

Deep Digital Flexor Tenotomy

What is a deep digital flexor tenotomy?

- A surgical procedure where the deep digital flexor tendon is separated/divided
- Often done as a salvage procedure

Why is this done?

- Removes the predominant force responsible for the disto-palmar migration of the distal phalanx
- Removes the source of pain
- Reduces the potential for further rotation of the distal phalanx

Deep Digital Flexor Tenotomy	
Indications for use	<ul style="list-style-type: none"> - Laminitis with rotation - Flexural deformities
Equipment and materials	<ul style="list-style-type: none"> - Needle and syringe - Kelly haemostatic forceps - Forceps (atraumatic) - Sharp-blunt scissors - Size 4 scalpel handle with a 22 blade
Preoperative measures	<ul style="list-style-type: none"> - An extended heel shoe is applied to the foot along with an aluminium pad with urethane plastic packing on the sole - The hair at the site should be clipped - The site should be surgically prepped - Administer Gentamicin sulphate intravenously
Procedure	<p>There are two procedures:</p> <p>1. Mid pastern approach:</p> <ul style="list-style-type: none"> - Patient is placed under general anaesthesia - An incision is made mid pastern through the skin, on the palmar aspect of the limb - Then, the Kelly haemostat is used to blunt dissect the flexor tendon sheath to separate the deep digital flexor tendon and the superficial flexor tendon - Once, the tendons are separated, the deep digital flexor tendon is isolated - The sharp-blunt scissors is placed under the deep digital flexor tendon, and brought forward - Using the scalpel, the tendon is then transected - The incision site is closed using 2-0 polypropylene suture (non-absorbable) <p>2. Standing DDFT tenotomy:</p> <ul style="list-style-type: none"> - The patient is sedate with clinician's choice of drug

	<ul style="list-style-type: none"> - Then, a nerve block is performed over each of the palmar nerves - At mid metacarpal area, an incision through the skin is made - Then, the Kelly haemostat is used to blunt dissect the flexor tendon sheath to separate the deep digital flexor tendon and the superficial flexor tendon - Once, the tendons are separated, the deep digital flexor tendon is isolated - The sharp-blunt scissors is placed under the deep digital flexor tendon, and brought forward (retracted) - Using the scalpel, the tendon is then transected - The incision site is closed using 2-0 polypropylene suture (non-absorbable)
Post operative care	<p>Administer:</p> <ul style="list-style-type: none"> - Antibiotics (Procaine penicillin) - anti-inflammatory/ analgesic therapy (phenylbutazone) <p>Bandage the site and change every 48 hours until the sutures are removed</p> <p>The animal should be kept in a clean stall, with little exercise/movement</p>
Complications	<ul style="list-style-type: none"> - Flexor tendon sheath sepsis - Adhesions - Wound infection
Consideration	<ul style="list-style-type: none"> - done as a salvage procedure - Reduced prognosis for athletic horses
Comparison	<p>The standing procedure is less costly, and is less stressful on the animal (doesn't require them being transported to a clinic)</p> <p>With the mid metacarpal approach, there is a reduced risk of severing the neurovascular bundles</p>

- The site of incision should be around 3cm in length
- There is a study done on a modified standing approach, where an incision is made at the site of the proximal interphalangeal joint -> possibility of many complications
- Radiographs are taken prior to and after the procedure
- Ultrasounds of the site after the procedure can also be done to evaluate the patient's progress

Drugs used		
Name	Purpose	Dosage
Detomidine HCl	Sedative	0.02 mg/ kg, IV
Procaine penicillin G	Antibiotic	22,000 IU/kg, q 12 h, IM for 24 hours
Gentamicin sulfate		6.6 mg/kg, IV
Phenylbutazone	Anti-inflammatory/ Analgesic	2.2 mg/kg