SURGICAL MANAGEMENT OF COXOFEMORAL LUXATION IN A CAT: A CASE REPORT

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A two-year-old domestic short-haired cat was presented to the Department of Veterinary Surgery and Radiology, Veterinary College, Hebbal, Bengaluru, with a history of vehicular traumatwo days back. Physical examination revealed left hind limb lameness, pain and crepitation in the left hip joint. Radiographic examination confirmed left coxofemoral luxation. Excision arthroplasty was performed as a salvage procedure, to relieve pain and to provide pain-free, functional pseudoarthrosis.
Keywords: Coxofemoral luxation, Salvage procedure, Excision arthroplasty.

Coxofemoralluxations in dogs and cats are generally the result of external trauma, with 59% to 83% caused by vehicular trauma (Basher *et al.,* 1986; Bone *et al.,* 1984). Clinical signs are associated with sudden onset, pain, deformity, crepitus, and limited or abnormal movement of the limb (Decamp *et al.,* 2016). Closed reduction can be attempted first and a Salvage procedure like femoral head and neck ostectomy (FHO) is recommended when a primary repair fails or is not feasible due toconcurrent fractures or damage to the articular surfaces of the joint (Meeson and Stickland, 2021).

Case history and Observations

A two yearold domestic short-haired cat was presented to the Department of Veterinary Surgery and Radiology, Veterinary College, Hebbal, Bengaluru, with a history of trauma from vehicular accident. It was not bearing weight on the left hind limb and on physical examination, joint deformity and crepitation were palpableatthe left hip joint. Pet was evincing severe pain upon circumduction of the left hip joint. Dislocation of the left coxofemoral joint was confirmed by radiography (Fig.1). Repeated attempts to reduce dislocation failed to retain normal anatomy and hence, a salvage procedure, excision arthroplasty, was resorted to for the management of the condition.

Fig.1. Pre-operative radiograph showing cranial luxation of left hip joint

Surgical Treatment

The surgical site (left hip region) was prepared aseptically after clipping the hairs and scrubbing with the povidone-iodine scrub solution. The cat was premedicated with ceftriaxone sodium (20 mg/kg body weight) and meloxicam (0.3 mg/kg Bd. Wt.) administered intramuscularly and it wassedated with diazepam (0.5 mg/kg body weight) and ketamine (25 mg/kg body weight) injected intramuscularly. Anaesthesia was maintained with intramuscular administration of ketamine.

A curvilinear incision was made from just dorsal to greater trochanter to proximal 1\3rd of the femur along its cranial border. Skin and subcutaneous tissue were bluntly dissected. The incision was continued through fascia lata along the cranial border of the biceps femoris to locate gluteal muscles. Middle gluteus and deep gluteus muscles were transected at their insertion for better exposure tothe hip joint. The limb was rotated externally at the stifle to expose the femoral head. The head was transected at the base of the neck using a pair of scissors (Fig.2). The ostectomised surface was examined for any sharp edges and smoothened using rongeur forceps. The transected gluteal muscles were apposed to their tendinous insertion with a simple interrupted suture pattern using Polyglactin 910 No. 1-0. The fascia lata and biceps femoris incisionswere closed with a simple interrupted suture pattern using Polyglactin 910 No. 1-0. The subcutaneous incision was closed using chromic catgut no. 2-0 with a simple continuous suture pattern. The skin incision was apposed using polyamide suturesno. 2-0,in horizontal mattress suture pattern. The surgical wound was cleaned and povidoneiodine ointmentwas applied and the dressing was done. The post operative radiograph wastaken to seethe situation (Fig.3.). Postoperatively antibiotic cover was given with Cephalexin (at the dose of 20 mg/kg body weight BID orally) for 7 days and analgesic meloxicam (at the dose 0.2 mg/kg body weight SID orally) for 3 days. Alternative day dressing was followed until suture removal, which was done 10 days post-operatively.

Fig. 2. Excised femoral head

Fig. 3. Post-operative radiograph

Results and Discussion

The cat recovered uneventfully from anaesthesia.The surgical wound was healed completely by the 10th day without any complications. Sutures were removed by the 10th postoperative day. Postoperatively in the first week, the pet was showing severe limping. The lamenessgradually improved by third week post-operatively. By the fourth week post-operative, the cat was moving around without and any evident lameness.

Cats with traumatic coxofemoral luxation are usually lame, often exhibit non-weightbearing lameness, and the affected limb may also be abnormally positioned. Closed reduction should be attempted and is mostlikely to be successful if performed within 48 hours as also mentioned by Meeson and Stickland, 2021. In the present case, it was not successful to reduce the dislocated joint successfully, because of the delay in attempting closed reduction. Hence, a salvage procedure, excision arthroplasty, was resorted to for the management of the condition.

Excision arthroplasty, also referred to as femoral head and neck ostectomy (FHNO) is a procedurethat takes a painful, poorly functional or non-functionaljoint and provides a pain-free functional alternative asalso reported by Meeson and Stickland, 2021. FHNO is asalvage surgical procedurein which the entire femoral head and part of thefemoral neck are removed (asalso recommended by Schulz and Dejardin, 2003. In the current case, the cat had normal wound healing and very good surgical outcome. Post-operatively, the cat was encouraged to exercise from10–14 days after surgery, by playing and undertaking a passive range of motion exercise, as also recommended by Meeson and Stickland, 2021.

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