

Procedure:

Make skin incision:

-Mid-metacarpal approach:

- Incise the skin over the medial or lateral aspect of the deep digital flexor tendon (DDFT) in mid-carpal area.

-Distal approach (mid-pastern region):

- Make a 3 cm vertical incision in the skin along the palmar midline of the pastern region 1 cm proximal to the bulb of the heel.
- Incise the subcutaneous tissue and the sheath of the DDFT to expose the tendon.

-Modified, standing, distal approach (at the level of the PIP joint):

- The foot should be flexed either by an assistant or one hand of the surgeon (strict asepsis should be maintained by the surgeon using his other hand at the operative site).
- Make a 1 cm incision through the skin between the lateral branch of the SDFT and the DDFT on the palmar aspect of the limb, just proximal to the collateral cartilage.

Locate/elevate/transect DDFT:

-Mid-metacarpal and distal (mid-pastern region) approach:

- Divide the skin and subcutaneous fascia (mid-metacarpal approach only).
- Identify the DDFT (mid-metacarpal approach only).
- Separate the DDFT from the superficial digital flexor tendon (SDFT) and accessory ligament (AL), and the metacarpal vein, artery and nerve using curved Kelly forceps
- Elevate the DDFT from the skin incision.
- An assistant flexing the limb will relieve the tension on the DDFT at this point, aiding its elevation, visualization and accurate transection.
- Take extreme care not to inadvertently elevate the neurovascular bundle (located medially) at the same time, which may lead to its transection in error.
- Transect the isolated DDFT .

-Modified, standing, distal approach (at the level of the PIP joint):

- Using blunt dissection with Kelly hemostatic forceps, separate the subcutaneous tissues to locate and enter the flexor tendon sheath.
- Introduce a straight bistoury knife into the flexor tendon sheath.
- Position the bistoury knife with the side of the knife lying flat between the DDFT and the interior aspect of the flexor tendon sheath.
- Palpate the end of the knife through the skin to ascertain its correct position deep to the DDFT.

- Turn the cutting edge of the bistoury knife in an outward direction to engage the DDFT.
- Extend the distal limb.
- The DDFT will be transected against the knife in a palmar direction.

Check extension:

-Mid-metacarpal and distal (mid-pastern region) approach:

- An immediate separation of the ends of the DDFT of 1-3 cm for mid-metacarpal approach, and 6-10 cm for distal (mid-pastern region) approach, will occur after complete transection.
- Manually extend the toe to ensure the tendon has been completely transected

-Modified, standing, distal approach (at the level of the PIP joint)

- Manually palpate the cut ends of the tendon.
- Manually extend the toe to ensure the tendon has been completely transected.

Exit- Close wound:

-Mid-metacarpal and distal (mid-pastern region) approach:

- Close tendon sheath/subcutaneous tissues using absorbable monofilament suture material in a simple continuous suture pattern
- Close the skin with staples or 2-0 monofilament, non-absorbable, simple interrupted sutures

-Modified, standing, distal approach (at the level of the PIP joint):

- Close the skin with staples or 2-0 monofilament, non-absorbable, simple interrupted sutures.
- May be performed with the foot still held or with the horse standing on it.