

THE SURGICAL APPROACH TO CORRECT ELBOW LUXATION IN A DOG

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A 9 years old spayed femal white poodle weighing about 5 kg. was admitted to the surgery clinic, Fac. of Vet. Med. Cairo Univ. suffering from lameness at the right forelimb since one month ago.

Clinical examination revealed that the affected limb was deformed and laterally displaced with slight degree of flexion. The said leg was held rigid and was painful on palpation. The head of the radius could be easily palpated lateral to the outer condyle of the humerus.

Radiographic examination (anteroposterior and lateral views) revealed complete dislocation of the distal extremity of the humerus from its normal biped construction and detachment of the anconeal process of the ulna from its normal place (Fig. 1).

Closed reduction was attempted without success probably due to the already formed connective tissues so surgical intervention was decided.

Open reduction of the elbow was performed under the effect of thiopental sodium anaesthesia injected intravenously in a dose of 15 mg/kg b.w., 2.5% sol, followed by intramuscular injection of 2 ml ketamine Hcl to prolong the effect of the barbiturate.

A curved skin incision was commenced laterally proximal to the lateral humeral epicondyle and proceeded distally just below the head of the radius. Separation

of the common and lateral digital extensor muscles as they originate from the lateral epicondyle of the humerus revealed good exposure of the joint capsule (Fig. 2).

The joint capsule was then opened and the periosteal elevator as lever was inserted into the joint space between the humerus and the head of the radius. Manual pressure was applied downward on the lever to increase the joint space. At the sametime the radius and ulna were firmly compressed towards the epicondyle of the humerus, till complete reconstruction of the joint. The joint capsule was closed with 2/0 chromic gut using simple interrupted stitches. The fascia between the common and lateral digital extensors was closed in the same manner.

The skin was closed with interrupted suture using silk (Fig. 3). An external splint with a plaster of paris bandage was applied to reinforce fixation. A course of antibiotic (Garamycin 40 mg twice/day) was intramuscularly given for one week to guard against infection.

After 7 days the skin stitches were removed, then a new ordinary bandage was applied for other 3 weeks. Daily inspection of the surgical region revealed slight oedema which gradually regressed by the end of the second week.

At the end of the third week lateral radiograph revealed good stability of the joint (Fig. 4) and the animal stepped normally with no signs of lameness.

COMMENT

Uncomplicated dislocation of the elbow is an uncommon event in the dog and cat (Ormrod, 1966 and Dingwall, 1970). In the meantime the biped construction of the humerus, the anconeal process of the ulna and the well developed medial and lateral collateral ligaments of the joint make the elbow a stable joint (Muller, Christensen and Evans, 1964). The adopted technique revealed its efficiency to reconstruct the joint



Fig. 1 . Lateral view showing complete dislocation of the elbow joint.

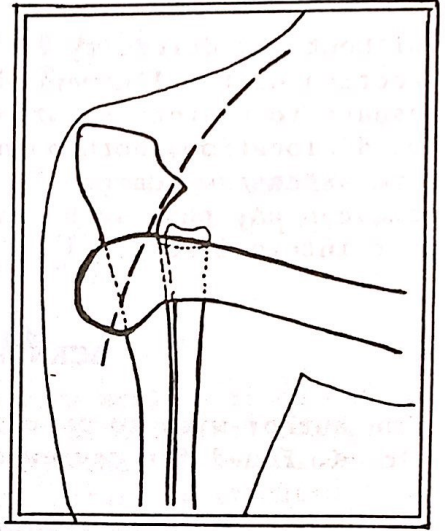


Fig. 2 . Lateral surface of the elbow showing the incision and its relationship to the bones.

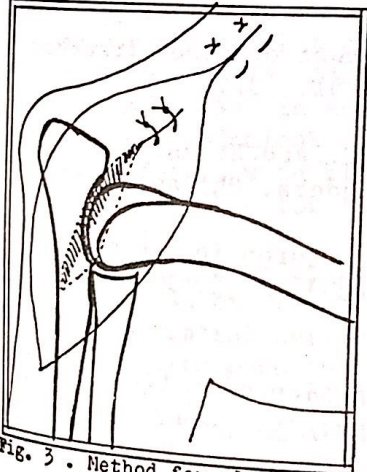


Fig. 3 . Method for closing the joint by suturing the anconeus muscle and the joint capsule. the skin is closed with interrupted suture.

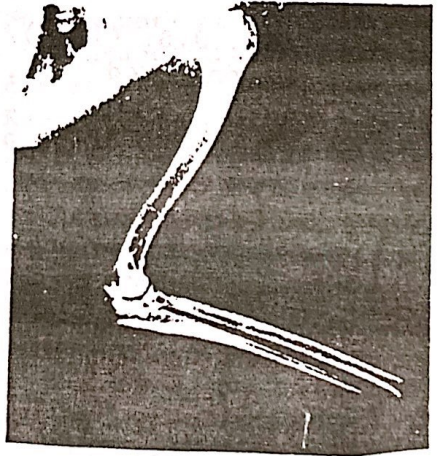


Fig. 4 . Lateral view showing good reconstruction of the distal extremity of the humerus with the upper extremity of the radius and ulna. (3 weeks post-operative)

without any deformity or ankylosis. At the sametime protection of the ligamentus attachment appeared to be necessary to prevent rotation of the limb. In sever cases of dislocation, both open reduction and ligament repair are necessary (Campbell, 1966 and Stoyak, 1975). Finally one can say that such cases could not be corrected without internal surgical intervention.

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