



MJF COLLEGE OF VETERINARY AND ANIMAL SCIENCE, CHOMU

Surgical Management of Upward Fixation of  
Patella  
(UFP)/Stringhalt in Large Animals

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# Clinical Sign



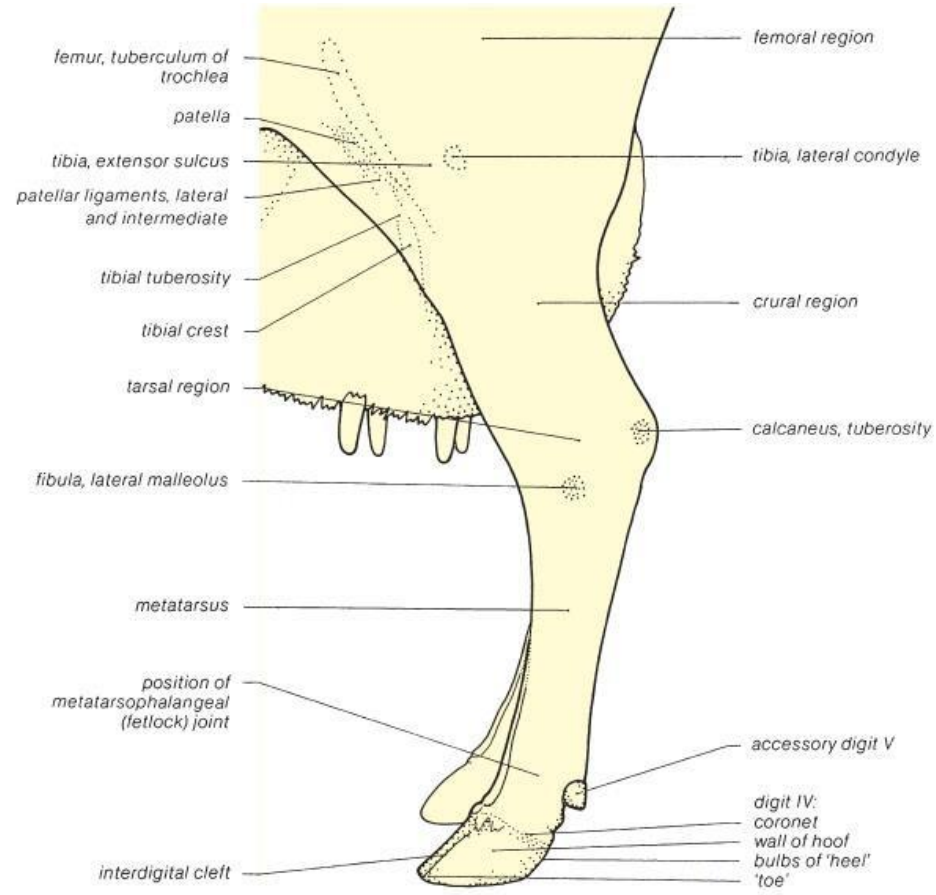
## Symptoms

- In acute cases, hind limb is locked in extension. The stifle and hock cannot flex, but the fetlock can.
- In some cases, the locking may be relieved and recur in next few steps or it may remain locked for hours or days.
- In some cases, “catching” of the patella occurs when the animal walks and the limb never truly locks in extension.

# Predisposing Causes

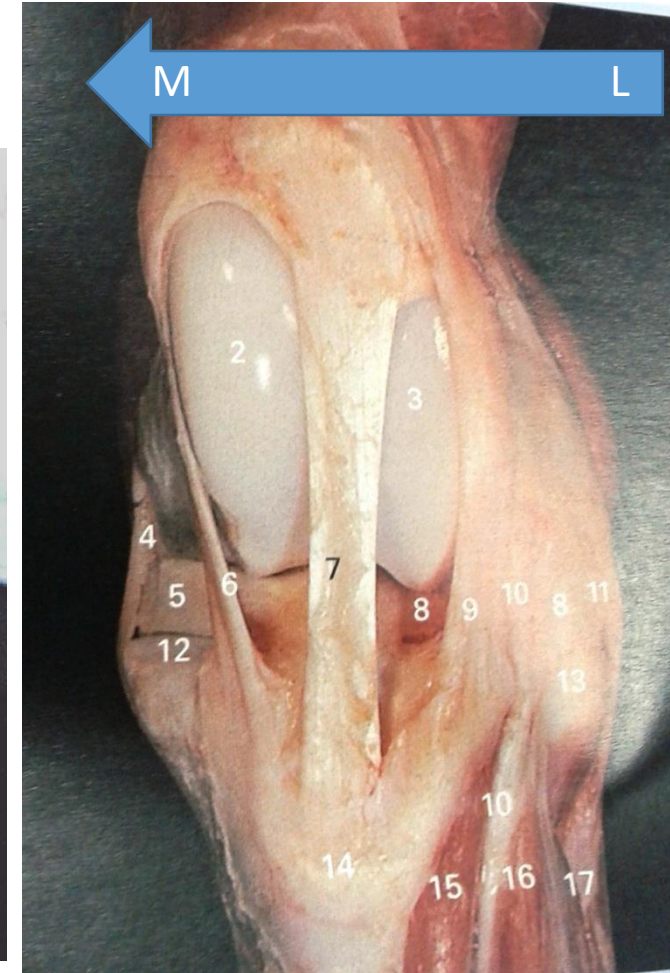
- Occupational Trauma
- Laxity of Ligament
- Climate Condition
- Pregnancy

- The patella get fixed between the trochlear ridges by hooking the medial fibrocartilage of patella over medial trochlear ridge of femur.





# How to locate the MPL



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- On palpation, when the limb is locked in extension, patellar ligaments are tensed and the patella is locked above the medial portion of the femoral trochlea.
  - Make the animal walk up and down a slope. Since animals with intermittent upward fixation of patella are reluctant to fully extend the stifle when they walk uphill, they assume a slightly crouched position and are reluctant to allow the stifle to be thrust caudad. As they descend the slope, a jerky gait may be noted as the result of incomplete extension of the stifle.

### **Differential diagnosis**

- Intermittent upward fixation of patella may be confused with stringhalt. The patella should be forced upward and outward over the femoral trochlea to observe if it can be temporarily locked that would help to rule out stringhalt.
- Radiograph of the stifle should be made on animal less than 3 years of age to eliminate the possibility of concurrent osteochondritis dissecans of the trochlea and subchondral bone cysts of the medial condyl.

## Treatment

### Conservative approach

- In acute upward fixation of the patella, a sideline may be applied to the affected limb so that as the limb is drawn forward, the patella is pushed medially and downward, which often disengages the fixed patella.
- Startling the animal with a whip so that the sudden jump may release the patella.
- Backing the animal while at the same time pushing inward and downward on the patella may release it.

### Surgical approach : *Medial patellar desmotomy*

- A  $\frac{1}{4}$  to  $\frac{1}{2}$  inch incision is made over the middle patellar ligament near the tibial attachment of the ligament under local analgesia.
- A blunt bistoury is inserted underneath the medial patellar ligament close to its tibial attachment. (Alternately a curved mosquito forceps are forced through the heavy fascia beneath the medial patellar ligament. This tears the fascia so that a large bistoury can be inserted beneath the ligament.)
- The blade is turned outward and the medial patellar ligament is severed.
- Skin wound is closed in a standard manner.

**Prognosis** : Favourable.

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# Restraining/Positioning

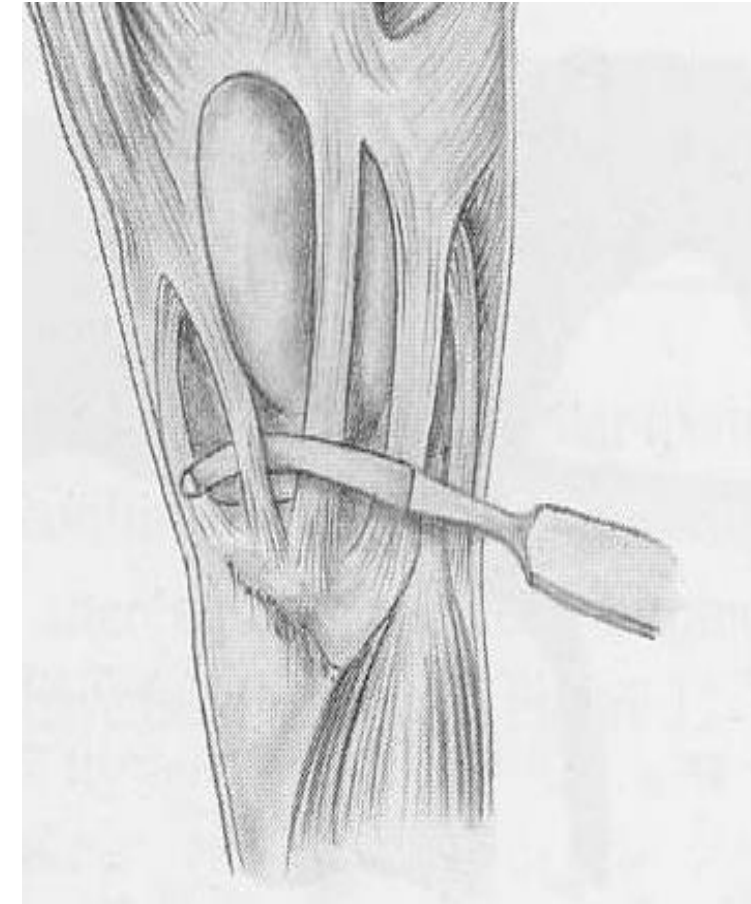
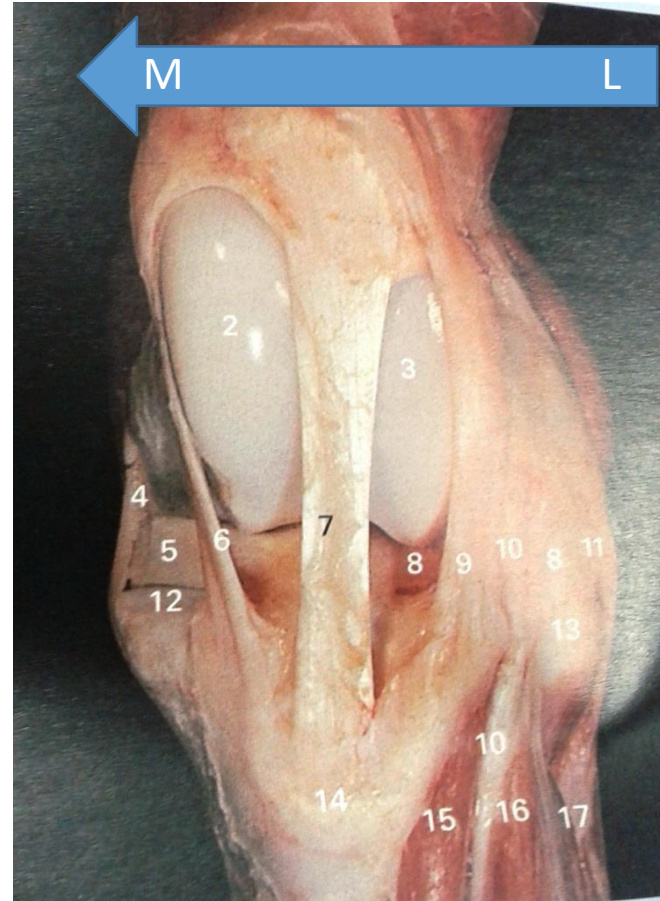


Inj. Xylazine 5 mg IV /COW/Buffalo  
Inj. Butorphanol 2 mg IV/COW/Buffalo





# Surgical Correction



Depression at the location of medial patellar ligament, Cessation of crunching sound and immediate relief of the characteristic jerk flexions during progression indicates successful surgery.

Medial Patellar Desmotomy





Buffalo Post Surgery.xspf1.xspf





# Stringhalt in Horses



## **STRINGHALT**

It is an involuntary flexion of the hock during progression and may affect one or both hind limbs.

### **Etiology**

- Exact etiology is not known.
- Nervous diseases, degeneration of the sciatic and/or peroneal nerves, affection of the spinal cord, toxic factors and articular lesions within the hock and stifle are thought to be responsible for the condition.
- Involvement of lateral digital extensor.

## **Symptoms**

- Some horses show mild flexion of the hock during walking, while others show a marked jerking of the foot towards the abdomen.
- Some horses show these signs at each step, while in others it is spasmodic.
- The signs become more apparent when the horse walks after rest and the signs may diminish later on.
- Clinical signs increase in cold weather whereas decrease in warm weather.

## **Diagnosis**

History and clinical signs.

## **Differential Diagnosis**

- It must be differentiated from fibrotic myopathy, in which the foot is jerked suddenly downward and backward before being put to the ground.
- It must also be differentiated from intermittent upward fixation of the patella. In stringhalt, there is no locking and releasing of the patella and the patella cannot be locked when forced upward and outward on the trochlea of the femur.

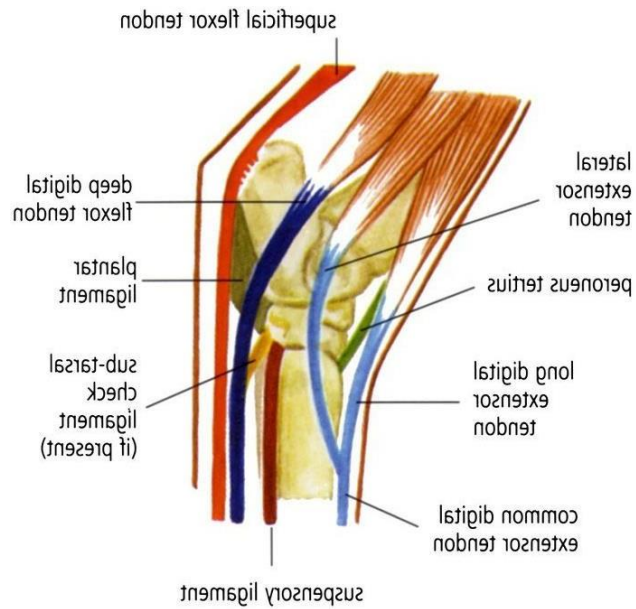
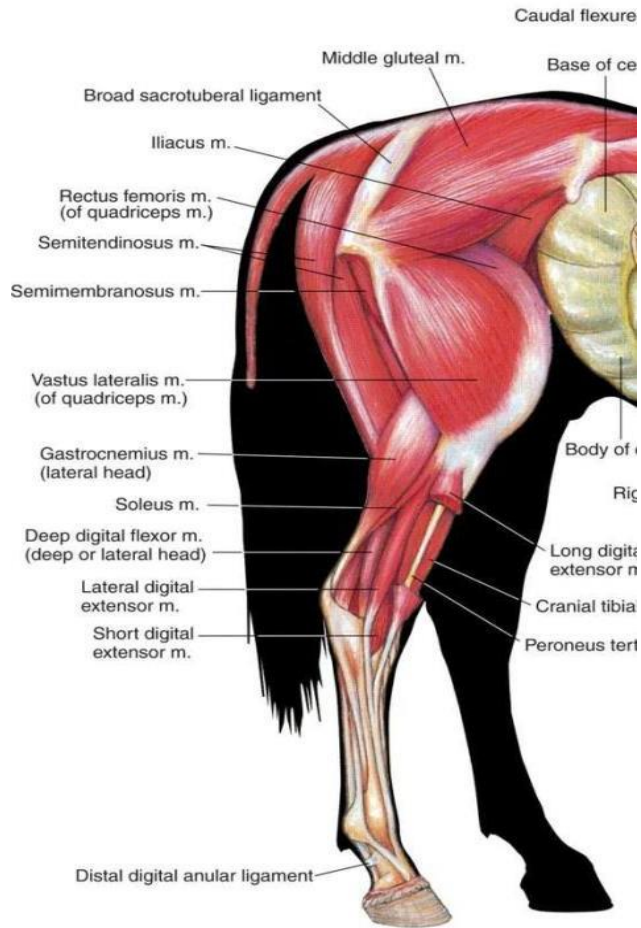
## **Treatment.**

### **Lateral digital extensor tenotomy**

- Operated in standing or in lateral recumbency with affected limb upper most under local analgesia.
- A 4-inch incision is made over the muscle of the lateral digital extensor just above the level of the point of the hock.
- Incise through the fascia and the muscle belly is exposed. Pull the muscular portion to reveal movement in the distal portion just before it attaches to the long extensor.
- A ½ inch incision is then made over this distal portion before it joins the long extensor.
- Skin and subcutaneous tissues are cut with a scalpel and then a blunt pointed bistoury is slipped under the tendon and severed.
- Exert tension on the proximal portion to pull out the tendon.
- When the whole tendon is exposed (about 7 inches) through the upper incision, the tendon should be cut off, removing a 3-4 inch portion of the muscle belly with it.
- After removal of the tendon, subcutaneous fascia is sutured.
- Skin wound is sutured in a standard manner.

**Prognosis:** Favourable to guarded.

# Boccar's operation/ Peroneal tenotomy



Lateral Digital Extensor Tenotomy