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Management of delayed case of Snake bite envenomation in a dog

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Abstract

The two year Doberman dog was presented with the history of blood oozing out on the mouth. On clinical examination the fang mark below the swelling, haematuria, melena, pain and oedema at the swelling site was noticed. The whole blood clotting time test was positive and treated for snake bite envenomation with snake venom antiserum, fluids, antibiotics for three consecutive days and the dog was recovered uneventfully.

Keywords: Swelling, snake bite, hemotoxic, whole blood clotting time test, dog

Introduction

Snake bite in animals generally occurs during grazing or hunting or while playing in the garden. Most of the cases of snake bite have been reported in dogs and horses, Garg, (2000) [2]. Poisoning from snake venom in animals is an emergency which requires immediate attention or otherwise delayed and inadequate treatment may lead to untoward consequences. The present paper describes snake bite in canines and its therapeutic management, Ananda *et al.*, (2009) [1]. Poisoning from snake venom in animals is an emergency which requires immediate attention or otherwise delayed and inadequate treatment may lead to untoward consequences. The present paper describes snake bite in canines and its therapeutic management

Materials and Methods

The Doberman dog of two years old presented with history blood oozing out on the around the area of mouth. On clinical examination, the animal was dull and depressed, congested mucous membrane. Temp: 38.3 °C, H/R: 66/min, R/R: 19/ min. The fang mark was noticed below the swelling. Haematuria and melena also noticed. It also evinced pain and oedema at the swelling site. The two millilitres (2 mL) of blood was collected from the animal and it was observed for its whole blood clotting time (WBCT). It was not clotted for more than six hours. Finally, the case was confirmed as snake bite envenomation of hemotoxic type.

Results and Discussion

On first day, the animal was treated with snake venom antiserum 1 vials, Inj. Cefoperazone sulbactam sodium @ the dose rate of 10 mg/ Kg body weight, Inj. Normal saline (1500 mL), Inj. Flunixin meglumine @ the dose rate of 2.2mg/ Kg body weight, Inj. Ethamsylate 10mL and Inj, Lasix 10mL and the animal responded well to the treatment. On 2nd day the blood was clotted after two hours from the time of collection, the same treatment was followed along with tetanus toxoid, on 3rd day, the collected blood clotted within 20 minutes, the same treatment was followed. On fourth day all the symptoms such as haematuria, oedema, swelling and pain got disappeared and the animal was recovered uneventfully.

The toxicity of snake venom is attributed mainly to proteolytic enzymes *viz.*, phosphatidase, cholinesterase and neurotoxin. Neurotoxin present in the snake venom affects the central nervous system and results in failure of cardiovascular system. Proteolytic enzymes are responsible for local changes in permeability leading to edema, blistering, bruising and local necrosis (Nicholsan., 1995 and williams *et al.* 2010) [4, 6].

The fangs of a snake are invariably contaminated with various types of bacteria which warrant use of broad-spectrum antibiotics in bitten animals. Anti-venom may sometimes cause anaphylactic reactions as it is derived from hyper immunised horse serum with concentrated and purified immuno globulins which may lead to immediate or delayed immune reactions in

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certain cases (Jain, 1986). Clinical signs such as salivation, dullness, muscular weakness with abnormal gait observed in the present case have also been observed by Ananda *et al.* (2009)^[1]. This clinical sign can be attributed to the enzymatic and non-enzymatic compounds in the snake venom. According to Klaassen (2008)^[8], hyaluronidase cleaves internal glycoside bonds in certain acid mucopolysaccharides resulting in decreased viscosity of connective tissues which allow other fractions of venom to penetrate the tissues. The edema observed at the site of bite may be attributed to enzyme hyaluronidase which acts as a spreading factor. The alterations in the hematological parameters might be due to damage to the blood cells by snake venom (Ananda *et al.*, 2009)^[1]. However, increased leucocytes count is attributed to systemic infection as snake fangs and oral cavity has bacterial contaminants (Blaylock, 2001)^[7]. The increased biochemical values like alanine aminotransferase and creatinine may be due to the hepatotoxic and nephrotoxic effect of snake venom (O'Shea, 2005)^[9]. Corticosteroid was administered in this case to counteract development of shock due to hemorrhage as well as to overcome the untoward effect to antivenom as lyophilized polyvalent anti-snake venom may sometimes cause anaphylactic reactions (Sai *et al.*, 2008)^[5]. Although, antihistamines can at certain times potentiates the toxic action of the snake venom (Ananda *et al.*, 2009)^[1], their use is important as it counteracts the severe side effects produced by histamine in snake venom. Broad spectrum antibiotics were administered to the dogs, as snake fangs are contaminated with different types of bacteria which are mainly gram negative enterobacteriaceae (Blaylock, 2001)^[7].

References

1. Ananda KJ, Mohan K, Ansar K, Sharada R. Snake bite in dogs and its successful treatment *Veterinary World*. 2009; 2(2):66-67.
2. Garg SK. In *Zootoxins*. Veterinary Toxicology, CBS publishers and Distributers 1st Edn, 2002. New Delhi.
3. Jain NC. *Schalm's Veterinary Haematology*. IVth (Ed), Lea and Febigen, Philadelphia, 1986.
4. Nichol SS. *Toxicology In: Text Book of Veterinary Internal Medicine, Diseases of Dog and Cat*. Ettinger S J and Feldman EC (eds). Volume. I, IVth (Ed). WB Saunders, Co., Philadelphia, 1995.
5. Sai Butcha Rao M, Satish Kumar and Thirumala Rao DS: *Intas Polivet*. 2008; 9(1):116.
6. Williams D, Gutierrez JM, Harrison R, Warrell DA, White J, Winkel KD, *et al.* The Global Snake Bite Initiative: An antidote for snake bite. *Lancet*. 2010; 375:89-91.
7. Blaylock RSM. Normal oral bacteria flora from some South African snakes. *Onderstepoort Journal of Veterinary Research*, (2001) 68:175-182.
8. Klaassen CD. *Properties and Toxicities of animal Venoms*. In: *Toxicology*. 7th Edn, McGraw-Hill, New Delhi, 2008, 1093-1098.
9. O'Shea M. *Venomous Snakes of the World*. Princeton: Princeton University Press, 2005.