

If Only They Could Talk

Our regular focus on equine health. This month MJR's resident vet John Martin looks at ways of treating bowed tendons.



John Martin

OWNERS, trainers and vets dread tendon injuries above any others in the thoroughbred racehorse as they are invariably serious and at best will mean a prolonged period away from the racecourse.

Much work has been done over the years trying to develop new techniques and treatments to speed up the recovery period but as yet no miracle cure has been found.

Tendons

Tendons are structures, composed of dense longitudinally arranged fibres which attach muscle to bone. The tendons most commonly injured in the racehorse are the superficial digital flexor tendon (SDFT) and deep



Horse with recent bowed tendon

digital flexor tendon (DDFT). These tendons run from the back of the knee and hock and attach to the bones below the fetlock, acting to support and flex the fetlock joint. 'Bowed tendon' is a term which refers to tearing of the fibres in the SDFT, 'bowed' because of the classical bowed appearance of the damaged tendon. Immature tendons have an ability to adapt to the pressures and strains they are exposed to, a property that deteriorates with age, hence tendon injuries are more commonly seen in the older horse. Any factor which causes the tendons to be stretched beyond their capacity will cause the fibres in the tendon to tear. These factors include fatigue, uneven surfaces, incorrect shoeing leading to long toes and low heels, loss of balance or inadequate training and conditioning for the level of work being undertaken. The degree of damage can range from minor, with little fibre damage, to severe with total tendon rupture.

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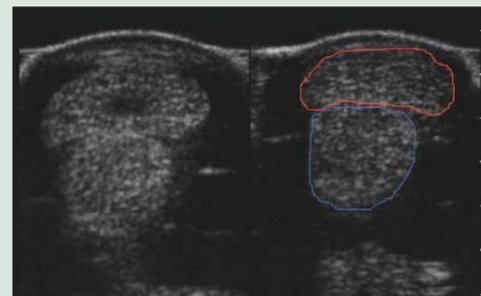
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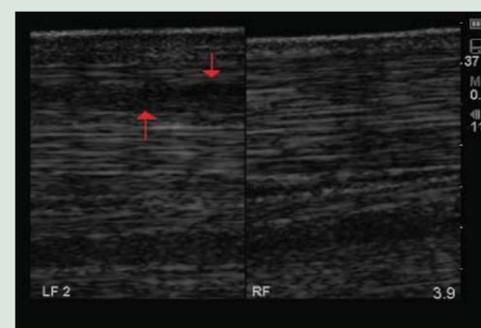
Diagnosis of a bowed tendon

A tentative diagnosis of tendon damage can be made by the classical signs of heat and swelling around the tendon area. The tendon itself will also be thickened and painful to palpate.

These signs should be taken very seriously when noticed. Ultrasound exams of the tendon are used to confirm the diagnosis. They will also allow assessment of the degree and extent of fibre damage within the tendon.



Ultrasound scans of horses tendons. On the right are the normal sdft (red) and the ddft (blue). On the left are scans of a bowed tendon with a large core lesion.



Longitudinal scans of the tendons. On the right each long white line is a healthy tendon fibre. On the left you can see a dark area where the fibres have been torn.

reintroduced to controlled exercise beginning first with walking exercise either in hand or on a horse-walker.

After this the next step is introducing some ridden walking and trotting exercise.

It is very beneficial to obtain ultrasound scans of the damaged tendon to assess healing before the level of exercise is increased. Tendons generally carry a poor prognosis for full recovery due to their poor healing capacity.

This poor healing can be attributed to a poor blood supply in the area. The length of time which it takes for a tendon to heal can vary a lot depending on the degree of damage and also the age of the horse with injuries in younger horses generally healing much quicker and with a higher probability of returning to racing.

There are many techniques which have been tried in attempt to accelerate the healing of bowed tendons.

The most infamous of these is probably firing. This was documented as a treatment method as early as 500 AD. The theory is that the act of firing the horse's leg causes an inflammatory response in that area which will also promote healing of the damaged tendon. There is little scientific evidence to back up the practice.

The most recent work being undertaken in relation to finding a cure for tendon injuries is with Platelet Rich Plasma (PRP) injections.

Platelets are cells found in the blood stream which are responsible for blood clotting but are also part of the repair process in injured tissues by releasing growth factors.

With PRP injections, plasma is extracted from the patient's blood and injected into the area of damaged tendon.



Swimming can be a great help with recovery from tendon injuries

Treatment

In the early stages of tendon damage aggressive anti-inflammatory therapy is essential and should be instigated once a tendon injury is suspected. This includes cold therapy in the form of cold hosing, ice-bubble boots and swimming.

The horse should also be given systemic anti-inflammatory drugs, most commonly 'bute'. Both front legs should also have support bandages applied.

It is essential to begin anti-inflammatory therapy immediately as damage to the tendon causes a significant inflammatory response, which if not controlled early, will lead to scarring and adhesions within the tendon.

The horse should remain on box rest during this inflammatory stage, being led out only for cold therapy.

Once the initial inflammatory phase is over and under control the next step in treatment is time and patience. The horse should be slowly

The plasma which is collected from the horse has a high concentration of growth factors which enhance tissue healing and increase circulation to the area.

Here at MJR if a horse is suspected to have a tendon injury the aggressive anti-inflammatory therapy which is so crucial in the early stages will be started immediately.

Ultrasound scans will also be performed on site so as an accurate diagnosis and prognosis can be established from the outset. The horse will stand in ice-bubble boots daily and will also begin swimming which is not only excellent anti-inflammatory therapy but also allows the horse to maintain condition and a level of fitness which would not be possible if the horse was on just box rest.

The healing progress of the tendon will be monitored with regular scans before the horse is re-introduced back into work. All anti-inflammatory therapy and ultrasound scans are included in the Mark Johnston Racing daily training fees. ■

No hidden charges



The Mark Johnston Racing daily training fee includes:
Gallop fees; vaccinations; worming; exercise shoes; on-site resident vets; in-house ultrasound scanning; digital X-rays; all referrals including bone scans, surgery, etc; dynamic 'overground' endoscopy; routine endoscopy; all medicines and drugs; dental care; vitamins and minerals; swimming; gelding; etc. etc. etc.

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