Newsletter

February 2010

Southern Counties Veterinary Specialists

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Holter Monitoring

Holter monitoring has been around for a long time. In the old days Holter monitoring was impractical, with bulky and uncomfortable cassette recorders used to store ECG data, often with dubious quality and significant expense. Nowadays we use small and comfortable digital recording devices well tolerated by the patient, which accurately store huge amounts of data.

These devices have advanced the diagnosis and management of arrhythmia in our canine (and feline) patients dramatically. It was with some trepidation the first time we strapped several thousand pounds worth of equipment onto a crazy Boxer, but we quickly realised how useful this test was and now we look back and wonder how on earth we managed without this invaluable equipment in the past. We have five units in our clinic at SCVS now, such is the demand for the information they provide.

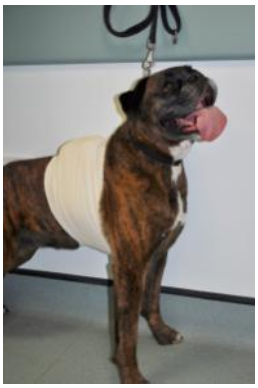
There are a number of applications for Holter monitoring, such as:

- Investigation of collapse/syncope.
- Screening for occult myocardial disease in pre-disposed breeds such as the Dobermann.
- Determining how effective our control of arrhythmia has been.

Often a resting ECG will identify an arrhythmia in the clinic, but it is often only when we record ECG for 24-hours or more, that we truly appreciate the clinical significance of arrhythmia. By allowing the animal to go home and perform his/her usual activities, we get information on heart function that we simply could never achieve in the clinic.

Heart rate control is extremely important in the heart failure patient, particularly when atrial fibrillation is present, and we commonly use Holter monitoring to determine heart rate and rhythm accurately, away from the stressful vet clinic. You would be amazed how different it can be!

Holter is still rarely used in general first opinion practice, probably because the equipment is expensive to buy and specialist data analysis is also required. We offer Holter as part of our diagnostic investigation, usually in combination with echocardiography, but we can arrange to fit Holters and analyse the data without the need for full referral if indicated. Alternatively Holter monitors can be hired from the Holter Monitoring Service (www.holtermonitoring.co.uk).



We would encourage colleagues to consider this extremely useful test for cases presenting with collapse, syncope, for screening for cardiomyopathy in pre-disposed breeds, notably the Dobermann and Boxer, and also for help in managing chronic heart failure patients.

For more information don't hesitate to contact us at SCVS where we will be happy to help.

Canine Cruciate Ligament Disease

Cranial cruciate ligament (CrCL) disease is the commonest reason for referral of dogs with lameness at SCVS. Despite familiarity with the condition there can be difficulties with the diagnosis and there are controversies surrounding the most appropriate treatment.

Diagnosis

The diagnosis of CrCL deficiency can be challenging in the dog without an obvious drawer sign. Here are a few useful tips on the clinical signs of the CrCL stifle to help you put cruciate disease at the top of your list of differential diagnoses.

Signalment

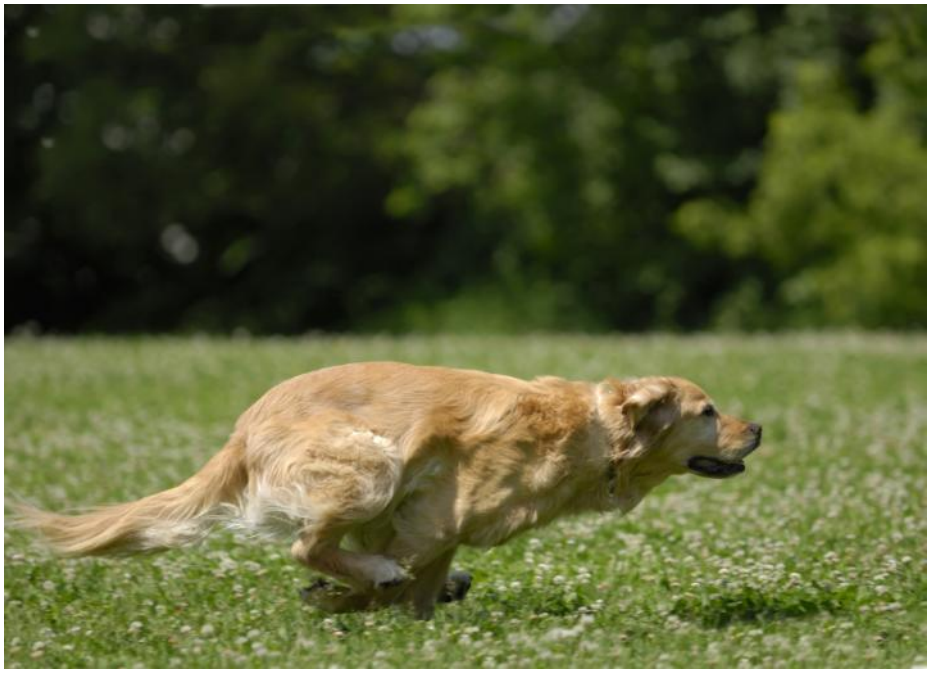
Any breed may be affected although certain breeds such as Labrador retrievers, golden retrievers, Rottweilers and Westies are predisposed. Larger breeds are more likely to present with bilateral disease at an early age (< 12 months).

Lameness

Lameness can vary in degree from mild/intermittent hind limb lameness exacerbated by activity (in the case of an early partial cruciate ligament rupture), to non-weight bearing lameness frequently seen following acute complete ligament rupture.

Quadriceps muscle atrophy

There is preferential atrophy of the quadriceps muscle group following disruption of proprioceptive fibres within the injured cruciate ligament. Atrophy occurs less than 2 weeks after CrCL injury and precedes disuse atrophy of other muscle groups such as the hamstrings. Quadriceps muscle atrophy is most easily appreciated in unilateral cases by palpating both hind limbs simultaneously from behind with the dog in a standing position.



Medial soft tissue thickening ("medial buttress")

This is a palpable feature of the chronic partial or complete CrCL rupture. Fibrosis over the proximal aspect of the medial tibia occurs in response to the abnormal loads placed on the medial joint capsule as a result of increased internal tibial rotation.

Alteration in stifle joint range of motion

Stifle osteoarthritis occurs early in the course of the disease and in chronic cases is associated with a reduction in stifle flexion. The normal stifle should flex until the point of the hock contacts the caudal thigh musculature. CrCL rupture also results in increased internal tibial rotation, which is more obvious with the stifle in flexion. Manoeuvres that

Why choose Southern Counties Veterinary Specialists?

- Our orthopaedic surgeons are some of the most experienced in the UK having performed thousands of cruciate surgeries. No surgery is completely free of complications but our complication rate following cruciate surgery is very low.
- We offer a range of surgical techniques that can be tailored to the individual case. Treatment options are discussed with the client at the time of the consultation.
- Pain management is a high priority, cases are monitored by surgical interns and fully qualified veterinary nurses 24 hours a day following surgery.
- Unlike many referral centres we have a full time physiotherapist and an underwater treadmill. Rehabilitation and physical therapy are crucial for full return to function following surgery for CrCL disease. Underwater treadmill hydrotherapy usually commences following suture removal.

involve full flexion and extension of the joint or internal tibial rotation are normally resented in dogs with partial cruciate ligament rupture. Reluctance of the dog to fully flex the stifle joint when sitting so that the leg sticks out to the side is known as a positive "sit test".

Instability/cranial tibial translation

There are 2 specific tests for CrCL instability; cranial drawer and cranial tibial thrust (tibial compression). It is best to perform both of these tests since they give different insights into the relative stability of the joint. The cranial drawer test is a measure of the static stability of the joint whereas the tibial compression test is a measure of dynamic joint stability.

Treatment

There is increasing evidence that partial tears progress to complete tears over a period of time so treatment recommendations are the same for both types of ligament injury.

A proportion of **small dogs (less than 15kg)** can make a functional recovery with a prolonged period of rest, physiotherapy and anti-inflammatories alone although surgery offers a more rapid and predictable recovery. Surgery is advised for small breeds if they have failed to respond to conservative management, if they have bilateral CrCL disease or if they have increased tibial plateau slopes (common in Westies).

Larger dogs are much less likely to recover without surgery, so early surgery is always advised. Irrespective of the technique employed surgery must include visual inspection and probing of the menisci for injury either by arthroscopy or mini parapatellar arthrotomy. Meniscal release is not performed since there is evidence that this procedure is both unnecessary and detrimental to the joint.

Extracapsular suture

Although this is a popular procedure the success rate declines with increasing size of the patient. Recent improvements in technique include the use of more modern materials for the suture, isometric suture placement and minimally invasive arthrotomy or arthroscopy. The reported incidence of postsurgical meniscal injury requiring further surgery is high (10-15%) which probably reflects ongoing instability following stretching/failure of the suture (joints are almost always unstable when examined 4-6 weeks after surgery). The cost of surgery is less than that of tibial plateau levelling procedures (unless revision surgery is required for meniscal injury).

Tibial plateau levelling/ tuberosity advancement procedures

Tibial plateau levelling osteotomy (TPLO), closing wedge ostectomy and tibial tuberosity advancement (TTA) are reliable techniques that can be used on all sizes of dog. Return to function is rapid and the risk of complications in our hands is very low. With the advent of Synthes locking plate technology for TPLO,

surgery can be performed bilaterally even on larger breeds of dogs, facilitating more rapid rehabilitation and recovery. The incidence of postsurgical meniscal injury requiring further surgery is low (<3%). The procedures are a little more expensive than suture stabilisation owing to the greater complexity of surgery and the cost of implants.

Bits and Pieces

Our imager, Andrew Denning, is happy to see cases for specific ultrasound investigations or procedures without the need to refer the whole case to us. He will provide a written report and hand the case back to you to proceed as you wish.

Ultrasound

As our thank you to you, we are continuing our free CPD evenings this year. For details see our website and monthly flyers.

We now have interactive technology and will be using this with many talks to keep you all awake!!

Free CPD

Our website is finally up and running, giving details of all of our services, staff, facilities and many downloads for you and your clients. It is being updated regularly, so please pay us a visit at www.scvetspecialists.co.uk

New Website

We now have the Burgess MRI scanner every week, and have recently reduced our re-scan fee.

MRI Scanning

With a dermatologist, neurologist and soft tissue surgeon we are ideally placed to deal with any conditions related to the ear, and our specialists enjoy conferring with each other on these cases.

Ear Disease

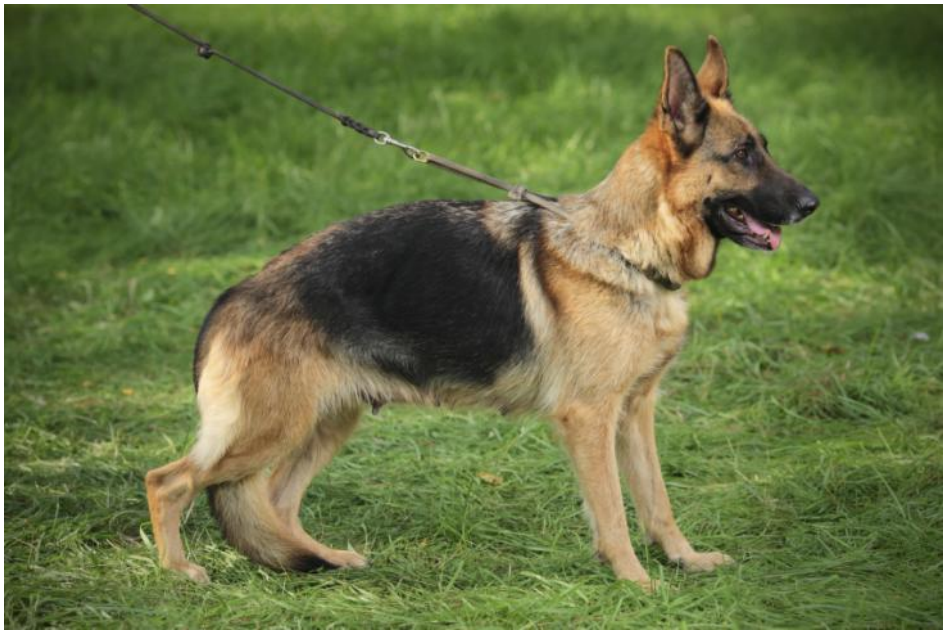
Nerve and Muscle Function Tests

An electrodiagnostic investigation is often necessary to diagnose diseases of the peripheral nerves (neuropathies), muscles (myopathies) and neuromuscular junction (myasthenia gravis) in dogs and cats.

Electromyography (EMG), nerve conduction velocity (NCV) studies and auditory evoked potentials (AEP also called BAER or BAEP) are some of the electrodiagnostic tests available at SCVS. These tests are performed by our two neurologists, Katia Marioni-Henry and Sergio Rodenas, assisted by our dedicated Veterinary Nurses.

- EMG , in association with muscle biopsies, is used to diagnose myositis (infectious or immune-mediated diseases of muscles), metabolic myopathies (such as hyperadrenocorticism-associated myopathy), inherited (such as myotonia) and degenerative myopathies (eg muscular dystrophy). EMG helps also to characterize some neuropathies.
- NCV studies are used to assess the function of the motor and sensory components of peripheral nerves. NCV may confirm the need, and guide the choice of nerve biopsy to diagnose polyneuritis (infectious or immune-mediated diseases of multiple nerves), traumatic neuropathy, metabolic myopathies (such as diabetic or hypoglycemic polyneuropathy), and distal denervating polyneuropathy.
- Both EMG & NCV require that the patient is completely relaxed; therefore, they are performed under general anesthesia.
- AEP are used to assess the function of the auditory nerve and brainstem. AEP are mainly used to test hearing, and dogs and cats of over 6 weeks can be tested.

These useful tools can make all the difference when obtaining a definitive diagnosis of some of these diseases. If you want to discuss whether they may be applicable to a particular case, please phone Katia or Sergio for more advice.



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