

Luxations in the Dog

Classification and treatment of coxo-femoral dislocations

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THE superior-anterior type of coxo-femoral dislocation represents over ninety per cent of the dislocations in the dogs of this area, and reports from other areas indicate a comparable incidence of that dislocation. For that reason this paper will be confined to a discussion of this group only, permitting the reader to use his own resources on those unusual cases which he will seldom encounter.

Diagnosis and reduction of the coxo-femoral dislocation has been fully discussed in the literature; they are not a part of treatment in its truest sense. Treatment consists of maintaining reduction until sufficient healing has taken place to securely hold the femoral head in the acetabulum after removal of whichever type of fixation may have been used.

As in most surgical procedures there are numerous methods of accomplishing certain results. The procedure of choice, however, is largely determined by an accurate appraisal of the pathology present. This is especially true in treating the dislocation of the coxo-femoral articulation. In order to ascertain the method of choice for fixation, we have found it useful to classify these dislocations into three clinical groups and treat each group accordingly.

After the clinical diagnosis has been verified radiographically, the animal is anesthetized with sodium pentobarbital. Complete relaxation is essential for good reduction maneuvers.

With the patient in the lateral recum-

bent position and the injured hip dorsal, the assistant steadies the pelvic area by means of a towel placed between the groins and with the ends passed over the edge of the table. By applying pressure on the ends of the towel, the pelvic girdle is sufficiently fixed to permit reduction in most



Fig. 1. Illustrating the method of fixation for coxo-femoral dislocations of Group II.

cases.* Grasp the lower part of the extremity firmly with the right hand, and place the left palm over the acetabular area with the left thumb on the trochanter major before beginning a gradual tension on the extremity with the leg in definite abduction. Increase the outward rotation and pull with the right hand until the member is of equal length with its fellow. Then, maintaining this tension, apply inward rotation. If the shortening of the leg

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* The Stader Retractor may be applied. (No. Amer. Vet. 17:44)

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has been overcome, the head of the femur will drop into the acetabulum. This will be readily discernible with the left hand which has been kept over the acetabular area.

Classification of the injury is then made to determine the type of fixation, if any, to be employed. Care must be taken at this point to classify the dislocation correctly if the desired results are to be obtained.

Classification of Coxo-femoral Dislocations

Group I. If the head of the femur **snaps** back into the acetabulum and **remains there when tension is released** from the extremity, we know that the case falls in group I or II.

To differentiate between groups I and II we proceed as follows: Placing the right hand lightly on the foot of the affected member, we move the leg in all directions without making any willful attempt to keep the dislocation reduced. We increase the motion until we are satisfied that normal motion will not again cause a dislocation. No splints or other means of fixation are required for the first group.

Group II. The reappearance of the dislocation upon the release of tension and after carrying out the movements described above characterizes the second group.

Fixation used in group II: Flex the leg completely. Place cotton padding from the toes upward over the hock, and then bandage as shown in Figure 1. Keep in mind that all efforts should strive to rotate the leg inward. Therefore, bandage clockwise on the right leg and counter-clockwise on the left leg. Start the bandage at the toes, bandage the lower extremity and then bandage the groin. When good fixation has been accomplished, tape may be applied over the bandage.

It has been our experience that 7 to 10 days of this type of fixation is sufficient to prevent any further dislocation. We favor this kind of fixation because it maintains a good degree of inward rotation, places muscular tension on the tro-

chanter exerting lateral pressure, and permits the patient to move about.

Group III. In this group, we place those cases which will redislocate immediately upon release of the tension after reduction. It is often difficult to determine when reduction has been accomplished in these cases. However, reduction can be accomplished with patience and care.

Fixation, in these cases, must be of the type that will insure pressure of the femoral head into the acetabulum with a marked degree of inward rotation. The spreader cast described by Ehmer* has proven to be all that he claimed it to be when used on this group. For brevity here we suggest that the reader carefully pursue Ehmer's description. This spreader cast should be kept on the animal for about 10 days. We do not use it on all cases of coxo-femoral dislocations because it is somewhat uncomfortable.

Years of experience indicate that if the described classification and treatment are followed coxo-femoral dislocations will no longer disturb the small animal practitioner.

* Ehmers, E. E. 1934. Special casts for the treatment of pelvic and femoral fractures and coxofemoral luxations. No. Amer. Vet. 15(Dec.):34.

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field cases; late hatches may be more apt to come down than early hatches.

In general, symptoms vary from droopiness to muscular incoordination, retraction of the head, somersaults, rotation of the head or rotation in a laterally prone position. The condition is afebrile and of rapid onset.

In most cases gross lesions are confined to the brain. These gross alterations are characterized by edematous enlargement of the cerebellum associated with slight greyish discoloration and minute hemorrhages either on the cut surfaces or the convexities. This may be observed by longitudinal splitting of the head and gross examination of the brain.

The protective factor against encephalomalacia is present in certain edible oils such as corn oil, cottonseed oil, peanut oil,