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Intramedullary Pinning of Fratured Tibia in the Dog

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Intramedullary Pinning of Fractured Tibia in the Dog. A 1-year-old male Collie was admitted to the Stange Memorial Clinic Oct. 3, 1948. He had been injured the previous week in a dump-box accident which resulted in a compound comminuted fracture of the right tibia and fibula approximately 11/2 inches proximal to the hock joint. The local veterinarian, who first attended the case, had applied a conventional wood splint to the leg but later referred the case to the veterinary hospital with an unfavorable prognosis.

Because the leg was badly shattered and apposition was difficult to maintain with the wood splint, an attempt was made to bring the fractured ends of the tibia together with wire suture. The patient was anesthetized with sodium pentobarbital given intravenously. The wound was cleaned, shaved, and defatted with ether and sprayed with 70 percent alcohol. The skin over the wound was laid back and several small bone sequestra were removed. Two holes were drilled into each fractured end of the tibia. Two silver-alloy wire sutures were placed through these holes and apposition of the broken ends was completed. The skin was closed with four interrupted silk sutures. The entire leg was wrapped with cotton and another conventional wood splint was applied. Because infection was already apparent, 300,000 O.U. of procaine-penicillin were administered intramuscularly.

Penicillin therapy was continued for 12 days along with periodic topical application of Bipp paste to the skin wound. Healing of the skin was satisfactory, and the skin sutures were removed on the fifth day.

By the twenty-third day it was apparent that the silver-alloy sutures were not going to hold the broken ends of the tibia together to enable healing. Hence, it was decided to insert a pin into the intramedullary cavity of the tibia. Anesthesia was completed with sodium pentobarbital given intravenously, and again the surgical area was cleaned, shaved, defatted with ether and sprayed with 70 percent alcohol. The skin was incised and laid back over the area of the fracture, and the broken ends were exposed. The silver-alloy sutures were removed. The soft calluses which had formed at each end of the broken tibia were removed with a Klein Sidecutter. A 1/8 inch stainless steel pin,
approximately 3 inches long, was inserted into the proximal portion of the tibia leaving only about 1/2 inch of the pin exposed. By continued extension of the limb enough space was established between the broken ends so that a forceps could be applied to the pin. By this method 1/2 the length of the pin was driven into the distal end of the bone involved. This pin was never removed. A Bipp pack was placed over the wound, and the leg was again resplinted with the conventional wood splint. Dosages of 300,000 O.U. of procaine-penicillin were administered intramuscularly every day for four days in an attempt to combat infection.

Healing progressed satisfactorily except for an area of pressure necrosis which developed on the lateral side of the foot due to the splint. Treatment of the necrosed area was not successful. Therefore, on the thirty-first day after the second operation the wood splint was removed. The callus formation at this time was soft. To prevent the patient from using the leg, a figure 8 bandage was placed on the leg in such a manner as to keep the leg flexed at the femorotibial and the tibio-tarsal articulations. It was determined that the application of this bandage every other day did not interfere with circulation yet did prevent the patient from using the leg excessively. It was necessary to replace this bandage every other day for 16 days.

Fluoroscopic examination on the forty-fifth day revealed excellent apposition and a large soft callus which was easily palpable.

The patient was discharged on the fifty-second day following the pinning. He was able to walk quite normally by this time, but the leg was still weak and

Fig. 1. The injured leg as it appeared when presented for treatment.

Fig. 2. The same leg after pinning and splinting.
atrophic. The owner was instructed that further convalescence was necessary to insure complete healing.

Three months after the accident the dog had regained all the strength in the injured leg and was as active and capable as ever.

This case has been presented, not because of the complexity of the surgery, but as a further illustration of service that may be rendered to the client. Had it not been for the intramedullary pinning this Collie would probably have lost his leg.

R. C. Williams, ’49

Vaginal Tumor in a Hereford Cow. January 25, 1949 a 5-year old female Hereford was admitted to Stange Memorial Clinic having been sent in by a practicing veterinarian. She was in good condition, and temperature, respiration, and pulse were within normal limits.

The only history available stated that she was due to freshen in May, 1949, and that there was a tumor-like mass which partially occluded the vagina.

The cow was examined per vagina and per rectum to ascertain the nature and size of the tumorous mass. The growth was found to be quite soft and pliable. Its size was approximately 10 inches long and had a maximum diameter of 3 inches. The peduncular attachment to the left lateral wall was also about 3 inches in diameter.

January 27, 1949, the cow was prepared for surgery. The perineal and vulvar areas were shaved, cleansed with soap and water, and disinfected with Queseptic solution. The cow was then secured to the operating table in right lateral recumbency. No anaesthesia was administered. A spaying ecraseur was then introduced into the vagina, the chain was placed around the pedunculated base, and the tumor removed. There was little hemorrhage; neither suturing nor packing was necessary.

There was a slight hemorrhagic vaginal discharge at 72 hours but follow-up treatment was unnecessary. The cow continued to eat normally and to have normal evacuations. She was sent home Feb. 16 in good health.

The tumor was found by laboratory examination to be a myxo-lipo-fibroma.

S. King, ’49

A Dwarf Hereford Bull Calf. An interesting case of abnormal development in a purebred Hereford bull calf was observed at the Stange Memorial Clinic during the first month of the winter quarter. This calf was admitted to the clinic on Jan. 6, 1949, and was six weeks old at that time. While not especially underweight for its age, the calf was abnormally short and compressed. There was a history of extensive bloating since birth and this condition was evident at all times while the calf was in the clinic.

A study of pedigrees of the sire and dam revealed the Domino strain was predominant, especially on the dam’s side. The calf was the dam’s first offspring.

The only treatment consisted of a transfer of a ruminal flora from a healthy cow to the calf. This was accomplished by obtaining the flora, transferring it to a