

SUCCESSFUL MANAGEMENT OF SNAKE ENVENOMATION IN A HORSE - A CASE REPORT

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ABSTRACT

A thoroughbred horse aged about 13 years was presented to Veterinary College and Research Institute Hospital, Namakkal with the history of swelling over the facial region. Clinical examination revealed pale mucous membrane and salivation with fang mark wound over the upper lip. Temperature, pulse rate and respiration rate were within normal range. Twenty minutes whole blood clotting time was positive for envenomation. The animal was treated with intravenous administration of polyvalent snake venom antiserum mixed with one litre of normal saline. Streptopenicillin, frusemide and ranitidine were administered for three days. An uneventful recovery was noticed following therapy.

Keywords: Horse, snakebite, polyvalent snake venom antiserum

INTRODUCTION

Snake bite in animals generally occurs during grazing. Snake bite with envenomation is one of the emergency conditions with significant mortality in equines. Reports on the management of snakebite have been recorded in bovines and dogs. The present article describes successful management of viper snake envenomation in a horse.

CASE HISTORY AND OBSERVATIONS

A thoroughbred horse aged about 13 years, was presented to the Veterinary College and Research Institute Hospital, Namakkal, Tamil Nadu with the history of sudden swelling in the facial region, anorexia and excitement. Clinical examination revealed pale mucous membrane, salivation with fang mark over the upper lip (Fig.1). Temperature, pulse rate and respiration rate were within normal range. Whole blood and serum were collected for laboratory examination. Twenty minutes whole blood clotting time (20 MWBCT) was conducted, blood did not clot within the 20 minutes period of time indicating the necessity of administration of anti-snake venom. Haemogram and serum biochemical parameters were within the normal range [haemoglobin 8.22 g/dL, PCV 29 %, RBC $4.16 \times 10^6/\mu\text{l}$, BUN 12.3mg/dL, creatinine 0.8 mg/dL, total protein 5.46 g/dL, albumin 3.6 g/dL and AST 353.6 U/L]. Based on the history, clinical signs and 20 MWBCT, the case was confirmed as snake envenomation.

TREATMENT AND DISCUSSION

The animal was administered with polyvalent snake venom antiserum (20 ml) mixed in one litre of normal saline intravenously. Tetanus toxoid (50 Lf 5

ml IM), streptopenicillin (5 g IM), Inj. Furosemide (2 mg/kg b.wt. IV), and Inj. Ranitidine (1.5 mg/kg b.wt. IV) were administered for three days. Reduction in swelling of upper lip and complete recovery was noticed after three days (Fig. 2).

Snake venoms are not a single toxins but cocktail of many components. Toxins found in snake venoms are neurotoxins and hemotoxins. The severity of the snake envenomation in animals depends upon the type of the snake, size of the animal, number of bites and the quantity of the venom injected during the time of bite (Garg, 2002). The clinical signs are less severe in horses when compared to the small animals. The present case showed reduced haemoglobin and erythrocyte count. The most common hematological findings in viper envenomation included hemoconcentration, leucocytosis, thrombocytopenia and nucleated red blood cells in the peripheral circulation (Segev *et al.*, 2004).

Polyvalent snake venom antiserum had been tried earlier successfully for the treatment of snake bite envenomation in dogs (Vijayakumar *et al.*, 2001). The toxicity of snake venom was attributed to proteolytic enzymes like phosphatidase, cholinesterase and neurotoxin. Bailey and Garland (1992) recommended polyvalent antivenin, tetanus toxoid and broad-spectrum antibiotics for treatment of snake envenomation. The fang of a snake was invariably contaminated with various types of bacteria which warrant the use of broad spectrum antibiotics in the affected animals.

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Fig.1. Horse showing the signs of snake envenomation



Fig.2. Horse recovered after treatment

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