

FEMORAL HEAD AND NECK OSTECTOMY FOR THE SURGICAL CORRECTION OF TRAUMATIC COXOFEMORAL LUXATION IN A NON-DESCRIPT DOG- A CASE REPORT

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A four-year-old, non-descript, female dog was presented to ICAR- Indian Veterinary Research Institute, with a history of falling from the third floor of the building. Clinical examination revealed left hindlimb lameness with pain in the coxofemoral joint. Physical and radiographic examination confirmed left coxofemoral luxation, which was corrected surgically by femoral head and neck ostectomy technique. Prompt postoperative care with mild exercise leads to a successful outcome. The animal recovered without any complications.

Keywords: Coxofemoral luxation, Surgical management, Femoral head ostectomy, Lameness.

Coxofemoral luxation is a frequently encountered traumatic orthopaedic condition in dogs. The main presenting symptom will be non-weight-bearing lameness. Cranio-dorsal coxofemoral luxation is most commonly encountered in small animals. Closed reduction for coxofemoral luxation is often unsuccessful in small animals. Surgical correction techniques include femoral head and neck ostectomy (FHO), gluteal tenotomy, trochanteric transposition, triple pelvic osteotomy, toggle pinning, and total hip replacement (Kilic, 2006). FHO is considered as an effective way of managing the coxofemoral condition, especially when other treatments are unsuitable or uneconomical (Smith *et al.*, 2017).

FHO is a surgical procedure that creates pseudarthrosis on a previously articulating area by disarticulating the coxofemoral joint and removing the femoral head and neck. This surgical procedure is indicated in conditions such as irreducible coxofemoral luxation, acetabulum fracture, degenerative joint diseases, and avascular necrosis of the femoral head (Trostel *et al.*, 2000) check the year. In addition, FHO is usually considered as a salvage process to restore the normal function of the affected joint. In this case, the dog was

diagnosed with coxofemoral luxation, and surgical correction using FHO was successfully employed.

Case history and Treatment

A four-year-old, non-descript, female dog was presented to ICAR-Indian Veterinary Research Institute, with a history of falling from the third floor of the building. Clinical examination revealed left hindlimb lameness. An orthopedic examination revealed partial weight bearing on the left hind limb, with pain evidenced on palpating the coxofemoral joint. In addition, an apparent shortening of the left hind limb was noticed. The pelvic radiograph in a ventro dorsal view indicated craniodorsal luxation of the left coxofemoral joint without any radiographic signs of fracture (Fig 1A). Thus, the case was diagnosed as craniodorsal luxation of the left coxofemoral joint and was decided to correct surgically.

The animal was sedated using xylazine at the dose rate of 1 mg/kg intramuscularly, and anaesthesia was induced using ketamine hydrochloride at the dose rate of 10 mg/kg body weight intravenously. Pre-emptive analgesia was achieved using tramadol at 2 mg/kg body weight intramuscularly. General anaesthesia was maintained under 2% isoflurane.

The animal was positioned in the right lateral recumbency, and the surgical area was aseptically prepared. A long vertical incision was made along the craniolateral border of the femur. After proper dissection of underlying tissues, the coxofemoral joint was exposed. The middle and deep gluteal muscles were separated and retracted caudally. After separating the tendinous attachment of the deep gluteus, the joint capsule was incised to expose the femoral head. A giggle wire was employed to perform femoral head osteotomy (Fig. 1 B). The dissected area was thoroughly irrigated with normal saline. After capsulorrhaphy, the

muscles, fascia, subcutaneous tissue, and skin were opposed routinely.

Post-operatively, the limb was immobilised using an Ehmer sling to achieve superior stability. The dog was administered with cefpodoxime @10 mg/kg body weight orally for seven days. Carprofen at the rate of 4 mg/kg body weight was administered orally for pain management, along with other supportive treatments. The owner was advised to give light exercises after one week. The sutures were removed on 12th postoperative day. The animal started complete weight bearing by the 30th postoperative day without any complication.

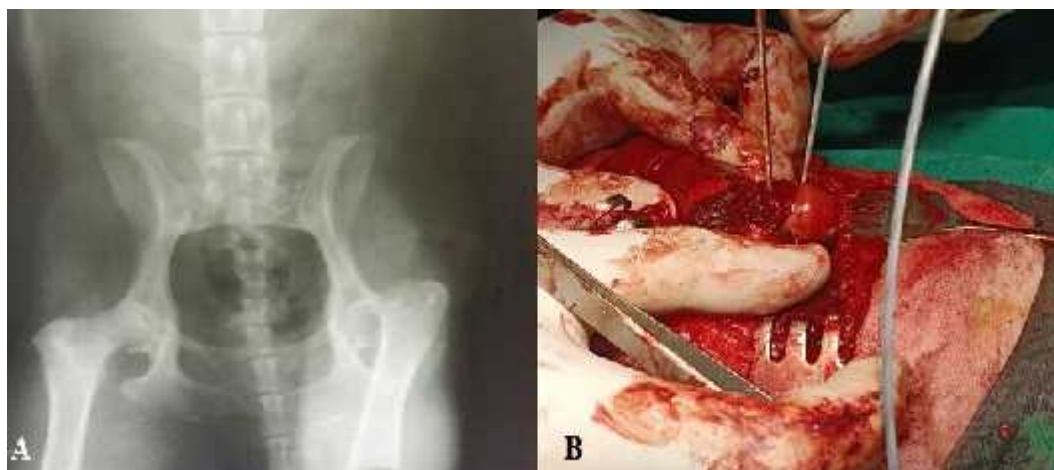


Fig 1: (A) Hip ventro-dorsal radiograph revealed cranio-dorsal luxation of the left coxo-femoral joint (B) The femoral head and neck osteotomy was performed using a giggle wire

Results and Discussion

This case report describes the successful treatment of a traumatic coxofemoral luxation using FHO in a four-year-old, non-descript dog. Coxofemoral injuries are commonly encountered in small animal practices. The surgical and non-surgical or closed reduction method is adopted depending on the presenting condition. Surgical correction is preferred as it has less chance of failure. Surgical reduction is successful in managing coxofemoral luxations of small dog breeds. FHO can be efficiently adopted for managing coxofemoral luxation in dogs weighing up to 25 kg as also reported by Sutradhar *et al.*, 2019.

The common complications of FHO include pain, wound infection, muscular flap necrosis, and shortening of limbs as mentioned by Kilic, 2006. In the present case, the surgical asepsis and good postoperative management by the owner resulted in complete recovery without any complications. Furthermore, the slight exercise performed daily helped to provide a physiotherapeutic effect and contributed to faster recovery. From the present case, it is concluded that aseptic surgery and good postoperative management contributed to the favourable outcome.

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