

BILATERAL CONTRACTED FLEXOR TENDON AND ITS SURGICAL MANAGEMENT IN A CALF

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Congenital flexural deformities usually involve the carpal or fetlock joints and ranges in severity from mild flexion of one joint to severe flexion of several joints and inability to walk, stand and suckle (Fubini and Ducharme, 2004). This condition is involving the flexor tendons of one or both fore limbs or hind limbs, but front limbs are primarily affected . Etiology includes inherited factors (autosomal recessive gene), *in-utero* malpositioning, large size of foetus, toxicity and mineral and vitamin deficiency during pregnancy (Kumar *et al.*, 2012). The present report communicates successful surgical management of bilateral forelimb fetlock joint knuckling in a jersey calf.

CASE HISTORY AND CLINICAL OBSERVATION

One cross bred Jersey male calf of 10 days old weighing about 30 kg body weight was presented with history of flexed fetlock in both the fore limbs, difficulty in standing on hoof and bearing weight on the fetlock joint (Photograph 1). On clinical examination the calf had normal body temperature, respiration rate and pulse rate. Physical examination of fore limb revealed, knuckling of both the fore limbs at fetlock joint and manual straightening was not possible. The case was diagnosed as bilateral contracted flexor tendon and was advised for surgical correction.



Photograph 1. Knuckling of fore fetlocks.

TREATMENT

The calf was restrained in lateral recumbancy and sedated with Xylazine hydrochloride @ 0.08 mg/kg body weight. The palmar aspect of both the forelimbs were shaved, cleaned properly and prepared aseptically for surgery (Photograph 2). Local infiltration with 2% lignocaine hydrochloride and adrenaline solution was administered at the site. One cm long skin incision was made at both the sides of palmar aspect of the limb in between fetlock and coffin joint over the tendon. The subcutaneous tissues were separated by blunt dissection. Both superficial and deep digital flexor tendons were separated by blunt dissection. At first the superficial digital flexor tendon was transected in the right forelimb and manual pressure was applied to extend the limb but was not successful . So the deep digital flexor tendon was also severed. While in left forelimb transaction of only superficial digital flexor tendon was sufficient for correcting the deformity.

Antibiotic Chloramphenicol powder was sprinkled inside and the skin wound was closed in routine manner. Sufficient padding with bandaging was done after application of antiseptic ointment and sterilized pad over suture line . Plaster of paris (POP) cast with splint was applied from knee joint to the hoof in both the limbs. Post-operatively inj. Ceftriaxone sodium (Intacef) 500mg, inj. Meloxicam (Melonex) 2ml and Tribivet 2ml were given for 5 days consecutively. The owner was advised to keep the calf in a confinement dry place with minimum mobility and avoiding of soiling.



Photograph 2. Surgical preparation of the site.

RESULTS AND DISCUSSION

Knuckling results with flexion of fetlocks, pastern or carpal joints to varying degrees due to shortening of the superficial and deep digital flexors and associated muscles. The animal bears weight on the dorsum of the fetlock joint and if the condition is not corrected septic arthritis of the joint is the usual sequel. There are different techniques which have been adopted for the treatment of contracted flexor tendon in calves, viz. application of splint, POP bandage or fiber glass cast (Cihan *et al.*, 2004), tenotomy with splint (Patel *et al.*, 2012) and administration of oxytetracycline (Maiti *et al.*, 1996 ; Kumar *et al.*, 2012). Where there is possibility of manual straightening of joint, only application of splint or plaster cast can solve the problem. In the present case tenotomy with plaster cast was used due to failure in manual straightening. Post-operatively antibiotics and analgesics were recommended to prevent secondary bacterial infection and to reduce inflammation at the site. Inj. B-complex was recommended as it helps in absorption of calcium and phosphorus at the joint surface therefore it attributed to relieve the bone tension and helps in normal extension (Madison *et al.*, 1994). POP cast and sutures were removed on 25th post-operative day and the calf showed stiffness of joints. So it was advised for gentle hot fomentation and physiotherapy in order to reduce stiffness caused due to application of POP cast and to regain normal mobility. After 3 days of physiotherapy the calf showed normal walking ability without flexion of the joint.

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