Short Communication

SICKLE KNIFE INJURY IN A 2-YEAR-OLD NON-DESCRIPT DOG: A CASE REPORT

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ABSTRACT

A 2-year-old non-descript intact male dog was presented at Veterinary Clinical Complex, VCRI, Orathanadu, TANUVAS with a sickle cut wound on right forehead, right lateral part of shoulder and left lateral ofneck,with exposed tracheal rupture. As per the history the animal was attacked by a human using sickle knife. The defect was closed with appropriate techniques. After 14 days of post operative care the dog healed well and was back to normal routine.

Keywords: : Cervical tracheal rupture, cut wound, sickle knife injury.

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INTRODUCTION

Traumatic tracheal injuries in small animals comprises a various range of damage from minor lacerations to complete tracheal ruptures. Although relatively uncommon, these injuries have been documented in both the cervical and thoracic regions of the trachea. In dogs, the predominant causes of tracheal rupture include dog bites, motor vehicle accidents and even man-made causes (Fenet *et al.,* 2022). Complete tracheal rupture is a life-threatening condition, marked by an acute onset of respiratory distress and stridor (Morath *et al.,* 2015). This condition is often associated with generalized subcutaneous emphysema and pneumothorax. Conversely, smaller tracheal tears may result in milder clinical signs, which typically resolve with medical treatment alone. Despite the less severe presentation of minor tears, severe cases necessitate urgent surgical repair to safeguard the animal's life. This intervention aims to restore tracheal integrity, stabilize respiratory function and prevent further complications. The present study deals with the surgical management of tracheal rupture by sickle knife in a non-descript dog.

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CASE HISTORY AND OBSERVATION

A 2 year non-descript intact male dog weighing around 20 kgs was presented with the history of sickle knife cut injury of 2 - 3 cm deep on the forehead (Fig.1), and a deep 4 cm long cut wound on the left lateral part of the neck (Fig.2) with exposed ruptured tracheal (Fig.3) along with a cut wound on the lateral part of the right shoulder. Animal had difficulty in breathing, hypovolemic shock and tachycardia with the heart rate of 150/min.

TREATMENT AND DISCUSSION

The dog was treated for the haemorrhagic shock. The bleeding was stopped using pressure tamponade on the wound. The animal was preanaesthetized with inj. Atropine sulphate @0.002mg/kg b.w., Butorphanol @0.2 mg/kg b.w., Xylazine @1 mg/kg B.W IV. The induction and maintenance was achieved using inj. Ketamine hydrochloride @5 mg/kg and Diazepam @0.5 mg/kg IV. The wound sites were prepared aseptically and the dog was intubated to facilitate respiration. Using PGA 2-0 the ruptured trachea was closed with simple interrupted suture (Fig. 4) followed by muscle, sub cutaneous and skin were closed with polyamide 1-0 with cross mattress pattern (Fig.5). Similarly, the wound in the lateral part of the shoulder and forehead were closed (Fig.6), where as a passive drain had been placed at the frontal region to drain the exudates, the same was removed after 14 days post treatment. The dog was treated with anitibiotic inj. Intaceftazo 25 mg/kg b.wt I/V and anti-inflammatory using inj.Meloxicam 0.5 mg/kg b.wt i/m. The antibiotic and anti-inflammatory followed upto 5 post operative days.

Tracheal rupture is a relatively rare condition, occurring less frequently in dogs when compared to cats. In dogs, the primary causes of tracheal rupture are trauma from dog bites and road traffic accidents (Holt, 2014; Basdani *et al.,* 2016). In the present case the etiological factor was malicious cut injuries caused by sickle knife.The anesthetic protocol for surgical repair of a tracheal tear was effective. The endotracheal intubation was done with ET size 6 which was smaller in size than anticipated, and long enough to pass upto the carina, hopefully below the tracheal tear injury (Wilson and Shih, 2015). Minor cervical tracheal tears may be self-limiting and heal without intervention, but large cervical tracheal tears including partial or complete tracheal disruption may lead to serious respiratory distress or death associated with airway obstruction secondary to tracheal displacement, soft tissue interposition, or intraluminal hematoma formation (Jordan *et al.,* 2013). The tracheal rupture was closed with simple interrupted pattern as per Basdani *et al.* (2016). Diagnosing laryngeal or tracheal perforation can be particularly challenging, especially in cases with signs of subcutaneous emphysema and mild or no respiratory distress. In the present case dynamic air leakage through tracheal

wounds was consistently present. In the present case animal did not show any post operative complications (Fenet *et al.,* 2022)

The dog showed uneventful recovery on 14th post operative day.The present case reports the successful surgical approach to tracheal rupture in a dog.

Fig. 1. Dog presented with cut wound at frontal region

Fig.2. Dog presented with multiple lacerated wound

Fig. 3. Tracheal rupture

Fig. 4. Trachea was sutured with interrupted suture

Fig. 5. Sutured site

Fig. 6. Dog after suturing all the lacerated wound

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