Surgical management of lacerated upper lip and exposed hard palate in a dromedary camel

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Abstract
A 9 year old male camel was presented to Veterinary Clinical Complex, Bikaner with the history of barbed wire injury to upper lip since six month. A successful diagnosis and surgical management was done under general anaesthesia. Camel was recovered completely after 25 days of surgery, without any further complications of suture and wound dehiscence.

Keywords: Surgical management, upper lip, dromedary camel

Introduction
Camel suffers with various surgical affection of head and neck region such as mandible fracture, soft palate injury, torticollis, lacerated eye lid, ruptured eyeball, cornial opacity and lacerated nostril because camel browsing the upper storey tree vegetation and the thorny vegetation from shrubs and bushes, which often inflict injuries to the head region mostly eyes and lips are involve (Kumar, 2013) [1]. Lacerated wounds are caused by barbed wires lead to tearing of tissues and such wounds have irregular jagged borders and may occur on lips, cheeks, face, legs, in case of camel (Harpal and Kuldip, 2013 & Gharu, 2014) [2-3]. Camel suffers with various wounds included lacerated wounds which markedly affect the value of animal, draft capability and overall performance (Gharu, 2014 & Gahlot and chouhan, 1992) [3-4].

Anaesthesia and surgical procedure
General anaesthesia was required due to furious behaviour of presented case. Camel was kept off-feed and off-water since 24 hours and 12 hours respectively. Depending on the availability and cost of anaesthesia following drugs were used as a balanced anaesthesia according to measured body weight (500 kg) of camel with their appropriate dose given in Table 1.

Table 1: Chemical restraint used for surgery according to Singh et al., (2020) and Tranquilli et al., (2013)[5-7].

<table>
<thead>
<tr>
<th>Name of drug</th>
<th>Purpose</th>
<th>Dose rate</th>
<th>Calculated dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylazine(20mg/ml)</td>
<td>Sedative</td>
<td>0.4mg/kg, I/M</td>
<td>10ml</td>
</tr>
<tr>
<td>Propofol 1% w/v (10 mg/ml)</td>
<td>General anaesthesia</td>
<td>2.5 mg/Kg I/V</td>
<td>125 ml</td>
</tr>
</tbody>
</table>

After administration of general anaesthesia, head of camel was fixed on a small table for easy surgical approach. Surgical site was prepared aseptically and wound was debride well through sterile surgical blade. Fresh wound was sutured by using vertical mattress suture pattern through silk no.2 with five sutures. Apposition of wound edges was occur as a result of surgery. Camel will recovered completely after 1-2 hours of surgery.

Post operative care
Suture line was daily cleaned by spirit and diluted povidone iodine solution. No any discharge was noticed from suture line, Streptomycin @ 10 mg/kg body weight and Penicillin @ 4000-10000 IU/kg (Dicysticine, Zydus AHL (Candila Healthcare Ltd.) Ahmedabad), once a day, for 5 days and Meloxicam @ 0.2-0.5mg/kg body weight (Melonex, Intas Pharmaceutical Ltd., Ahmedabad), once a day, for 3 days, were administered with supportive treatment of B-complex and liver extract as 30 ml total dose (injectable).
Result and discussion
Wound was completely recovered after 25 days (Fig: 3) of surgery without any further complications of suture and wound dehiscence. However some authors (Singh et al., 2020) wrote in their literature that the wound healing in camel is comparatively slower but in present case no evidence has emerged. Herbal fly repellent (D’Mag) was also recommended for one month from day of surgery to reduce the risk of maggot infestation. Debridement and thorough cleaning of the wound is essential. The skin of camelids is relatively thicker than that of other species; thus infolding is not a serious problem. However there is less flexibility in the skin and it is more tightly adhered to the underlaying structures than in other species, making reconstructive surgery more difficult. Tension sutures may be used as appropriate. All suture material are tolerated by camels (Fowler, 1992 & Gharu, 2014) and similarly in present case non-absorbable suture material was also well till complete healing. No capillary reaction or further inflammation was observed at wound site till complete healing. Gharu, (2014) reported 0.61% lacerated wounds at the junction of gingival and lower lip, in his study. In present case sex of camel was male and the male camel in “Rut” season become vicious and unmanageable, during vicious condition male camels bite himself, fighting with another camels and in order to restrain such animals the owner bashes with a stick over the head and neck which sometimes causes injuries of head and neck region (kumar, 2013 & Gharu, 2014).

Fig 1: Photograph showing exposed hard palate and laceration of upper lip.

Fig 2: Photograph showing application of vertical mattress suture pattern.

Fig 3: Photograph indicates condition after a week of surgery

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Conflict of interest
Authors have no conflict of interest with any one about this manuscript.

References