**Indications:**

Used in cases of acquired tendon contracture.

Inferior check ligament desmotomy is frequently performed on horses with adhesion of the deep digital flexor tendon to the navicular bone. It may also be used as an adjunct for the treatment of laminitis, and for flexural deformities in foals.

Other indications include:

* Correction of flexural deformities
* Mild - moderate cases of distal interphalangeal flexural deformity that do not respond to conservative treatment.
* Severe cases of distal interphalangeal flexural deformity may require a deep digital flexor tenotomy
* Severe metacarpophalangeal joint flexural deformities, in combination with superior check ligament desmotomy
* Severe and persistent cases of ALDDFT tendinitis where conservative treatment has been unsuccessful.
* Rotation of the distal phalanx as a consequence of chronic laminitis or abnormal hoof-pastern axis.

Inferior check ligament desmotomy creates a lengthening of the deep flexor tendon allowing the hoof angle to be lowered. This brings the hoof-pastern axis into normal alignment and allows the necessary changes to be made within the hoof capsule.

**Description:**

* The ligament originates from the palmar carpal ligament and inserts on the deep digital flexor tendon in the mid metacarpal region.
* In cases of navicular syndrome or palmar foot pain, allowing the DDFT to lengthen by transection and resection of the inferior check ligament takes stress off the DDFT itself, as well as the navicular bone and other soft tissue structures within the foot. As wear and tear occurs in the foot, the navicular bone may lose its fibrocartilaginous covering, and the navicular bursa, between the DDFT and the navicular bone, may collapse. These horses may have a broken forward or broken back pastern axis and in either case, the discomfort may be the result of the increased tension on the deep digital flexor tendon as it passes under the navicular bone in the heel area. Increasing the length of the musculo-tendonous unit by resecting the check ligament may decrease this tension and allow some shoeing options
* In cases of flexural deformity of the DIP joint, there is a functional shortening of the deep digital flexor musculo-tendonous unit. This shortening is responsible for the abnormal changes that occur within the foot. The increased tension of the flexor tendon causes the DIP joint to be constantly flexed, which causes a change in angulation of the third phalanx and increased weight bearing on the apex of the bone instead of the entire solar surface. This abnormal weight bearing leads to chronic foot bruising and lameness. All flexural deformities appear to have some radiographic signs of rotation, but this may be due in part to the distortion of the hoof capsule, the bending of the horn tubules of the anterior hoof wall and the flat thin sole resulting from the increased pressure on the apex of the third phalanx.

**Technique:**

1. The most straightforward technique and commonly performed technique is accomplished by:
2. using conventional surgery in lateral recumbency positioned for a lateral approach, with the affected leg up.
3. The skin may be rolled palmarly before incising, so the final placement appears over the fourth metacarpal bone.
4. The skin incision begins 2 cm distal to the head of the fourth metacarpal bone and extends distally 2 cm.
5. Sharp dissection is continued through the subcutaneous tissue, the fascia of the flexor carpal sheath and paratenon, exposing the junction of the accessory (inferior check) ligament with the DDFT.
6. A pair of curved haemostats are passed along the dorsal border of the accessory ligament and the DDFT and spread, then withdrawn.
7. Next, the haemostats are passed along the palmar border of the ligament in a similar fashion. Care must be taken to avoid the neurovascular bundle.
8. Digital palpation of the superficial digital flexor tendon (SDFT) and DDFT is performed to confirm that the proper structure has been isolated.
9. The lower limb may be slightly flexed to relax the ligament that is isolated, exposed, and exteriorized with the haemostatic forceps, and then transected.
10. Remove a 1-cm section of the ligament. The limb should undergo extension and flexion, and the operator should observe the movement of the structure to ensure complete transection.
11. Closure should be performed in three layers, being careful to leave a 0.5-cm opening in the distal portion of each layer to allow for drainage, should a seroma occur.
12. The bandage should extend above the knee and be taped to prevent slippage and exposure of the incision. If there is no slipping of the bandage, the first bandage should remain in place 4 to 5 days before changing.
13. The foot should be trimmed appropriately, and, if a corrective device such as a toe cap is needed, it should be applied.

**Complications:**

Incisional swelling, incision dehiscence and post-operative scarring.

**Prognosis:**

* Although clubfoot deformity in horses is common, there is a sparse amount of evidence-based work defining the syndrome and its management. Therapy is often empirical and based on clinical experience.
* The primary goal of therapy and management of any clubfoot horse is to obtain a sound horse with a normal or near-normal foot that will be maintained with routine hoof care. One important principle of clinical management is to determine if discomfort or lameness is present, and if so, to localize the source of the lameness and determine the association of the lameness to the clubfoot (primary or secondary). If the foot is improperly loaded, a normal-contour hoof capsule will not be possible to obtain, and the underlying lameness may be the limiting factor on the future athletic capacity.