

Clinical management of lacerated wound at neck region in mares

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ABSTRACT

Two mares aged 6 and 9 years were brought to the clinics with history of lacerated wound at neck region due to injury by fencing wire while riding. The wound involved skin, underlying muscle along with ruptured left side of jugular vein. The wound was irrigated with normal saline and povidone iodine solution to remove dirt or debris in the wound. After desired level of anesthesia ruptured jugular vein was ligated from proximal end using chromic catgut No.2. The muscles and skin were sutured in routine manner. The regular dressing of wound carried out and complete healing took place after 31 days.

Keywords: Jugular vein, lacerated wound, mare, neck region.

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Introduction

Neck lacerations are very common particularly when horse move in pasture fenced with barbed wires (Barber, 2005). The wound are horizontal, located at the base of neck, and often involve skin, subcutaneous tissue may sometime up to brachiocephalicus, sternocephalicus and sternohyohyoidius muscles. There usually no loss of function but skin edges may retract variable amount as a result of tension which increase by movement of head and neck. The size of the wound varies widely and lacerations can be small to large (Wilson, 2006). The larger wound (greater than 15 cm wide gape) or those that cause complete transaction of neck muscle are rather uncommon.

Case History and Clinical observation

Two mares aged 6 and 9 years belonging to sanchor district of Rajasthan were brought to the clinics with history of lacerated wound at neck region due to injury by fencing wire while riding. The clinical examination revealed that the wound was located at the latero- ventral aspect of mid cervical region.

The wound involved the skin, underlying muscle along with ruptured left side of jugular vein. The proximal end of jugular vein was ligated by local veterinarians using cotton thread (Fig. 1). The lacerated wound was 20-25 cm long up to right side of jugular vein and muscles were extensively damaged with bleeding in both the cases. All the blood parameter was normal except the level of hemoglobin and red blood cells were 6.8 gm/dl and $3.93 \times 10^6 \mu\text{L}$, respectively in first case whereas, level of hemoglobin and red blood cells were 7.4 gm/dl and $4.1 \times 10^6 \mu\text{L}$, respectively in second case which might be due to severe blood loss.

Treatment and Discussion

Mares were restrained in standing position and area around the wound was prepared aseptically. The wound was irrigated with normal saline and povidone iodine solution to remove dirt or debris in the wound. Mares were sedated with Inj. Xylazine @1.1 mg/kg body weight intravenously and local infiltrations of 2% lignocain hydrochloride were carried out at the periphery of lacerated wound. After desired level of anesthesia ruptured jugular vein was re-ligated from proximal end using chromic catgut No.2. The powder of strptopenicillin was sprinkled at the wound site to minimize the infection.

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Fig.1: Ruptured jugular vein ligated with cotton thread, Fig. 2: Suturing of lacerated wound, Fig. 3: Image showed suture tearing of surgical wound, Fig. 4: Application of hide ash and honey paste, Fig.5: Complete recovery of lacerated wound in mare.

The muscles were sutured in continuous lock stitch pattern using chromic catgut No. 2. The skin was sutured with silk in interrupted suture pattern and gauze bandage was inserted to minimize the dead space (Fig. 2). The wound was protected from flies by wrapping the gauze bandage around the neck. Preoperatively Inj. Tetanus Toxoid 3000IU, Inj. Dicrysticine 5 gm and Inj. Melonex 15 ml were administered intramuscularly to minimize the post-operative complications. The mares were tied with rope on both the side to minimize the movement of head. Post operatively Inj. Dextrose 1 Lit, Inj. DN's 1 lit and Inj. Dicrysticine and Inj. Melonex were administered for 3 days.

The hematinics liquid A RBC Rakkt 50 ml daily given orally for 15 days to enhance the level of hemoglobin. The wound was dressed with betadine for 5 days. The sutures were teared due to abrupt movements of head during feeding (Fig. 3). Therefore, wound was irrigated regularly with normal saline and povidone iodine followed by hide ash and honey paste application to allow second intention healing (Fig. 4). The granulation of wound was started 7th day post operatively and complete healing took place after 31days (Fig.5).

When treating equine wounds, the prime object is to obtain rapid wound closure with a functional and aesthetically satisfactory outcome. Injuries to head and neck are common in horse (Stashak, 1991 and Barber, 2005). The sizes of wound at neck were reported to be ranging from narrow laceration of 2-3 cm in width to large lacerations which are greater than 15 cm in width (Wilson, 2006). In present case, the mares had lacerated wound at the neck causing laceration on left and right side measuring approximately 20-25 cm which was healed in 31 days. Jugular vein was injured causing severe hemorrhage and ligated later on. Healing was allowed to occur by second intention. Injuries to neck in horse often involve neuro-vascular injury of vaso-sympathetic trunk, recurrent laryngeal nerve, common carotid artery and jugular vein (Wilson, 2006). However there was no any injury to nerve but jugular vein were injured in the present case report. Muylle *et al* (1994) studied the healing process of venous punctured wound of jugular vein in equids. However, the wall of jugular vein was not repaired instead of ligation of vein was done in present case. Regular dressing and irrigation of wound

enhance the healing process by decreasing contamination, exudates and edema (Knottenbelt, 2003). Wound healing in horse is often complicated by formation of exuberant granulation tissue. Strptopenicillin powder sprinkled on wound would help in combating infection. Hide ash containing trace element which are responsible for faster wound healing due to epithelization whereas, honey having antibacterial and anti-oxidant property which help in reduction of infection and stress.

Conclusion:

Successful wound management is always based upon regular follow up of the general principle of wound care. Hide ash along with honey may ensure to rapid wound healing.

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