

Upward fixation of patella in cattle

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Introduction

Upward fixation of patella is the most common surgical problem in Indian cattle especially buffaloes. Although it has been reported in almost every species of domestic animals and may occur sporadically. Chronic luxation of patella has been defined as temporary displacement of progressive nature. Patellar fixation is one of the main functional disorders of the stifle joint in cattle, characterized by temporary or permanent dislocation of the patella from its regular position during locomotion. Upward fixation of patella is more common in young and debilitated animals with steep angle between femur and tibia. This is due to the strain brought about by heavy work on the tendon and immature ligaments of the femuro-patellar articulation, when they first started as draft animals. The disease is responsible for considerable economic loss as the lameness affects the working ability of bullocks and also movement of animal. If the case is left untreated animals become anorectic which eventually leads to loss of condition. Upward fixation of patella is treated surgically by Medial Patellar Desmotomy (MPD).

History and Observations

Condition is usually seen in older animals and low body condition animals. In most of the cases, lameness after prolonged rest is observed to be the most typical sign, which is at peak during morning. The fixation involves subtle extension of the limb, phalangeal flexion such that the animals were dragging their tip of the hoofs. In acute cases, the hind limb gets locked in extension. Limb is dragged in full extension during walk and the animal moves by swing rigid affected limb outward and forward. Backward movements are restricted and the animal show jerky flexions during progression or they drag their affected limb with flexed pastern. Clinical signs are most severe in advanced pregnant animal due to the laxity of ligament under the effect of estrogen. The symptoms in few cases disappear after few steps and again develop after rest. On palpation the straight ligaments feels tensely stretched, the trochlea of the femur is found free from the patella and the later is found beyond its upper extremity.

Treatment

Cases are treated by surgical procedure of Medial Patellar Desmotomy (MPD) as a

standard procedure. The animal is controlled and cast in lateral recumbency with the affected limb towards the ground and under local analgesia medial patellar ligament is severed. The medial ligament is felt as a prominent cord and is severed using bisturi knife or B.P. blade number 11. A crunching sound is observed while cutting the ligament. Protrusion of adipose tissue through gap created by cut ends of the ligaments and feeling of gap due to cutting of tensed ligaments is observed after the surgery. Immediate relief from jerky flexion on walking is the most important confirmatory sign for the successful operation. The animals should not be used for hard work for about 8-10 days.

Upward fixation of patella is the most common condition encountered in field which is effectively treated surgically by MPD (Medial Patellar Desmotomy). The operation has 100% cure if performed well providing immediate and permanent relief from the condition with minimum post-operative care by closed method. MPD can also be performed in standing position. It has been reported that buffaloes in late pregnancy and early lactation suffer from molybdenum induced phosphorus deficiency haemoglobinuria and are more susceptible to this condition.