Reconstruction of barbed wire injury in a spotted deer

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Introduction

During the process of capture and immobilization of a free range wild animal, physical injuries such as contusions, lacerations, abrasions, punctures and fractures may be inflicted on the animal accidentally or as a result of mishandling. Lacerations caused by sharp objects like barbed wire is a common capture injury with minimum tissue loss. They may be superficial or deep and heal by primary intention.

Case History and Clinical Examination

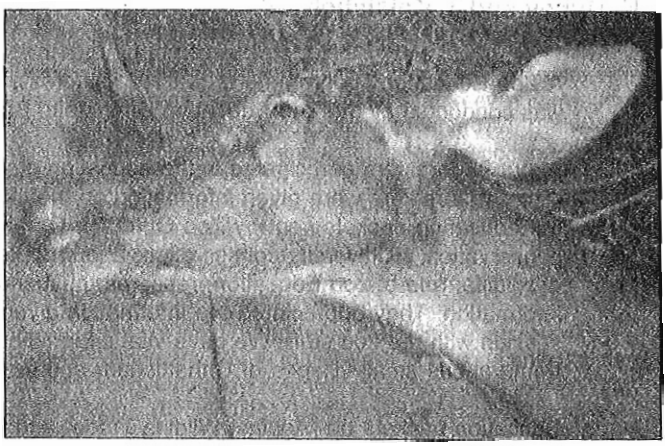
A Spotted Deer, about 9-12 months of age sustained barbed wire injuries when brought under captivity by Manda Wildlife and Protection Department, Jammu. The case was immediately reported to the Division of Surgery & Radiology, F.V.Sc. & A.H., R.S. Pura and was attended within 8 hours of injury. The deer was captured in a drive net by experienced persons. The lacerations were present on left side of the face, the major one extending from lateral canthus of eye to oral commissure. Mucosa of lower lip was totally damaged and a portion of lower lip had detached from the anterior portion of the mandible. Lacerations were also present on the right and left forelimbs extending from middle of humerus to the middle of metacarpus.

Surgical Management

The deer was secured in a normal posture and a prophylactic dose of tetanus toxoid 10 Lf was administered intramuscularly. The animal was sedated with triflupromozine HCl (0.25 mg/ kg/ intramuscularly). Desired level of sedation was achieved within 15 minutes. The wounds were cleaned with lukewarm normal saline. The area around the wound were clipped and shaved and the wounds and its periphery were thoroughly cleaned with normal saline. Devitalized tissue from the wound edges was carefully debrided and adequate haemostasis was achieved. The wounds were then lavaged with 0.5% chlorhexidine solution. The reconstruction of the major lacerations on cheek and fore limbs was done under local infiltration of 2% Lignocaine HCl. Horizontal mattress sutures 0.25 cm apart were applied using 1-0 chromic catgut. The needle prick was kept 0.5 cm away from the debrided ends. The lip was reconstructed using 1-0 chromic catgut and brought back to its original shape with simple continuous sutures. Povidone Iodine lotion was applied on the suture line as well as on minor lacerations which were not sutured. Ampicillin-Cloxacillin 500 mg was injected intramuscularly at 12 hours interval for 5 days. The animal was shifted to a clean, dry and well-padded small enclosure. Follow-up dressings of the wounds was done with Povidone Iodine ointment. The wounds healed without any post-operative complications.

Discussion

Minor lacerations were cleaned and treated with topical antiseptic ointment and larger lacerations were closed with a long lasting absorbable suture material as advocated by Nielsen (1996). Adequate distance between the sutures and from the debribed edges was kept so as to provide enough of holding power to the tissues and sutures as well. Slight eversion of wound edges as in horizontal mattress sutures helps ensure good dermal opposition and faster healing (Burnett, 1988; Swaim and Handerson, 1990). The ideal lavage solution is sterile, non-toxic, iso-osmotic and normothermic (Daily, 1985) and Normal strength saline solution used for the purpose met these criteria. Further, chlorhexidine diacetate solution effectively controls the infection and is recommended for more superficial wounds (Amber *et al.*, 1983). Povidone iodine was used for wound dressings as it has wide spectrum of anti-microbial activity due to the presence of free iodine (Swaim and Lee, 1987).



Showing lacerations on left side of face and detachment of mucosa of lower lip in a spotted deer.

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