1958

Intramedullary Pinning of the Humerus in the Calf

Richard Hubbard
Iowa State College

Follow this and additional works at: https://lib.dr.iastate.edu/iowastate_veterinarian
Part of the Large or Food Animal and Equine Medicine Commons, and the Veterinary Anatomy Commons

Recommended Citation
Available at: https://lib.dr.iastate.edu/iowastate_veterinarian/vol20/iss2/12

This Article is brought to you for free and open access by the Journals at Iowa State University Digital Repository. It has been accepted for inclusion in Iowa State University Veterinarian by an authorized editor of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
grain of morphine 45 minutes prior to anesthesia. The dog was anesthetized with 1½ grains of pentobarbital sodium and immediately vomited and continued to vomit periodically throughout the surgery. The right hip was clipped, shaved, scrubbed, defatted with ether and disinfected with phenylmercuric nitrate. As described by Brown¹, a 6-inch incision was made vertically over the coxofemoral joint near the anterior edge of the greater trochanter. The incision was deepened through the subcutaneous tissues until the anterior margin of the biceps femoris muscle was identified. The biceps and the tensor fascia lata were separated with scissors at their junction, reflecting them posteriorly and anteriorly respectively. This exposed the superficial gluteal muscle and its aponeurosis which attaches to the third trochanter. The aponeurosis was then severed directly over the greater trochanter, the free ends tagged, and the muscle reflected dorsally. The middle gluteal muscle was then exposed and was bluntly separated from the underlying deep gluteal muscle to reveal the location of the sciatic nerve so it could be avoided. The muscle was then severed through its aponeurosis near the greater trochanter and reflected dorsally after tagging the free ends. The deep gluteal muscle was handled similarly to the middle gluteal and the joint capsule was exposed. The joint capsule was found to be stretched due to the dislocation and a false joint was present dorsal and anterior to the acetabulum. The joint capsule was severed and about a teaspoon of hemorrhagic synovial fluid drained out. The stretched ligamentum teres was severed and the head of the femur was rolled laterally and anteriorly from the pseudoarthrosis. The acetabulum was located and the ventral two-thirds was found to be filled with blood, fibrin, connective tissue and mostly fat. This material was removed by curettage avoiding the synovial membrane as much as possible. The head of the femur was replaced into the acetabulum and the joint capsule was closed with mattress sutures of medium Vetafil® (synthetic suture). The gluteal muscles were sutured to their aponeuroses with medium Vetafil mattress sutures and the fascia lata was closed with interrupted sutures of 000 chromic catgut. The subcutaneous tissue was approximated with a continuous suture of 000 chromic catgut and the skin closure was accomplished with interrupted medium Vetafil sutures. The limb was then held in flexion with a figure-8 bandage.

The patient was kept on intramuscular injections of 2 cc. of a penicillin-streptomycin combination twice the first day and 1 cc. of the same antibiotic twice a day for the succeeding 4 days. The figure-8 bandage was removed on the seventh day post-operative as were the skin sutures.

The dog began to bear weight on the leg slightly on the eleventh day post-operative and increased her use of the limb each day until released on the eighteenth day following surgery at which time she was using the leg most of the time when walking, but persisted in carrying the leg when running.

The purpose of reporting this clinical case has been to review the dorso-lateral approach to the coxofemoral joint as described by Brown and show that chronic coxofemoral luxations can be reduced successfully without using one of the many methods of internal fixation.

— Fred Wood '58


---

**Intramedullary Pinning of the Humerus in the Calf.** On November 1 a 2-day old Holstein calf was admitted into the veterinary clinic. The history revealed that a fracture of the right humerus had occurred during parturition. X-ray pictures revealed a simple fracture of the distal one-third of the right humerus.
Fracture of the humerus.

The animal was anesthetized with 12 cc. of pentobarbital sodium. The area of the right forearm was clipped, shaved and disinfected. A point was chosen on the most anterior prominence of the lateral tuberosity of the humerus for the insertion of the intramedullary pin. A skin incision was made over the chosen point of insertion. A ¼-inch stainless steel threaded intramedullary pin was inserted by using a drill and chuck through the medullary cavity of the proximal fragment. Traction was applied to the forearm until reduction was accomplished and the two segments were in apposition. The pin was then threaded into the medullary cavity of the distal fragment and anchored in the medial condyle. The unused portion of the pin was cut off close to the point of insertion to allow the skin incision to be closed.

After-care consisted of routine antibiotic administration for 5 days following surgery. By the fifteenth day the calf was frisking about the pen and was using the leg in nearly a normal fashion. On the twenty-fifth day following surgery the skin incision was opened and the pin removed. When the skin incision healed, the animal was discharged.

—Richard Hubbard '59

External Fixation of a Multiple-Fractured Canine Pelvis. On Nov. 6, 1957, a 6-month old female Red Bone Coonhound entered the Stange Memorial Clinic with a history of being hit by a car. Examination revealed fractures of the pelvis and a 2-inch laceration on the lateral surface of the right elbow. Except for the fact that the dog could and would not rise and carry any weight on his hind quarters, he appeared in fairly good clinical condition. Pain was manifested upon palpation of the ossa coxarum.

A dorso-ventral x-ray revealed the following: (1) multiple fracture of the pelvis, involving the left acetabulum, (2) extensive overriding of the fractured shaft of the left ilium, (3) the center of ossification of the right tuber ischium showed some separation, (4) encroachment upon the pelvic cavity by the fractured segments and this, if it persists, could cause dystocia in a pregnant bitch (Fig. 1).