



# CASE REPORT ON ANTI SNAKE VENOM INDUCED ANAPHYLACTIC REACTION AT A TERTIARY CARE HOSPITAL

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**ABSTRACT:** After antivenom injection, allergic responses are the most commonly reported outcomes. Adverse reactions to snake antivenom are widespread in many places of the world where snakebite is common. The majority of acute responses are minor. Anaphylaxis may appear within an hour following antivenom exposure. In this case, a 20-year-old male patient was administered with ASV after admission to SVRRGG hospital with complaints of snake bite. Later, developed with hypersensitivity reactions and treated with medication.

**KEY WORDS:** anti snake venom reaction, snake bite, anaphylaxis.

**INTRODUCTION:** There are around 60 venomous snakes present across Andhra Pradesh and the most prominent are *Naja naja* (Indian cobra), *Bungarus caeruleus* (Indian common krait), *Daboia russelli* (Russell's viper) and *Echis carinatus* (Saw-scaled viper).<sup>1</sup> Antivenom is an immunoglobulin usually pepsin refined F(ab)<sub>2</sub> fragments of IgG purified from the serum or the plasma of a horse or sheep that has been immunized with the venom of one or more species of snakes which is given to stop snake venom from binding to tissues and causing serious blood, tissue, or nervous system problems. In India only polyvalent ASV is available. The antivenoms are produced against 4 important venomous snakes mentioned above. Each ml of polyvalent ASV produced in India neutralizes 0.6 mg dried Indian cobra venom, 0.45 mg dried common krait venom, 0.6 mg of dried Russell's viper venom and 0.45 mg of dried Saw-scaled viper venom.<sup>2</sup>

**CASE REPORT:** A 20-year-old male patient was admitted to SVRRGG hospital after an hour of unknown snake bite on 9<sup>th</sup> February, 2022 while working in the paddy fields near his hometown with the chief complaints of pain and swelling. Initially the patient showed no signs of loss of consciousness and only presented with swelling and pain on the left leg, soon after hospital admission the patient started to have a blurry vision and drowsiness. The vital signs were BP (120/80mm of hg), SpO<sub>2</sub>(95%), pulse(96bpm) and serum electrolytes were sodium-131mmol/L, potassium-3.5mmol/L, chlorine-91mmol/L. Haemoglobin was 11.2 g/dl, platelets- 2lakhs/ $\mu$ l. Treatment given was Inj. ASV 5 vials in 5% dextrose IV TID, Inj. Augmentin, Inj. Metrogyl, Tab. Paracetamol 500mg TID, Tab. Serratio 10  $\mu$ g TID. Wound dressing was done with magnesium sulphate (Mgso<sub>4</sub>) and glycerine (roller coated bandage with 20g of mgso<sub>4</sub> is dissolved in 100ml of glycerine). After giving Inj. ASV of 1 vial the patient presented with itching, wheal, flare and vomiting's. Reactions subsided after stopping ASV and giving 0.5ml of Inj. Adrenaline through IM route, Inj. chlorpheniramine maleate 10mg IV, Inj. hydrocortisone IV 100 mg. There were only local signs as redness, itching, swelling, vomiting's and no signs of systemic complications in the patient so the recovery was fast. During the hospitalization period the patient did not have another anaphylactic reaction and was discharged after 5 days of hospitalization.

**DISCUSSION:**

Anaphylaxis is a life-threatening, systemic hypersensitivity reaction characterised by fast onset and skin and mucosal abnormalities. Food, medicines, and insect stings are the most common causes of this condition. All antivenom-treated individuals are considered reactive and susceptible to antivenom-induced hypersensitivity responses. Even in patients who remained asymptomatic after receiving human immunoglobulin, complement activation and immune complexes were observed. Treatment with antivenom causes hypersensitivity reactions.<sup>(3)</sup> The general adverse reactions due to anti snake venom include respiratory failure, shock, cellulitis, MODS (multiple organ dysfunction syndrome), VICC (venom induced consumptive coagulopathy) and also death<sup>(4)</sup>. But in our case the patient had wheal, flare, itching and vomiting and subsided after giving treatment. A wide proportion of patients develop reactions, either early (within a few hours) or late (5 days or more) after being given anti-snake venom. In India, these antivenoms cause reactions in 5.6 to

56% of recipients, 10-15% of which are moderate to severe. (5) In this case a 20 years male patient who was administered with anti-snake venom developed reactions early which is after 1 hour. After noticing the signs, the attending physician stopped the ASV immediately and started INJ. Hydrocortisone to treat itching and redness followed by INJ. Adrenaline of 0.5cc through IM route. Signs and symptoms subsided in 24 hours.

**CONCLUSION:** Hypersensitivity reactions are rare and are dependent on the patient's inherent characteristics which cannot be modified. As a clinical pharmacist it is my responsibility to report these reactions to ensure treatment at right time to right patient with right drugs and doses.

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