

SURGICAL MANAGEMENT OF BILATERAL MANDIBULAR FRACTURE IN A DROMEDARY CAMEL

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INTRODUCTION

Mandible in camel is an elongated bone consisting of two halves which fuse together during the first few months of life. Bilateral or very rarely unilateral mandibular fractures are common in male camel especially during the rutting season and occur across the first premolars or quite cranial or caudal to this point in inter-dental space. Presence of mental canal and alveoli of the first premolars render this part of the bone quite weak and prone to easy fracture. Standard interdental wiring technique using 1.0 mm diameter stainless steel, silver or copper wire is the method of choice to repair mandibular fractures in camels (Gahlot *et al.*, 1984). Successful management of bilateral mandibular fracture in a male dromedary camel by interdental wiring using 1mm Kirschner wire is reported.

CASE HISTORY AND TREATMENT

A seven year old male dromedary camel weighing about 600 kg suffering from bilateral mandibular fracture by hitting on a water tank accidentally was presented to Madinat Zayed Veterinary Hospital, Abudhabi, UAE. Physical examination revealed open, bilateral, oblique, mandibular fractures caudal to the canine teeth (Fig.1).

The wounds showed severe bleeding and the animal was showing severe pain, salivation and distress. Body temperature was



Fig.1

37.4° C. Tachycardia (80 beats per minute) and tachypnoea (17 breaths per minute) were noticed.

The camel was sedated with 100mg Xylazine hydrochloride intravenously and was restrained in sitting posture by keeping the fore limbs and hind limbs tied separately under the body. The oral cavity was kept open using a mouth gag and was flushed using warm saline solution. Using an electric drill, 1mm diameter holes were drilled across the gums of first cheek teeth (second premolar and first molar) on both the sides. Two 1mm K-wires were passed through the predrilled holes on either side. The medial end of each wire was passed through the space between the central incisors.

By careful manipulation, the lower jaw was pulled forwards and upwards to achieve proper reduction. The medial and lateral ends of the wires on each side were twisted carefully using a wire twister to effect proper alignment

of the fractured ends. The twisted ends were cut using a wire cutter about 1cm away from the base and the cut ends were bent downwards between the gap of the incisors to avoid injury to the gum and the lower lip (Fig 2).

Long acting Amoxicillin trihydrate(15mg/kg body weight) was administered intramuscularly to prevent infection and Ketoprofen hydrochloride (2.2mg/kg body weight) was administered intramuscularly to control pain and inflammation. The oral cavity was washed twice daily with warm saline solution. The camel was allowed to drink water on the first day and advised to eat small quantity of tender grass from the second post-operative day. Normal feeding was advised only after 10 days. Examination after one month revealed good clinical union of the fractured fragments. A small sub-mandibular abscess found developed on the right side below the fracture site which was drained and treated as per standard protocols. The wires were removed using a wire cutter by careful manipulation on the 50th post-operative day under sedation using 100mgxylozine hydrochloride intravenously. The animal made an uneventful recovery (Fig3)

RESULTS AND DISCUSSION

Trauma was found to be the most important cause of fracture in camels of above 6months

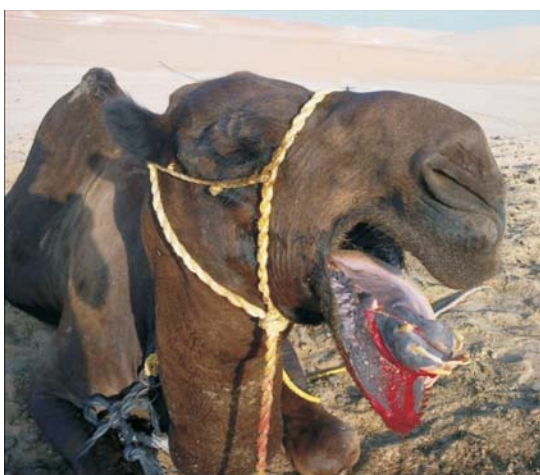


Fig.2



Fig.3

of age (Ahmed and Fahd, 2012 and Kumar *et al.*, 1979). In the postoperative period, the lateral limbs of the wires slip downward in line with the normal slope of the incisive part of the mandible, a complication commonly observed in the old ages as the incisor teeth take an outward slope with the advancing age (Hanuman and Gahlot, 2001). Embedment of the lateral limb of the wire in the gums also results in loosening of the wire with consequent ventral deviation of the cranial fracture fragment (Henninger and Warren, 1997 and Siddiqui and Telfah, 2010). Development of sub-mandibular abscesses is a very common postoperative complication of these fractures and can lead to osteomyelitis if not drained and treated in time (Gahlot *et al.*, 1984). In the present case the only complication noticed was a small sub-mandibular abscess which was successfully managed.

SUMMARY

A case of bilateral mandibular fracture in a dromedary camel and its successful surgical management by interdental wiring has been reported.

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