

REPAIR OF CALCANEAL FRACTURE WITH PANTARSAL ARTHRODESIS OF HOCK JOINT IN A DOG

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A male dog was presented with complete lameness of right hind limb. Survey radiographs confirmed for calcaneal fracture. A calcaneal fracture at its base with subluxation of hock joint was repaired using a lag screw application and pantarsal arthrodesis with a reconstruction plate was performed.

Key words: Calcaneal, Dog, Fracture.

The tarsal joints are subjected to injury and degenerative diseases. One of the most common injuries encountered in this joint is a shearing fracture that may occur when the leg is dragged along the road by a car (Lesser, 2003). Calcaneal fracture is a disabling injury because it completely disrupts the common calcaneal tendon apparatus. Fractures at calcaneal base disrupts the origin of plantar ligament and subluxation and hyperextension of the calcaneoquartal joint (Welch, 2003). The concurrent occurrence of tarsal subluxation and calcaneal fracture has not been reported.

A male dog aged about 2 years was presented to the Department with the history of an automobile accident and trauma in the right hind limb. On clinical examination, it was evident that the affected hock joint was unstable and showing valgus deformity.

Radiographic examination revealed avulsion fracture of calcaneus (Fig.1). Clinical examination revealed subluxation of hock joint. General anaesthesia was achieved

using atropine sulphate @ 0.04 mg/kg, i/m, xylazine hydrochloride @ 1.2 mg/kg, i.m and ketamine hydrochloride @ 6 mg/kg, i/m. and was maintained with ketamine hydrochloride as and when required. A cranio-medial, curved incision was made over hock joint and distally towards tarsals and the subcutaneous fascia and tendons were reflected cranially to expose the joint.

The calcaneus was repositioned using a bone holding forceps and a hole was drilled using a 2.5 mm drill bit with universal hand drill. A 2.7 mm self tapping cortical screw of suitable length was fixed (Fig.2). Similarly, Ost *et al.* (1987) also reported reconstruction of distal calcaneal slab fractures with lag screws. Arthrodesis of joint was performed with a reconstruction plate on medial aspect of tibia and hock joint (Fig.3). A pantarsal arthrodesis in a dog by using a reconstruction plate has been performed with successful outcome as also reported by Shahi *et al.* (2015).



Fig.1- Preoperative radiograph showing calcaneal fracture

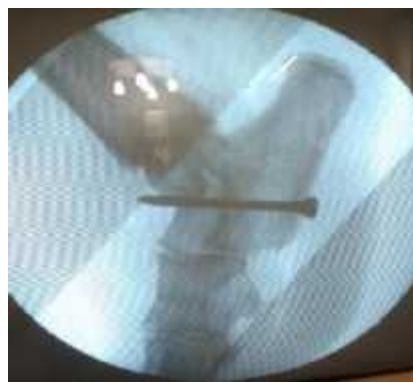


Fig.2 - C Arm image showing lag screw fixation in calcaneus



Fig.3- Pantarsal arthrodesis using a Reconstruction plate



Fig.4- Radiograph showing repair of calcaneal fracture and arthrodesis using a lag screw and reconstruction plate

Three screws were fixed in distal tibia, two in tarsals and one in metatarsals. The incision was closed with polygalactin 910 no.1 and black braided silk no.1. Inj. Ceftriaxone sodium was injected @20 mg/kg, i/m, o.d. for 7 days. Inj Amikacin sulphate was injected @ 6 mg/kg, i/m o.d for 5 days. The wound healed uneventfully. The sutures were removed on 12th post operative day. The animal started taking weight partially on the affected hind limb. The post operative radiograph on 15th day was suggestive of stable implants at the fracture site (Fig.4).

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