



Chartered Physiotherapists

BRADFORD'S

VETERINARY PHYSIOTHERAPY

SPRING IS IN THE AIR.....We hope!

Welcome to our quarterly newsletter, we hope you get chance to enjoy it with perhaps an easter egg or three!.....tut tut tut. Please let us know your thoughts on the newsletter.

Canine- CRANIAL CRUCIATE DISEASE

The cranial cruciate ligament (CCL) is found deep within the stifle (knee) joint and has a vital role in stabilising the hind leg, particularly during the weight-bearing phase of gait. Partial or full rupture of the CCL is one of the most common injuries affecting many breeds of dog and may occur due to a trauma/sports injury or more commonly from degenerative changes occurring within the fibres of the ligament itself. An acute injury usually presents as sudden onset of pain, swelling and lameness. Partial rupture, however can present as intermittent pain, swelling and lameness, which is often exacerbated by exercise. The instability caused by both acute rupture and the more chronic, partial rupture will lead to degenerative joint disease (arthritis) due to increased 'wear and tear' on the joint surfaces.

Treatment

There are many different treatment techniques for CCL ruptures. The choice is dependent on the size and weight of the animal, the degree of instability and arthritis already present. There are several different surgical techniques, such as using a nylon suture to mimic the CCL or cutting the bone to alter the angle of the weight bearing surface of the knee, or reposition the attachment of the patella tendon, to alter the biomechanical forces thus eliminating the need for a CCL. Non-surgical treatment is occasionally used to treat smaller dogs.

Post-operative exercise and Physiotherapy

Your dog's post-operative care will depend on your surgeon's protocols but usually include confinement to a cage or small room, where they cannot run, jump or fall. All walking should be controlled on a lead. Many specialist veterinary surgeons will recommend physiotherapy as an important part of your dog's rehabilitation and research has shown that dogs that received physiotherapy after a CCL repair had significantly better limb function than those that did not (1). On initial consultation, a thorough assessment allows us to formulate an individually tailored treatment programme that consists of 'hands-on' treatment techniques, a home exercise programme, including gentle mobilisation, strength-

ening and proprioceptive (balance) exercises and on-lead controlled walking. We will also advise about managing your dog's weight, as with restricted exercise it is easy to gain weight, which puts the injured leg at greater risk of re-injury. Physiotherapy management will also include gait re-education, and treatment of the secondary compensations and soreness that often occur. With continual reassessment we can appropriately progress the home exercise programme by increasing the difficulty of the strengthening, proprioceptive and functional exercises with the aim of returning your dog to full fitness.

Case Study

Megan was an active eight year old Border Collie/ Springer Spaniel when she sustained a traumatic rupture of her right CCL. She was referred to a specialist orthopaedic surgeon and was treated with a tibial plateau levelling osteotomy (TPLO), followed by small room rest and restricted slow lead-walking exercise. She was referred to physiotherapy six weeks after surgery as she was still lame and had lost a lot of muscle in her right hind leg. On initial physiotherapy assessment Megan had very good movement and did not appear to have any pain in her operated stifle but the muscles in her right hind leg had wasted away and were

very weak, which was making it difficult for her to use that leg properly. Because of this, she was compensating by overusing other muscles, which had become tight and sore.

After an initial assessment, the tight, sore muscles were treated using a combination of hands-on techniques and laser therapy and Megan was started on a programme of daily exercises that her owner was shown how to do with her. After beginning with gentle static proprioceptive and strengthening and specific slow lead walking exercises, she soon improved sufficiently to progress to dynamic strengthening and proprioception with increasing difficulty and speed. Once she was able to use her right hind leg normally during all these exercises, on varying terrain/ surfaces, and was sound during controlled running (on a lead), we started controlled off-lead exercise and work towards conditioning the muscles for the fast, high-impact movements that active dogs like to do- leaping, jumping, sharp turns. Three months after starting physiotherapy, Megan is sound and well on her way to getting back to all the exercise and running she did before her injury.

Moira Robson MSc MCSP ACPAT

1.Marsolais GS, Dvorak G and Conzemius MG (2002) Effects of postoperative rehabilitation on limb function after cranial cruciate ligament repair in dogs. *Journal of the American Veterinary Medical Association*. 220:1325-30.

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Evening Talks

We'd like to extend our sincere thank you to Holmer Veterinary Surgery in Hereford for allowing us to chatter on for hours at an evening talk to all their lovely vets Thursday 21st February. The evening involved lots of clinical discussion about musculoskeletal issues and problems plus copious amounts of coffee and a generous delivery of pizza so 'Thank You' for listening to Moira and Tim and we hope it got your cognitive juices flowing! Should any other Veterinary

practice feel they would like us to come along and discuss our services with them one evening we are more than happy to do so alongside a good cuppa, we're very easily pleased! Alternatively, should any of our clients wish to hold an 'Open Discussion Meeting' or a 'Vet Physio Evening' whereby you can gather enough people to listen than feel free to contact us and we can arrange it, dependent upon venue availability etc. Its often nice to get a social

group together to have a chit chat early on in the year to get everyone excited about their competitive plans! Plus hopefully it won't be too cold!



Talks Open to Livery Yards, Riding Club Groups or maybe even local BD and BE focus groups?

The above image showing a discussion point!

RIDER INFLUENCE?

When we ride our horses we are aiming for well balanced, controlled and symmetrical movement between each element both for the discipline in which we practice and to ensure the horse is a well balanced and healthy animal. A balanced horse both left to right and front to back is imperative to ensure that the horse can carry out the tasks we require of them whatever that role, and to minimise the risk of over strain and injury.

We are all becoming more aware of the impact of an injury or a fall upon the horse but how about you as a rider?

The repetitive action of riding your horses perhaps for one discipline only, can undoubtedly cause you as a rider to become unbalanced as well as the risk to your horse as well. This is on top of the falls, accidents and tussles with youngsters you have on a daily basis sometimes!! Why not stop and

think for a moment on how all of this affects you physically..... problems, as with horses can go unnoticed for a long time before they cause you pain. This is just the same for your horses, we are all the same. We all compensate on a daily basis to get the jobs done! Whether that's yard work, riding one or more horses daily, lungeing, dealing with youngsters or even sat in the lorry and driving long distances. All of this places huge pressure and strain on your musculoskeletal system and if we are unlevel and unbalanced then this 100% without doubt will be transferred through the saddle to the horse. We spend a huge amount of time and not to mention money on saddles and the fitting of, balancing of the feet, different types of bits and bridles and we completely forget to address the other 50% of the picture, the rider on top!!

Please do not neglect yourselves as a crucial element to your success with your horse. If you are restricted in your movement or asymmetrical in yourself at all, this **will** be transferred through the bridle or through the saddle and restrict your horse, causing them to have problems and pain.

Do you as a rider struggle with pain in your neck, shoulders, back or down into your legs?



Image of part of our rider assessment

THE EQUINE SUSPENSORY LIGAMENT

Injuries to the suspensory ligament are a common occurrence in athletic horses. They can occur in both the fore and hind legs and have the potential to bring a horse's competitive career to an end.

Where is the suspensory ligament and what does it do? To describe it in simple terms, it runs down behind the cannon bone between the knee and the fetlock in the fore leg and between the hock and the fetlock in the hind leg.

To be more precise, in the fore leg it originates on the distal row of carpal bones at the back of the knee and on the back of the upper part of the metacarpus (cannon bone). In the hind leg, it originates mainly on the upper metatarsus, although there are some attachments to the distal row of tarsal (hock) bones.

Two thirds of the way down the metacarpus (or metatarsus) it divides into medial and lateral branches which

continue down to attach to the outside surface of the sesamoid bones at the fetlock joint. From there it continues below the fetlock as lateral and medial extensor branches which insert on the Common Digital Extensor

tendon at the front of the pastern between the fetlock and the foot.

It is interesting that the suspensory ligament is actually a modified muscle. It's anatomical equivalent in animals

with more than one toe is the medial interosseous muscle. In the horse the suspensory ligament is made up of predominately tendon fibres with some residual muscle fibres. The number of muscle fibres varies between individual horses and between breeds. Standardbred horses have a higher proportion than thoroughbreds.

The suspensory ligament along with the sesamoid bones and distal sesamoidean ligaments make up what is known as the suspensory apparatus. Its function is to support the fetlock joint during the weight-bearing phase of the stride.

It is during this phase that most suspensory ligament injuries occur. Uneven loading of the limb during weight bearing is the main contributing cause

helped in many cases by an uneven ground surface and poor foot balance. Overloading of the ligament leads to tearing of collagen (tendinous) fibres and the small blood vessels associated with the muscle fibres. There is

bleeding within the ligament with the formation of a haematoma.

The healing process proceeds through three steps;

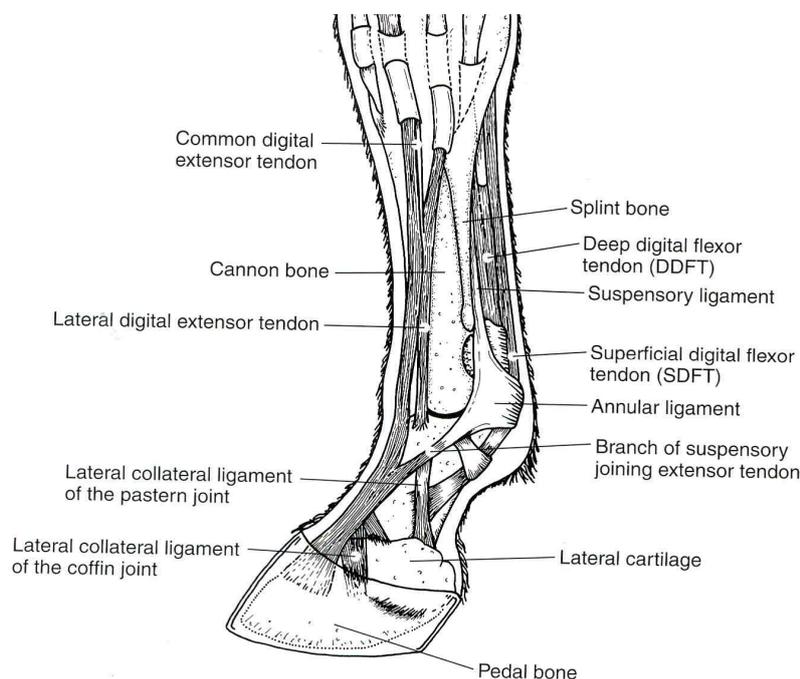
- (1) Removal of damaged tissue by phagocytes (white blood cells).
- (2) Migration of fibroblasts into the area to start producing new collagen (scar tissue).
- (3) Remodelling of scar tissue.

The early scar tissue is organized in a haphazard manner. During the first 2-3 months the collagen fibres orientate themselves in a parallel alignment and slowly increase in diameter.

The repaired tissue is not as strong or as elastic as a normal ligament tissue and as such is predisposed to re injury. This is an important point when assessing the prognosis for a successful return to competition.

The inflammatory changes associated with the tearing of the collagen fibres produce the characteristic signs of heat, swelling, pain and reduced function. The term for inflammation of the suspensory ligament is *desmitis*.

Dr Peter Gillespie BVSc MACVS



Why not ask our advice in the management of suspensory ligament injury both during the acute phase and through the chronic stages.

SERVICE FEEDBACK

You are *all fantastic!* Thanks to those of you for taking time out of your busy schedules and completing our questionnaire that we posted on Facebook/Twitter and via email. It's REALLY important to us to provide a service you are all happy with. We won't get it right all the time however we are committed to what we do and want to offer you as animal owners a well qualified and professional approach for your animal. We are keen to expand the services we offer in years to come so your ongoing support through word of mouth recommendation is greatly valued! We couldn't do it without you!

"Very pleased with the recent physiotherapy that my mare received to treat a sore back & some weakness & tightness thought to have been caused by an old jumping injury. The treatment received was thorough and given with genuine care & attention and has improved my mares overall condition & attitude." Emma, Herefordshire

"I have had both Rhiannon and Tim to treat our horses over several years and the diagnosis and treatment has always been excellent. They are both very professional and knowledgeable and happy to answer any questions I may have in a very straightforward manner. I have, and will always thoroughly recommend the practice to other people who own horses and, having used others in the past, would now always just use Bradford's. Moira has given me several treatments which have included acupuncture and these have always been very successful. Having had treatments for my horses from Reiki, Chiropractors, 'healers,' herbalists and Kinetic practitioners in the past and because these so-called 'treatments' have never yielded any results, I would never use any of them again. I know that Bradford's Physio's are highly trained and qualified and I therefore have complete trust that I and my horses are getting professional treatment." Ellie Targett Herefordshire

The A Team!!We want to say "Thank you" to you all



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