

## Repair of radial fracture in a mare by percutaneous transfixation.

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A 7-years old mare was brought to the College Clinics with severe left fore-limb lameness due to an automobile accident. The animal was unable to put weight on the affected limb. The limb was swollen and it was more intense in the region of radius and ulna. Physical examination revealed crepitus and abnormal movement at midshaft region of radius. The case was diagnosed as midshaft radial fracture.

A temporary splint of aluminium strips was applied after proper padding for 3 days to allow the swelling to subside. Once the swelling subsided the splints were removed and the mare was fasted for 24 hours prior to surgery. The animal was anaesthetized by intravenous injection of 10% pentobarbital sodium at a dose rate of 17 mg /kg body weight and secured in right lateral recumbency. An area on medial and lateral aspect both at proximal and distal ends of radius was prepared for aseptic surgery. A Steinman pin was inserted transversely with the

help of electric drill through the proximal fracture fragment and the other through distal fragments. The ends of these pins were protruding about 1.5 cm on either side. The protruding ends of proximal and distal pins were held in position by external bars. The external bars were constructed from the 2.5 cm wide aluminium splints having holes at proximal and distal ends in order to accommodate protruding ends of transverse pins. The whole assembly of transverse pins and side bars were held in position by application of light plaster cast after proper cotton padding. Thereafter plaster cast was applied on the limb extending from the elbow joint to the hoof. The plaster cast was reinforced with a 2.5cm wide pliable aluminium splints. The animal was allowed to recover without struggling and was able to stand unassisted.

The animal received 15 ml of 10% geomycine intramuscularly for 5 days. Pin sites were dressed regularly with alcohol.

The weight bearing capacity of the affected limb increased progressively with the passage of time and by 20 days, the animal was able to walk with moderate limping. The sites at protruding ends of

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pins were free from any infection. The animal made an uneventful recovery.

Incidence of fractures of radius and tibia is high in large animals (Singh *et al.* 1983). Several methods of fracture repair including simple full limb cast, hanging-pin casts, nailing and plating (Kendrick, 1951; Reichel, 1956; Gill and Tyagi, 1972; Kumar *et al.* 1973; Vijaykumar *et al.* 1983) have been used with variable success. Full limb cast alone has not been favoured as there is always danger of its loosening and slipping down in postoperative period (Vijaykumar *et al.* 1983). Hanging pin cast, though, reported to be better than simple coaptation, yet have the disadvantages like rotation and angulation of fractured limb. (Kumar *et al.* 1973). Internal fixation either by pinning or plating is not always feasible because it requires perfection in technique and availability of implants and other special instruments. Moreover, internal fixation is reported to be associated with more complications, if not done with perfection and under rigid aseptic

conditions (Singh *et al.* 1984).

The use of transfixation technique in combination with full limb cast was considered adequate for the repair of mid-shaft fracture of radius in the present case. The method offered good immobilization without any apparent complications. Fixation of plaster cast in the proximal transverse pin avoided the slipping of the cast, which is a common disadvantage of repair by application of plaster cast alone. Side bars used to support the transverse pins prevented the rotation of the fractured bone and is conformity with the observations of Kendrick (1951), and Reichel (1953). In the present case no complication was observed however, some of the complications reported with this technique included soft tissue infection, bone necrosis and loosening of the pins (Singh *et al.* 1984). These complications may easily be avoided by rigid asepsis, regular care of the wounds at pin points and careful insertion of pins as has been practised in this case.

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### **Fascia Lata as an adjunct to Herinal Repair**

Ventral abdominal hernia, at least 10 cm long were repaired 6 week later by horizontal mattress sutures of 2 polyglycolic acid and reinforced with a sheet of fascia lata (7X12 cm) in ponies. The fascia lata was sewn to the abdomen using as much tension as possible. All hernias healed without complications.

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