

NASO - FASCIAL FRACTURE AND ITS SURGICAL MANAGEMENT IN A HORSE - A CASE REPORT

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ABSTRACT

Conservative management of open, displaced frontal and paranasal fracture with minimal surgical approach in a non-descript horse is reported.

Keywords: Nondescript horse, paranasal sinus, open displaced fracture

INTRODUCTION

The inherent configuration of the equine paranasal sinuses increase the risk for fracture from trauma often related to kick or running into immovable object. Depression fractures of the frontal and maxillary bone due to trauma cause hemorrhage into the sinuses and may lead to a profuse short-term epistaxis, which may be often followed by an unexpectedly prolonged (>4 weeks) intermittent low-grade epistaxis (Tremaine and Dixon, 2001). Open sinus fractures frequently lead to secondary sinusitis (Dixon 1993), and the presence of intrasinus sequestra may result in chronic suppuration with persistent sinusitis and have been managed surgically with stainless steel wiring (Mansmann and Wheat, 1973; Van-der-Velden and Verzijlberg, 1984; Gibbs and Lane, 1987; Scott, 1987; Lane, 1993; Schumacher *et al.*, 2000; Rush and Mair, 2004; Orsini and Divers, 2008; Debra, 2013).

CASE HISTORY AND OBSERVATION

A non-descript Tonga horse was presented with a history of colliding into a stationary train wagon and subsequent profuse epistaxis. Clinical Examination revealed displaced comminuted frontal bone fracture in the mid nasal bridge with most fragments of bone missing, few totally devoid of periosteal attachment with intact skin over the frontal bone (Fig.1), no radiographs were taken and initial neurologic evaluation revealed normal reflexes.



Fig.1. Naso-facial injury with exposed paranasal sinus



Fig. 2. Healed wound after 3 weeks

TREATMENT AND DISCUSSIONS

The horse was sedated with inj. xylazine (@ 0.3mg/kg), blood clots and loose bone fragments were removed and the sinus cavity was flushed liberally with 0.9% normal saline. All small fragments without full periosteal attachments were removed. Following removal of fragments and thorough debridement, the skin was desensitized with 10 ml lignocaine 2% and wound edges were opposed with prolene (no. 0) by simple interrupted suture pattern. Parenterally, Inj. Procaine penicillin (@ 1200i.u./kg) and inj. gentamicin (@ 6.6 mg/kg) was administered once daily for seven days and 10 ml inj. carbazochrome was given for 3 days. The head was bandaged to cover the wound and dressing was done on alternate days for three weeks. No complications were observed during healing period and the wound healed uneventfully with minimal facial deformity (Fig.2).

Injuries that are more complex result in complete loss of periosteal attachments and necessitate removal rather than replacement (Davidson *et al.*, 2014). However, a better cosmetic appearance can be obtained by primary open reduction of such large depressed fractures shortly after injury rather than by facial reconstruction later (Stashak and Theoret, 2011; Davidson *et al.*, 2014). Healing after repair of sinus injuries will be usually excellent, particularly if the skin remains intact although suture exostoses may remain (Tremaine, 2004, Southwood and Wilkins, 2014). If severe or open sinus fractures are not treated in horses, complications such as sinusitis, sequestra formation, facial deformity, abnormal bone growth in young horses and nasal obstruction could be expected.

SUMMARY

Conservative management of displaced frontal fracture including the paranasal passages without complications such as sinusitis, sequestra formation, facial deformity and abnormal bone growth is discussed.

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