



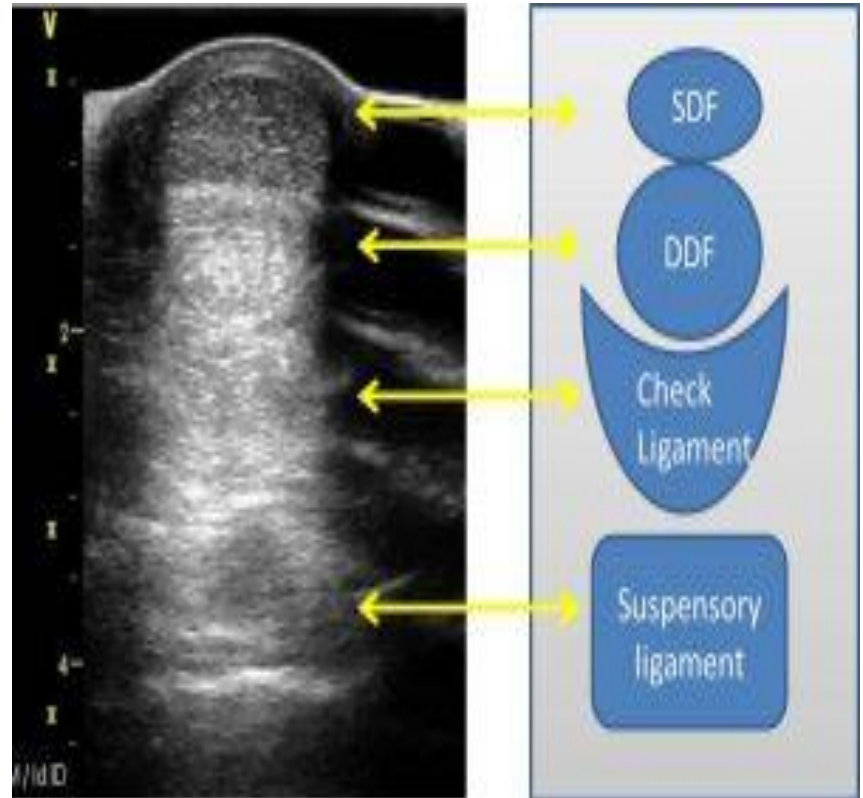
# Lameness tendon affection

Ibrahim MH Alrashid  
Depart. of Surgery and Obstetrics  
College of Veterinary Medicine  
University of Basrah



# Subject

- Superficial Digital Flexor Tendon Injury
- Deep Digital Flexor Tendon Injury
- Suspensory Desmitis
- Horse Tendon Injury Symptoms
- Horse Tendon Injury Recovery
- Treatments



# Superficial Digital Flexor Tendon Injury


- Tendons are bands of dense connective tissue tying muscle to bone or cartilage. These structures are designed to passively transfer force across joints or provide movement. The horse's digital flexor tendons have evolved to store energy, absorb shock, and support weight-bearing joints.

# Deep Digital Flexor Tendon Injury

- The deep digital flexor tendon (DDFT) arises from three locations in the upper forelimb: the humerus, radius, and ulna. It then courses down the carpal canal (the depression running down the back of the knee) and crosses over the navicular bone before inserting at the back of the coffin bone, lying deep beneath the SDFT and just over the suspensory ligament.

# Suspensory Desmitis


- A ligament is a band of tough connective tissue joining two bones or cartilages. Suspensory ligaments (SL) originate from the back of the fore and hind cannon bones.

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- There are multiple types of injury to the suspensory ligaments. Injury to the upper third of the suspensory ligament and the origin is usually called proximal suspensory desmitis (PSD). PSD of the forelimbs is different from that affecting the hind limbs, with significant differences in prognosis and approaches to treatment. It is important to remember the fore leg suspensory ligament injuries are markedly different than the hind leg suspensory ligament injuries.

# Causes

- **Foot Balance.** Poor foot balance, particularly low heels and long toes, has traditionally been suggested to increase the risk of tendon injuries.
- **Track Surfaces.** Tracks that are very hard result in higher speeds and increased peak impact loads.
- **Fatigue.** Fatigue is influenced primarily by the horse's work schedule, level of fitness, and intensity of competition.



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- **Contralateral Limb Lameness.** At high speed, lameness may result in excessive loading of the tendons in the contralateral limb.
  - **Weight.** Horses who are overweight or carrying excess weight will produce greater forces on their tendons compared with lower weight individuals.

# Clinical Signs

- Disruptions localized to the *extensor tendons* cause the horse to either "knuckle over" at the fetlock or "flip" his hoof in the affected leg to avoid knuckling over.
- A problem localized to the *deep digital flexor tendon* alone, pain and lameness are evident during weight bearing.
- *Superficial digital flexor tendon* disruptions result in a "very slight" fetlock drop with pain and lameness during weight bearing.


- If both the *deep and superficial digital flexor tendons* are damaged, the fetlock will drop more significantly than if either single structure is cut, and the toe will elevate upon bearing weight, with prominent lameness.
- A disrupted *suspensory ligament* (with no damage to the digital flexor tendons) results in a significant fetlock drop when bearing weight


# Diagnosis

- Observation of the flexor tendons profile combined with careful palpation are the first steps in clinical assessment of a tendon injury
- Palpation of the tendon between thumb and forefinger with the limb both weight bearing and non-weight-bearing allows subtle thickening to be identified.
- Assessed for enlargement between the SDFT and DDFT.
- The lameness associated with SDFT tendon injuries is typically fairly mild, approximately 1 to 2 grades out of 5 at the trot on firm ground

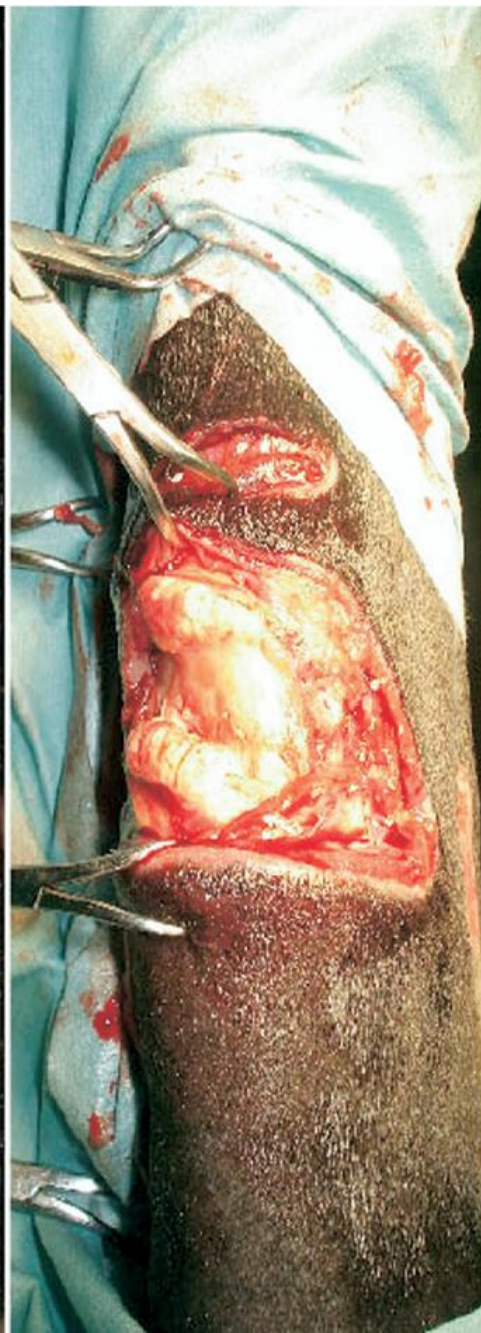
# Treatment

- **Anti-Inflammatory Therapy:** The aim of early and rapid control of the inflammatory cascade is to minimize further damage to the tendon structure secondary to the inflammatory response. Non-steroidal antiinflammatory drugs are indicated as the mainstay of antiinflammatory therapy for tendon injuries; a 3- to 5-day course is typical. A single dose of short-acting corticosteroids may offer a more potent initial anti-inflammatory effect.

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- Medical therapy is combined with physical anti-inflammatory therapies, including cold therapy for 5 days (20 minutes icing, 3 times daily) and pressure bandaging for approximately 3 to 4 weeks.
  - Therapies Aimed at Modulating More Ideal Healing  
Polysulfated glycosaminoglycans (PSGAGs) have also been indicated to be beneficial during the early phase of tendon healing.

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- Other therapies aimed at production of the most ideal healing tissue include the use of growth factors (IGF-1) or stem cells.
  - Rehabilitation Programs: Exercise and mobilization of the healing tendon can begin soon after injury once the inflammation is subsiding.









Thank You .....

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