

RADIOGRAPHIC DIAGNOSIS AND SURGICAL MANAGEMENT OF GUNSHOT WOUND IN A CAMEL (*Camelus dromedarius*)

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In gunshot injuries, most of the damage is not visible. As the projectile penetrates, it drags skin, hair and dirt through the wound. The amount of damage caused by the projectile depends on its shape, aerodynamic stability, mass and velocity (Gahlot, 2012). Very few reports of the treatment and outcome of bullet wounds in horses (Vatistas *et al*, 1995), porcine (Udey *et al*, 2011) and camel (Gahlot, 2000) exist in the scientific literature. Present report is based on diagnosis and treatment of gunshot wound in a camel.

History and clinical examination

A 5-year-old male adult camel of approximately 600 Kg body weight was presented to Teaching Veterinary Clinical Complex, Kothari Veterinary Hospital, DUVASU, Mathura with a history of gunshot injury at right side of neck and little swelling around the wound. The camel exhibited some pain and discomfort in movement of the neck along with anorexia. An approximately 2.5 cm diameter gunshot wound was found at the lateral aspect of 5th cervical vertebrae (Fig 1, 2). A lateral radiograph of neck revealed a radiopaque foreign body with a shape of a bullet at the anterior aspects 5th cervical vertebra (Fig 3). It was confirmed to be a gunshot wound with associated cellulitis.

Treatment

The camel was sedated with Xylazine hydrochloride (7 ml, I/V) and restrained in lateral recumbency. The area around the wound was infiltrated with 2 per cent lignocaine hydrochloride. The surgical site was prepared aseptically in routine manner.

The depth and size of wound was explored with the help of a straight haemostat which was introduced obliquely at about 6 cm deep from the skin. The

location of the bullet was adjudged and an incision was made directly at the level of bullet. The muscles were dissected and bullet was retrieved with the help of straight artery forceps. The skin incision was closed with simple interrupted sutures using silk No. 2. However the necrotic and dead tissue were extensively debrided out from the gunshot wound. It was left open and irrigated with povidone iodine solution. The entire gunshot wound was packed with sterile roll gauze soaked with povidone iodine. Oxytetracycline (5 mg/kg body weight, I/V) and Meloxicam (0.2 mg/kg body weight, I/M) were administered post operatively for 5 days. The wound dressing was done daily with 0.1% povidone iodine solution till complete wound healing. Postoperatively, the animal's feed and water intake was restored. The sutures were removed on 10th postoperative day. The gunshot wound healed in two weeks.

Discussion

The treatment of injuries caused by high velocity projectiles necessitates a proactive surgical strategy. Burenkov (2011) proposed active surgical strategy for treatment of gunshot wound on the neck region depending on the character of tissue lesions, the form and direction of the wound canal. The general principles of management of such wounds are extensive local antisepsis, debridement and broad spectrum antibiotics. The anatomical location where the bullet traverses and lodges, significantly influences the outcome of the case in gunshot injuries (Vatistas *et al*, 1995). The bullet neither penetrated nor injured any vital organ like trachea, oesophagus, jugular vein, carotid artery, vertebral column or spinal cord in animal of present study. The cellulitis in this case was due to local tissue damage and infection that occurred during cavitation (Eylon *et al*, 2005). The cellulitis resolved with debridement, administration

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Fig 1. Gunshot wound on right side of neck of dromedary camel.



Fig 2. Gunshot wound with approximately 2.5 cm diameter.

of, broad spectrum antimicrobial therapy and dressing with povidone iodine solution in this case. The heat generated by this high-velocity bullet might have caused the bullet itself to be sterile and thus it did not act as a source of continued infection. In the present case, the bullet was completely retrieved and no signs of clinically local and systemic lead toxicity were observed as also reported by Rhee and Martin (1997).

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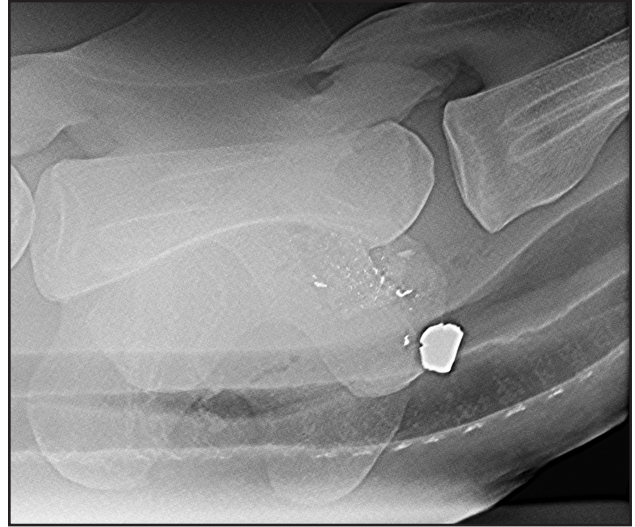


Fig 3. Lateral radiograph of neck revealed presence of a bullet at anterior aspect of transverse process of 5th cervical vertebra.

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