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Surgical correction of tibiotarsus fracture in a pigeon

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Abstract

A domestic pigeon was presented with history of right pelvic limb fracture due to hawk bite. On examination bird was unable to bear weight on right pelvic limb. On palpation, a crepitus found at tibiotarsal region. Radiographic examination reveals simple splintered mid-diaphyseal fracture of right tibiotarsus. Bird was anesthetized with ketamine. Surgical correction made by retrograde introduction of K-wire. The bird was recovered uneventfully with complete weight bearing on affected limb with no complications.

Keywords: Pigeon, tibiotarsus fracture, intramedullary pin

Introduction

Bone fractures are common in both wild and captive birds (Fix and Barrows, 1990; Houston, 1993) [1, 3]. Avian bones, including limb bones, are thin brittle and tend to break into fragments upon a variety of natural events like midair collisions, fights with other birds (Houston, 1993) [3] or anthropogenic experiences like gunshot wounds, collisions with automobiles or fences, encounters with traps and attacks by animals like dogs and cats (Fix and Barrows, 1990) [1]. The present report describes a surgical management of a case of a simple complete splintered tibiotarsus fracture in a domestic pigeon.

Materials and Methods

A 8 month old female domestic pigeon was presented to department of VSR veterinary college Bangalore, with the history of hawk bite and not bearing weight on right pelvic limb (Fig. 1). A crepitus was felt at palpation of tibiotarsal region. Radiographic examination revealed a simple splintered mid-diaphyseal fracture of right tibiotarsus (Fig. 2).

Pre-emptive analgesia was attained with meloxicam (0.5 mg/kg IM) later the general anaesthesia was then achieved with ketamine (50 mg/kg IM). The surgical site was prepared for aseptic surgery by plucking the feathers and applying antiseptic solution povidone iodine then the lower part of the limb was wrapped in cotton bandage (Fig. 3). The skin incision was made on craniomedial portion of right tibiotarsus, allowing fractured site exposure after separation of muscles. K-wire of 1.5 mm was inserted by using Jacob chuck in retrograde manner (from fractured site into the proximal fragment and reversed to distal fragment). The proper intramedullary pin placement was confirmed by C-ARM (Fig. 4). Muscles were sutured with vicryl (3/0) using simple continuous pattern and skin with trulon (2/0) using simple interrupted pattern. The surgical wound smeared with povidine iodine and light weighed bandaging was done. The affected limb was wrapped with roller gauge and owner was advised to restrict the movement of bird for 10 days.

Post operatively, prescribed syrup Meriquin (10 mg/kg bw) PO, for 7 days. Syrup Ostopet (1 drop BID for 20 days), syrup Bird plus (1 drop BID for 20 days).

Results and Discussion

The bird started to bear weight on the affected limb from 7th postoperative day. The postoperative follow-up radiograph revealed complete healing of fractured bone. The bird recovered uneventfully showed full weight bearing on affected limb.



Fig 1: Fracture of right pelvic limb



Fig 2: Simple splintered fracture of right tibiotarsus



Fig 3: Aseptic preparation of surgical site

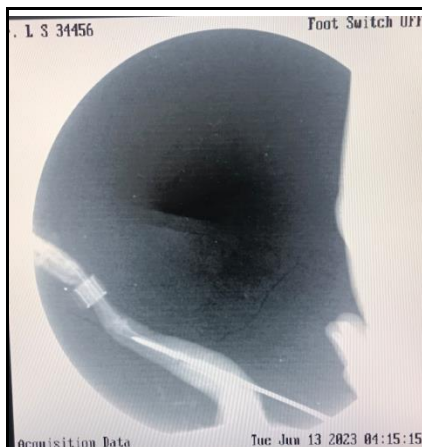


Fig 4: Post operative C ARM image

Tibiotarsal fracture are the most common fractures encountered in birds. Intramedullary pinning under ketamine anaesthesia is safe technique to repair tibio-tarsal fractures in pigeons (Verma *et al.*, 2018)^[5].

Conclusion

In the present case intramuscular administration of ketamine is found to be effective and safe throughtout the surgical procedure. Gahlot (2005) repaired tibial fracture in a peacock using intramedullary pinning, similar procedure was used to treat tibiotarsal fracture in present case.

Conflict of Interest

Not available

Financial Support

Not available

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