



## Therapeutic Management of Snakebite in German Shepherd Male Dog in Tandojam, Sindh-Pakistan

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### Abstract

A 1.5-year-old German shepherd male dog was brought to the emergency critical care unit of Sindh Agriculture University Tandojam-Pakistan clinics with a history of snakebite on the nose two days ago. The dog appeared dull and depressed during the clinical examination. The dogs were examined clinically and physically, and they were treated right away.

**Keywords:** Snakebites; German Shepherd Dog; Therapeutic Management

### Abbreviations

<sup>0</sup>F: Degree Fahrenheit; CMM: Conjunctival Mucous Membrane; bpm: Beats Per Minute; I.V.: Intravenous; I.M.: Intramuscular; p.o.: Per os.

### Introduction

In dogs living in hilly areas, snakebites are a common cause of morbidity and mortality. The presence of a large fauna flourishing in a favorable climate, ambient environmental temperature, and heavy rainfall in this hilly area of study raises the risk of snakebite. In Pakistan, there are nearly 216 snake species, 70 of which

are poisonous [1]. Bio toxins from snakebites and insect stings are common [2]. Snakes will not bite or attack animals unless they are disturbed. Dogs are the most commonly attacked and killed by snakes among domestic animals [3]. Swelling, oedema, and hematoma are the most typical local indications of snake bite in dogs, related largely to venom hemorrhaging activity, as well as severe lameness with discomfort when limb envenomation occurs [4]. Snakebite with envenomation is a medical emergency that requires immediate examination and treatment. A cases of snakebite in German shepherd dogs were presented to emergency critical care unit of department of veterinary medicine, Sindh Agriculture University

Tandojam-Pakistan, and their therapeutic care is described in this study.

### Clinical examination and case history

A 1.5-year-old German shepherd male dog was brought to the emergency critical care unit of department of veterinary medicine, Sindh Agriculture University Tandojam-Pakistan with a history of snakebite on his nose two days ago. The amount of food consumed was lowered, but the amount of water consumed was regular. The animal was vomiting and had blood-tinged diarrhoea, according to the owner. The animal was reclined and dull on clinical inspection. CMM was pink, rectal temperature was 100.7°F, heart rate was 120 bpm, and rectal temperature was 100.7°F. Leucocytosis ( $50.8 \times 10^9$  /L), granulocytosis (87.8%), and a platelet count of  $72 \times 10^9$  /L were among the hematological changes. All other hematological values were within normal limits.

### Discussion and Treatment

To reduce the vascular dissemination of venom, dog were maintained calm in lateral recumbency with their heads a bit below the level of the remainder of their bodies. With a 5% KMnO<sub>4</sub> solution, the fang marks were thoroughly cleaned. Prior to administering anti-snake venom, dexamethasone sodium phosphate (Injection Dexona 4 mg) was given intramuscularly. The dog were then given a single vial of lyophilised polyvalent anti-snake venom. According to the manufacturer's instructions, the lyophilised powder was first mixed in 10 mL of sterile water before being given with a 5% dextrose saline solution. In addition to this antibiotic Inj. Ceftriaxone 250 mg intravenously. The animals were given antibiotics and intravenous fluids the next day, and this was continued for the next five days. The dog had a good response to the treatment and were able to fully recover afterward. Following treatment with polyvalent snake antivenom and antibiotics, the patient recovered. Broad-spectrum antibiotics, tetanus toxoid, and polyvalent snake venom antiserum have previously been used to treat snakebite envenomation in dogs, cats, and other animals with success [5]. Snake venom is made up of proteins, peptides, non-protein toxins, carbohydrates, lipids, amines, and other molecules. Venom's chemical composition varies across taxonomic levels. Proteins make up the majority of snake venom (> 90% dry weight). Toxins that cause spontaneous bleeding in the gingival sulci, nose, skin, and gastrointestinal tract are known as haemorrhins. The snake's species was not identified by the owner. In these cases, polyvalent snake antivenom was preferred because it protects against the venom of the four most dangerous snake species found in Sindh (common co-

bra, common krait, saw scaled viper, and Russell's viper). The dogs were given a broad-spectrum antibiotic as a preventative measure because the snake's fangs are thought to be contaminated with a variety of bacteria. Intravenous fluids and the administration of antivenom to neutralise the snake venom in the pet's body are usually used in treatment.

### Conclusion

Snakebite in animals is a medical emergency; however, if treated quickly, approximately 65% of pets will survive.

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