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Popular Article

Surgical Correction of Contracted Flexor Tendon In A Jersey Calf

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Abstract

A two-week-old Jersey calf was brought to the ANDUAT veterinary clinical complex at Kumar Ganj, Ayodhya, UP, since it had been unable to walk or stand correctly from birth and had an incorrect forelimb placement. Bilateral congenital flexor tendon contracture was the diagnosis made after a physical and clinical examination of the calf. The calf was given anaesthesia and laid unconscious. The metacarpal region's caudal side was prepared aseptically. A POP was placed after surgery, along with a superficial and deep digital flexor tenotomy. On the fourteenth day following surgery, the calf was able to walk and place his forelimb appropriately.

Keywords: Congenital defect; Contracted flexor tendon; Jersey calf ; POP; Tenotomy

Introduction

Contracted tendons are a common congenital problem, more prevalent in the calf (Salas, 2021 and Steiner, 2014) within 1 or 2 weeks of age. The deformity ranges from a mild, moderate to severe. The cause for congenital flexural deformity is unknown (Schoiswohl, 2019) , but a calf seen with additional congenital abnormalities may have a heritable condition and should be removed from the breeding pool . Mild and moderate cases can be managed by physiotherapy combined with medical therapy (Saglam, 2021) whereas severe form requires surgical intervention by tenotomy . Good prognosis is warranted in cases presented earlier without other congenital abnormalities (Schoiswohl, 2019) and corrected by transection of superficial digital flexor tendon (SDFT) and deep digital flexor tendon (DDFT) followed by POP application.



Case History and Clinical Observation

A two-week Jersey calf was brought to the veterinary clinical complex, ANDUAT, Kumarganj, Ayodhya, UP with the complaint of unable to stand and walk properly on forelimbs since birth. On examination of forelimb, the calf was knuckling and an abnormally angled metacarpo-phalangeal joint without joint swelling was noticed.



Contracted Flexor Tendon of Forelimbs



Radiograph of Contracted Flexor Tendon of Forelimbs



Exteriorising SDFT followed by DDFT



Severed SDFT & DDFT



Wound closed by Polyamide with interrupted suture



POP application with a window for regular dressing

Treatment

A 0.05 mg/kg b.wt dose of Xylazine HCl was used to sedate the calf, and 2% lignocaine HCl was used for local infiltration. The calf was anesthetized, placed in lateral recumbency, and the caudal aspect of the metacarpal area was aseptically prepped using surgical spirit and povidone iodine. A linear incision was made on the caudal portion of the mid metacarpal area following aseptic preparation. The flexor tendon fascia was incised, taking care to prevent damage to the medial and lateral digital palmar arteries, veins, and nerves. Using blunt curved artery forceps, the superficial flexor tendon was lifted and transected; the deep digital flexor tendon underwent the same treatment. As soon as the flexor tendons were severed, the fetlock's extension and flexion



were assessed. Polyamide 2.0 is used to seal the skin in a straightforward interrupted pattern. POP was administered to the metacarpal region, starting from the heel and extending to the radius and ulna, following skin closure. Following surgery, the calf received three days of 0.3 mg/kg i.m. Meloxicam and five days of 250 mg intravenous Ceftriaxone. The 14th post-operative day saw the calf regain its ability to stand and walk normally.

Discussion

One common congenital condition is contracted tendon. Congenital flexural deformity has an unknown origin. Previous investigations suggested that the development of contracted tendon was also caused by hereditary variables and the foetus's malpositioning in the uterus. There are three categories for flexural deformities: mild, moderate, and severe. In less severe situations, the calves can walk on their feet but not on the ground with their heels. When an animal is badly afflicted, they may walk on the dorsal aspect of their fetlock, pastern, or carpus. In moderate cases, the dorsal aspect of the claw breaks over a vertical plane perpendicular to the ground. Physiotherapy will be effective in treating mild to moderate instances. However, surgery is necessary for tendons that are significantly constricted or that do not improve with medication. The degree of recovery is determined by the type of therapy used, the timing of presentation, and whether or not there is another congenital defect. The current case was initially brought in without any other congenital abnormalities and with a severely contracted flexural deformity. As a result, POP was applied after surgery to treat the calf. On the fourteenth post-operative day, the calf recovered without incident and shown normal gait and hoof placement.

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