

SUSPENSORY LIGAMENT INJURIES



OVERVIEW

The suspensory ligament originates at the back of the carpus in the forelimb and the back of the hock in the hindlimb. It extends down the limb close to the cannon bone and between the splint bones before inserting on the sesamoid bones at the back of the fetlock. It is responsible for suspension of the fetlock.



The ligament can be divided into three portions

- The origin (upper/proximal third)
- The body (middle third)
- And the branches (lower/distal third)

Injuries can occur at any location but injury to the proximal suspensory ligament is the most common.

Injury to this portion is referred to as proximal suspensory desmitis (PSD). Desmitis means inflammation of a ligament. Inflammation leads to enlargement. Due to the location of the ligaments between the splint bones this enlargement can lead to a compartmental syndrome which is painful.

Proximal suspensory desmitis is a common injury in sport and race horses. The hindlimbs are more frequently affected than forelimbs. Dressage and showjumping horses are more often affected.

Injury can be acute or chronic and range from a mild inflammation within the ligament to lesions or tearing of the ligament and associated avulsion fractures at the origin of the ligament.

CLINICAL SIGNS

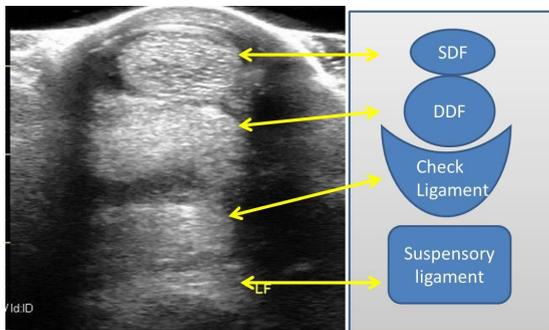
Most horses with PSD will present with a history of intermittent lameness lasting several days or weeks. In acute injury, there will sometimes be heat, swelling and pain. In chronic cases, physical findings are less obvious but sensitivity to palpation can be present. Lameness is often mild to moderate with the affected limb showing lameness on the outside of the circle.

Injury to the body of the ligament (middle third) is less common. In general lesions to the body of the ligament have a more guarded prognosis for return to full athletic work.

Injuries to the branches of the ligament are commonly seen in sport and racehorses. Horses that fracture a splint bone will also often have injuries to the branches. Injuries to a branch will show as an obvious painful swelling.



Degenerative suspensory ligament desmitis is a debilitating condition seen commonly in certain breeds. Quarter horses, Arabians and some European breeds are more affected. It often affects the body of the ligament and sometimes two or more legs are affected. The degeneration results in a weakening of the ligament and affected horses often exhibit obvious fetlock drop.



DIAGNOSIS

Ultrasound is used to diagnose injuries to the suspensory ligament. Abnormalities include:

- Enlargement of the ligament compared to the other leg
- Disruption of the fibres of the ligament
- Poor definition of the margins of the ligament
- Hypoechoic (black) areas within the ligament. This is referred to as a lesion.

TREATMENT

Treatment depends on the extent and location of the injury.

Horses that are sound but show some reaction to palpation of a ligament are usually managed with shockwave therapy. If a lesion is present on ultrasound, initially box rest is recommended for 2 months. Then a controlled exercise program is prescribed usually consisting of walking for another 2 months. Total healing time is approximately 8 months to a year. Shockwave therapy is also beneficial. In chronic cases, anti-inflammatories are often injected around the ligament to reduce the size of the ligament.



PROGNOSIS

Prognosis depends on the extent and location of the injury but prognosis for return to work is generally good. Forelimb PSD carries a more favorable prognosis compared to the hindlimbs. Poor foot balance can be a predisposing factor in injury. Foot balance x-rays can be beneficial and aid in corrective shoeing. Corrective farriery is important to help prevent re-injury.