GUNSHOT WOUND IN A DOG AND ITS MANAGEMENT

D.N. Madhu, S.W. Monsang, J. Singh, A.M. Pawde, Amarpal, P. Kinjavdekar and H.P. Aithal

Division of Surgery, Indian Veterinary Research Institute, Izatnagar, Bareilly, Uttar Pradesh, India.

[Received: 19.4.2014; Accepted: 27.11.2014]

Introduction

Gunshot wounds are the most common projectile injuries seen in veterinary practice (Pavletic, 1996). Management of gunshot wounds in small animal patients can be problematic, primarily because of the variations in the firearm used and the exact nature of the wound inflicted. Entry wounds are generally smaller than exit wounds, although there are exceptions (Pavletic, 1985). Exit wounds are often larger and irregular when a bullet impacts bone before exiting the skin. In many cases, there is no exit wound. Bullets that are fired from a low-velocity weapon or that strike dense tissue and transfer all their kinetic energy can be retained in the body. The gunshot wounds have been reported in various domestic pets well as wild animals (Fullington and Otto, 1997; Pavletic and Trout, 2006; Nath *et al*., 2007; and Shrivastava *et al*., 2011).

Case history and observations

A 3 year old female non-descript dog was brought to Division of Surgery, IVRI, with a history of gunshot wound near neck region and unable to bear weight on left forelimb. The incident happened two hours before presentation of the animal. Clinical examination revealed presence of entry wound on skin near 6th cervical vertebrae but there was no exit wound. Physical examination revealed presence of bullet near medial aspect of left elbow joint just underneath the skin which was easily felt with fingers from outside of the skin. Radiographic examination revealed that the bullet was planted close to left elbow joint (**Fig. 1**). Hence, it was decided to remove the bullet surgically.

Fig. 1: Radiography showing bullet planted close to left elbow joint

Fig. 2: Surgically removed bullet measuring 2.5 cm

Treatment

The animal was restrained in left lateral recumbency and the left elbow region was prepared for surgery. General anaesthesia was induced and maintained with xylazine @ 1 mg/kg IM and ketamine @ 5 mg/kg IM. A skin incision was made just above the bullet and it was extracted out using artery forceps. The wound was flushed with povidone iodine solution from the entry site to remove the

blood clots and necrotic tissues and it was left to heal as open wound. Postoperatively the dog was treated with ceftriaxone at a dose of 20 mg/kg intramuscularly every 12 hours for 5 days and meloxicam at a dose of 0.5 mg/kg every 24 hours for 3 days along with antiseptic wound dressing. The length of the bullet removed was 2.5 cm (**Fig. 2**). The animal made an uneventful recovery.

Discussion

This is a rare case of gunshot injury featuring a bullet which migrated subcutaneously from the entry wound on skin near 6th cervical vertebrae and got lodged near medial aspect of the elbow joint without entering the body cavities. In the present case, surgical removal of bullet, wound debridement to remove necrotic tissues, management of wound as an open wound to drain off any abscess and administration of broad spectrum antibiotics resulted in early recovery without any complications. These results were in line with the findings of Pavletic and Trout, (2006). In conclusion, a less aggressive surgical approach may be needed to remove bullets when they are easily accessible without the involvement of body cavities and major organs. However, at least two orthogonal radiographic views are must to realise the location and depth of the lodged bullet.

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