

from a recovered animal. Biological vaccines have been reported to give dogs a high degree of immunity against the infection. Treatment with drugs has not as yet proved to be beneficial to any appreciable extent.

REFERENCES

1. Canine Leptospirosis. N. Am. Vet. 23:198-203. 1942.
2. Canine Leptospirosis. Vet. Med. 39:179-182. 1942.

—Stilaf Anderson, fall '43

2

Repair of Fractured Femur Neck by Open Reduction. Fractures of the neck of the femur in the dog are rarely encountered. When seen, they present a difficult problem of repair. This is because it is difficult to apply splints to immobilize the fracture while healing occurs.

An 8-month old male, Wire-haired Terrier, weighing 20 pounds was examined for a left hind leg lameness. The lameness had resulted from an unknown injury 30 days previously. The leg was held in a fashion similar to that seen in a coxofemoral luxation. The limb could be moved in all directions with very little discomfort to the patient. There was a well defined circumscribed swelling protruding laterally in the region of the trochanter major. As the femur was moved forward and backward, definite crepitations could be felt in the region of the swelling.

X-ray examination showed a well marked fracture line extending across the neck of the femur close to the line of ossification. It was decided to attempt to repair the injury by fixing the proximal end of the shaft to the surgical neck with a screw applied in a manner described in human orthopedics.

Success of such an operation depends on two factors; (1) strict asepsis, and (2) directing the peg so that the fractured ends are in correct apposition. Strict asepsis is necessary because bones will not heal in the presence of sepsis, and the ability to combat and absorb infection is very limited in muscle and bone. It is necessary, because of this

fact, to use the utmost precaution to insure complete sterility in this operation.

A large area was shaved at the site of the operation. The animal was anesthetized by the morphine sulfate, intravenous nembutal method. The skin was scrubbed with ether and sterile gauze. When dry, the surface was scrubbed with tincture of green soap for 15 minutes with the aid of a sterile brush. Alcohol was applied and, when dry, wet packs of tincture of phenyl mercuric nitrate, 1:3000, covered the area for 30 minutes.

The operators wore masks, caps, sterile gowns and gloves. The operative field was draped with four double towels and the patient was entirely covered with a sterile shroud of double thickness. A four inch incision was made directly over the trochanter major parallel with the femur. When the incision was made, the skin was dissected back 1½ inches on either side of the line of incision to prevent the skin from coming in contact with the wound or the operator's hands. The tensor fascia lata was divided parallel to the incision for a distance of three inches exposing the trochanter major of the femur. The attendant upon direction by the operator adjusted the femur until the two fracture lines were in apposition. Then by the use of an ordinary one millimeter drill bit, directed slightly anterior and dorsally, a hole was drilled from the base of the crest of the trochanter major medially through it and across the trochanteric fossa into the surgical neck just below the head of the femur. The hole was drilled to a depth of approximately one inch.

The drill bit was withdrawn and a one inch vitallium screw was inserted into the hole by means of a screw driver. The parts were tested for mobility by extending and flexing the joint. Thirty grains of sterile sulfanilamide powder were placed in the wound. The fascia and subcutaneous tissue were repaired by chromic catgut and the skin edges brought together by interrupted mattress sutures. A post operative x-ray revealed that the fractured ends were in

complete apposition. No attempt was made to splint or confine the limb.

In human orthopedic surgery the screw, or pin, is placed within the bone marrow cavity of the surgical neck. In the dog, however, the surgical neck is so small that the operators chose to place the screw above the area going across the trochanteric fossa as shown in Figure 1. This was done because the bone marrow cavity in the neck of the femur was not much larger than the screw, and it was feared that the blood supply might be sufficiently impaired to cause necrosis of the part.

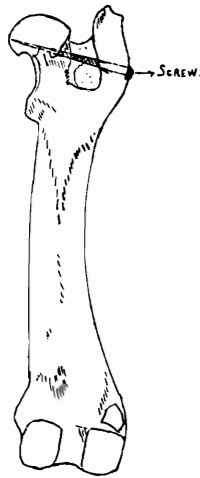


Fig. 1. Use of screw to repair a fractured femur

The postoperative recovery was most satisfactory with the exception of a temperature rise to 103.0°F. on the third day. This corrected itself in 12 hours with the aid of 20 grains of sulfanilamide per orum.

The wound healed without swelling, tenderness, or suppuration and the patient was released to the owner at the end of two weeks. Upon examination five weeks postoperatively, the animal was found to be using the limb at a slow walk, but carrying it at a faster gait. The muscles of the limb were somewhat atrophied, but the owner reported this was slowly correcting itself.

The prominent swelling at the troch-

anter major was still present but no tenderness, crepitation, or disfunction could be detected.

This is the second case of this type successfully repaired at the Small Animal Clinic, Des Moines, Iowa. The other case was a 10-month-old female Airedale. This dog made an almost perfect recovery. The fracture was of five weeks duration when repair was attempted. In this case the enlarged trochanter major diminished to normal size at the end of 90 days, causing the screw to protrude laterally $\frac{1}{4}$ of an inch. When this occurred a small incision was made through the skin over the screw head and it was removed without difficulty with the aid of a local anesthetic.

It is the belief of the operators that the swelling will soon diminish, in the case of the Wire-haired Terrier, and the screw will have to be removed.

—T. B. Ludgate, spring '43
Reiser Small Animal Clinic

3

Congenital Esophageal Stenosis.

On July 9, 1943, a 9-week-old Boston Terrier female was presented at the Stange Memorial Clinic with a history of a good appetite but repeated vomiting for the past week. This symptom became evident after the diet was changed from liquid to solid. Extreme emaciation and dehydration were apparent.

Upon observation it was noted that the vomitus was not admixed with digestive juices. It was tentatively diagnosed as congenital stenosis of the esophagus. An unsuccessful attempt was then made to pass a stomach tube. Allowing the stomach tube to remain in its abnormal position in the esophagus, a fluoroscope was employed. It revealed that the stomach tube had passed only as far as the cardiac area and had then turned back upon itself. This not only confirmed the diagnosis of stenosis but also revealed a diverticulum anterior to the stenosis. Pressure of the retained food