges maximum of venom on first bite, which may be fatal compared to subsequent bites. The uniqueness of this case lies in the fact that second bite was more serious than the first bite. Woman with two and half month of pregnancy who was bitten first and hade minor effect, and no negative effects on fetus. Man bitten latter with multiple bites and was affected seriously. Both the patients were successfully treated at our hospital.

Keywords: Snake bite, Pregnancy, Multiple bites, Antivenom

INTRODUCTION

Snakebite is a widely distributed but neglected condition and serious life-threatening medical emergency.[1] Snake bite is a major public health problem throughout the world, especially in tropical countries like India. Worldwide, it has been estimated that five millions of snake-bite cases occur every year. Which causing death of 0.1 million peoples.[2] The highest number of deaths due to snake bites is reported in India compared to other countries.[3] High rate of morbidity and mortality related to snake bite is due to delay in seeking medical aid.[4,5] Snake bites and stings during pregnancy are reported very rarely. Various studies from South Africa, India and Sri Lanka have reported 0.4-1.8% of hospitalized snakebite victims as pregnant women.[6] According to previous literatures, overall fetal deaths range from 38-43% with maternal deaths of approximately 10% after a venomous snakebite.[7,8]

Incidence of snake bite to more than one person by same snake at a same time is very rare and till date no literature has been published with such incidences. Here we reported an interesting case of snake bite to two victims (husband and wife) by same snake at same time and place. Second snake bite occurred immediately after the first bite with multiple bites to second victim. A female victim was having pregnancy of two and half months.

CASE REPORT

Two victims with history of snake bite by same snake over left forearm of female and multiple bites over thigh, knee and palm of male were brought to emergency medicine department of hospital.

Female patient

Day 1st

A 25 years old female patient (with two and half month pregnancy) with snake bite over middle part of her left forearm during sleep in the night was presented at our emergency department in a conscious and oriented state (figure-1). She was haemodynamically stable and able to move all four limbs with complaining of pain at site of snake bite.

Immediate treatment given was:

- ✓ Inj. Normal saline 500 ml, IV
- ✓ Inj. Ondensetron 1 Amp IV stat & 12 hourly
- ✓ Inj. Pantoprazole 40 Mg IV stat &12 hourly.
- ✓ Female patient was treated as per below mention:
- ✓ Inj. Antisnake venom 20 bulbs IV in Dextrose 5% 500 ML over 30-60 minutes
- ✓ Inj. Chlorpheniramine Maleate 50 mg IV
- ✓ Inj. Tetanus Toxoid 0.5 ML IM
- ✓ Inj. Ceftriaxone 1Gm IV stat and 12 hourly
- ✓ Inj. Metrogyl 400 mg IV stat and 8 hourly and
- ✓ Tab. Chymoral forte 1 tab three times a day.
- ✓ For further care she was shifted to ICU.

Figure 1: A 25 years old female patient with snake bite.

Figure 2: "V" mark inside the round mark at bitten site in left forearm present even after two months of snake bite.

Day 2nd

On the second day female patient was shifted to obstetrics and gynecology department for ultra sonography (USG) examination and report was found normal. Rests of the essential investigations were found normal, so she was discharged on second day.

Repeated USG examination was performed at 4 months of pregnancy and no fetal malformation was noted. Henceforth, patient was advised for regular follow up and to do delivery in a hospital.

Figure 3: Both patient after successfully managed snake bite.

Figure 4: Male patient with history of multiple bites.

Figure 5: Male patient in ICCU.

Later on, she developed induration of about 5 cm and a round bite mark and a "**V**" mark inside the round mark at site on left forearm, which was tender on touch and was present even after 2 months of snake bite (Figure-2). She was advised for frequent local application of Thrombophleb and Neosporin ointment. Finally, she delivered a healthy male child by normal vaginal delivery (Figure 2, 3).

Figure 6: Edema developed on left upper limb and left knee joint on bitten site.

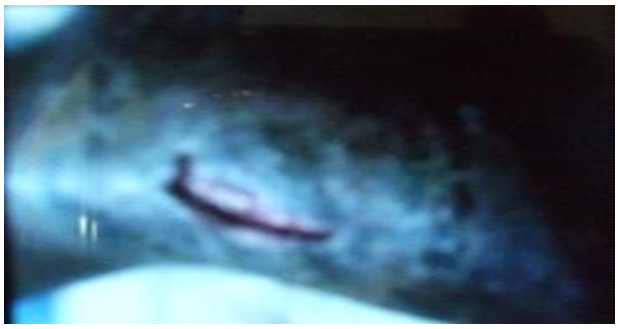

Figure 7: Skin necrosis around bitten site.

Male Patient

Day 1

A 27 years old male patient with history of multiple bites by snake over thigh, palm and knee was brought to emergency medicine department of our hospital in a drowsy state with inability to move limbs (Figure 4). He had shallow breathing with copious oral secretions. Patient had multiple snake bites at midnight while he was sleeping on the ground. First his wife was bitten and while attempting to catch the snake he got multiple bites. A very unusual aspect was that bite occurred after the bite to female patient and it was found very worsen. On examination, his pulse rate was found 68/minute; respiratory rate was 15/min with shallow breathing. Oral suction was performed immediately and then patient was oxygenated, intubated, and kept on ventilator with volume control mode (Figure 5). Intravenous cannulation was done. ABG (Arterial blood gas), CBC (complete blood count) & other investigations were performed.

ABG report was pH-7.0, PaO_2- 76 mm of Hg, $PaCO_2$- 25 mm of Hg and SpO_2- 98.5%.

Immediate treatment given to patient was:

- ✓ Inj. Normal saline 500 ml IV,
- ✓ Inj. Hydrocortisone Hemisuccinate 100 Mg IV,
- ✓ Inj. Dexamethasone Hydrochloride 8 Mg IV,
- ✓ Inj. Pantoprazole 40 Mg IV,
- ✓ Inj. Ondensetron Hydrochloride 2 Ml IV,
- ✓ Inj. Chlorpheniramine Maleate 50 mg IV,
- ✓ Inj. Tetanus Toxoid 0.5 Ml Intramuscularly,
- ✓ Inj. Anti-snake venom 20 bulbs in 500 Ml 5% Dextrose,
- ✓ Inj. Atropine 0.6 Mg IV,
- ✓ Inj. Neostigmine 2.5 Mg IV slowly,
- ✓ Inj. Cefixime 1 GM IV, 12 hourly
- ✓ Inj. Metrogyl 100 Ml IV. 8 hourly

Figure 8: Patient after skin grafting.

For further care patient was immediately shifted to ICU.

Day 2

Next morning the patient regained consciousness and extubated and in afternoon clear liquid was started orally. His initial investigations were found normal with swelling at bitten site on left upper limb, so patient was treated with Chymoral forte and Diclofenac Sodium 75 mg tablet three times a day and kept in ICU for further observation. Anti-snake venom 10 bulbs injection was given 8 hourly (total three doses). Patient was shifted from ICU to general ward after achieving desired recovery and stability.

Day 3

On 3rd day in afternoon, edema developed on left upper limb and left knee joint on site of snake bite (Figure 6). Again patient brought to ICU for further management of complications. As perfusion to edematous part was maintained, left upper and left lower limb elevation done along with MgSO4 (Magnesium sulfate) and glycerol dressing. But despite all management strategies, the edema was increased contentiously for next 24 hours and he developed redness with severe pain. Also the skin around snake bite site started necrotizing (Figure 7) so antibiotics were continued (Inj. Cefuroxime 1 GM and Amikacin 500 mg IV 12 hourly). Further essential investigations were found normal except total count of 18,000.

Patient was transferred to plastic surgery department for daily dressing. Debridement on left upper limb cellulitis was done under local anesthesia. Skin grafting was done after few days of debridement and patient discharged after 7 days with follow-up on 3, 7 and 15 days (Figure 8). Physiotherapy was started and patient settled afterward.

DISCUSSION

Snake bite is one of the most emergent causes of medical emergency, known for mortality and chronic morbidity. Most snake bites happen when snake is trodden on, either in the dark or in undergrowth. The effect of a venomous snakebite on a pregnant female would differ by species of snake. Antivenoms, which may be used in the treatment of the envenomed expectant mother, can cause anaphylactic reactions that may have an adverse effect on the mother and or fetus.[6] Once patient is brought to the hospital, a high index of suspicion and knowledge of manifestations of snake-bite is essential for early and accurate diagnosis. It should be noted that the venom detection in tissue samples depends to a great extent on time lapse between bite and death of a victim, which could allow venom for extensive absorption, redistribution and excretion. The identification of snake species is crucial for optimal clinical management, because it allows clinicians to choose the appropriate treatment and anticipate complications.

Usually the first bite is worse and more aggressive than the second bite. Interestingly, in this case the female was bitten first but she had not worse sign and symptoms compared to male patient, but the male patient who was bitten after his wife by same snake had severe effects. The female patient did not develop any sign or symptoms except pain at bite site while male patient bitten by same snake after his wife, who developed severe neuroparalytic effect and requires immediate aggressive management and surgical intervention. This shows that any snake bite can be fatal.

If female patient had dry bite then she should not develop induration of bite site. This means it was not a dry bite and it is said that snake ejects most of its venom in first or aggressive bite but in our case the second patient, the male was affected more severe compared to first one.

Important features of case report

1st victim with single bite (Female)

- ✓ No morbidity
- ✓ Had two and half month pregnancy and delivered healthy child at full term.
- ✓ Bite mark remained present after two months with sometime swelling and pain in bitten arm on working (Figure 6).

2nd victim with multiple bites (Male patient)

- ✓ Most unusual, had a worse clinical state

CONCLUSION

According to this rarely seen case report it can be concluded that the any bite (first or subsequent) can have serious effects but immediate hospitalization with proper care and treatment is important for survival of patients.

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