Cedar Veterinary Group
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# REFERRAL NEWS

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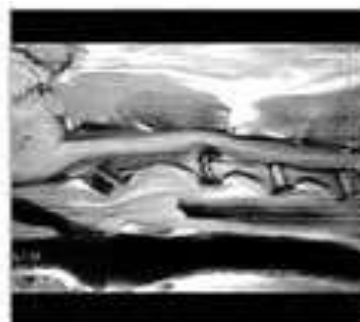
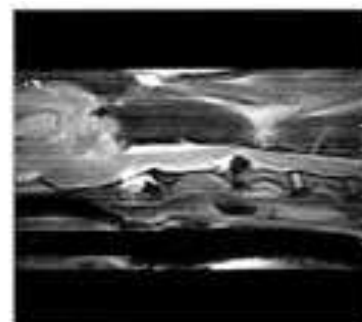
## MAGNETIC RESONANCE IMAGING

Magnetic resonance imaging (MRI) is a non-invasive technique that provides detailed images of the body in many different planes. It is based on the magnetic properties of atomic nuclei in living tissue and involves no exposure to ionising radiation. MRI provides superior soft tissue detail compared with radiography and computed tomography (CT).

Primary indications for MRI include brain, spinal cord and nerve root disorders. MRI is superior to other imaging techniques in the investigation of a number of spinal disorders particularly lumbosacral disease and parenchymal spinal cord lesions such as syringohydromyelia. Other indications include degenerative, anomalous, inflammatory, traumatic and vascular lesions. MRI has been used for assessment of stifle and shoulder joint disorders in dogs and is also useful in the evaluation of many other organs. MRI has been used for assessment of stifle and shoulder joint disorders in dogs. Brain lesions may be visualised and it is also particularly useful for mapping out tumour margins before surgery or radiotherapy.

We will be accepting cases for MRI scanning from 14th November onwards. The mobile scanner will initially be available on a monthly basis but we plan to increase the frequency of scans according to demand. The scanner, which is operated by Burgess Diagnostics, employs state of the art scanning technology to give improved image quality with reduced scan times. An expert interpretation and reporting service is available on request.





# CRANIAL CRUCIATE LIGAMENT DISEASE

Canine cranial Cruciate ligament (CrCL) disease is the commonest cause of referral for hind limb lameness in this clinic. Despite familiarity with the condition there can be difficulties with diagnosis and there are controversies surrounding the approach to treatment.

## DIAGNOSIS

The diagnosis of CrCL deficiency can be challenging in the dog without an obvious draw sign. In some cases correct diagnosis can only be achieved by interpreting all of the clinical signs and information gained from other diagnostic tests such as radiography, synovial fluid analysis and arthrotomy or arthroscopy. Here are a few tips on the clinical signs of the CrCL deficient stifle to help you put cruciate disease at the top of your list of differential diagnoses:

*CRCL cranial Cruciate ligament disease*

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

Quadriceps muscle atrophy – This is a neurogenic atrophy of the quadriceps muscle group and occurs following stifle joint effusion and disruption of proprioceptive fibres within the injured cruciate ligament. It can occur less than 2 weeks after CrCL injury and is more dramatic than disuse atrophy, which occurs later in the disease course and involves all hind limb muscle groups. Quadriceps muscle atrophy is most easily assessed in unilateral cases by palpating both limbs simultaneously from behind with the animal in a standing position.

Stifle joint effusion - Stifle joint effusion is usually relatively easy to detect during palpation of the joint. In the normal joint, the patellar ligament has well-defined medial and lateral boundaries. When there is an effusion the boundaries of the patellar ligament become less obvious.

Medial soft tissue thickening (medial buttress) – This is a palpable feature of the chronic partial or complete CrCL rupture. It is produced in response to the abnormal loads placed on the medial joint capsule (from increased internal tibial rotation).

**Alteration in stifle range of motion** – Stifle joint osteoarthritis, a common feature of chronic CrCL disease is associated with a reduction in the range of joint flexion. The normal stifle joint 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. Testing for increased internal tibial rotation is frequently painful in cases of partial Cruciate ligament rupture.

**Cranial tibial translation instability** – There are two specific tests for CrCL instability: It is best to perform both of these tests since they give different insights into the relative stability of the joint. The cranial draw test is a measure of static stability of the joint whereas the tibial compression test is a measure of dynamic joint stability.

*The cranial draw sign:* This test should first be performed with the joint held at its normal standing angle. A positive finding is cranial displacement of the tibia relative to the femur without a firm end-point. In chondrodystrophoid breeds, the tibia is often displaced cranially and the draw test brings the tibia back to its normal position with a hard end-point. Young large breed dogs often have some joint laxity or draw sign but they have a hard end-point. In some dogs with partial CrCL rupture the draw sign may be absent with the stifle held in the normal standing angle but a draw sign can be elicited with the joint held in partial flexion. This feature relates to the anatomy of the CrCL and the differing tension in the two bundle components of the ligament in different degrees of flexion.
*The tibial compression test (cranial tibial thrust):* In the CrCL deficient stifle, tibial compression results in cranial displacement of the tibia. This test is generally tolerated better by the conscious patient than the cranial draw test. Once a positive test has been established it is worthwhile initiating tibial compression with the stifle joint extended and then allowing the joint to flex and extend whilst maintaining compression. This action may precipitate displacement and replacement of the caudal horn of the medial meniscus, which will be palpable as a "clunk" or "click". Absence of this finding does not rule out meniscal disease.

# TREATMENT

My preferred approach is surgical treatment for most medium and large breed dogs with partial and complete CrCL is Slocum tibial plateau levelling osteotomy (TPLO). Small breeds are also surgical candidates for surgery if they have failed to respond to conservative management, if they have bilateral CrCL rupture or if they have tibial plateau deformity (common in Westies). I inspect the menisci for injury at the time of surgery using arthroscopy or mini parapatellar arthrotomy. I do not routinely perform meniscal release; there is increasing evidence that this procedure is both unnecessary and detrimental to the joint. Subjectively the results of TPLO are better than any other technique especially for larger breeds and the complication rate is relatively low.

*TPLO tibial plateau levelling osteotomy*

# FEES

In order to facilitate orthopaedic or spinal referrals we are introducing a number of fixed cost procedures into our scale of charges. This is already widely practiced in the human private health care field and will assist both you and your clients with the decision making process. The figures given include all charges normally associated with the proce dure **including the initial consultation, imaging, overnight hospitalisation and one follow-up consultation (including follow-up x-rays).** Extra charges will be incurred if additional investigations and / or follow-up visits are required or for cases seen on an emergency basis.

All fees are exclusive of VAT.

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|---|---|
| Tibial plateau levelling osteotomy < 50kg | £2200 |
| Tibial plateau levelling osteotomy > 50kg | £2500 |
| Thoracolumbar spinal decompression < 30kg (hemilaminectomy) | £1700 |
| Thoracolumbar spinal decompression )> 30kg | £2000 |
| Fracture repair (simple) < 30kg | £1300 |
| Fracture repair (simple) > 30kg | £1500 |
| Fracture repair (complex) < 30kg | £1600 |
| Fracture repair (complex) > 30kg | £2000 |

For humeral Y/T fractures, acetabular, spinal and multiple limb fractures estimates are available on request.

**NB:** All fees are correct at time of going to press and are liable to change in the future.

# METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

MRSA appears to be an emerging problem in small animal practice. It is not known whether this is the result of a genuine increase in prevalence or increased awareness and better recognition of the condition.

It is likely that all veterinary practices will encounter a small number of animals that are infected with MRSA. Animals most at risk include acutely ill hospitalised patients, immunocompromised patients and animals undergoing major surgery especially involving implants or prostheses. Thus orthopaedic patients, especially those with fractures caused by trauma, are vulnerable to infection.

We have seen a small number of cases of MRSA over the past 12 months including two orthopaedic patients. One of these was already infected with MRSA at the time of referral following previous stifle surgery and the other developed the infection after repair of a comminuted open fracture using an external skeletal fixator. Fortunately the bacterial isolates from both of these cases were

It is important that all practices have an infectious disease control policy to monitor and control MRSA and other potentially serious infectious agents. Clearly referral centres need to be extra vigilant because of the invasive nature of many of the procedures that are undertaken. Patients presented for revision surgery pose a particular risk because they may already be infected with MRSA at the time of referral. Referring practices are encouraged to culture suspected cases and inform us of the results **before** referral. Infected patients can then be isolated from other animals and barrier nursing precautions instituted.

At Cedar Veterinary Hospital we strive to achieve the highest standards of surgical asepsis and ward hygiene. Prevention and control strategies include the use of a dedicated orthopaedic referral theatre, vacuum autoclaving or gas (ethylene oxide) sterilization of all instruments and equipment and regular sampling of all hospital areas for bacterial colonisation.

For more information on MRSA including practice guidelines see the BSAVA website.

# NEW CANINE CARE CENTRE

Our new "Canine Care Centre" has now opened at Hangersley, on the outskirts of Ringwood. This will now be the base for Jo Scott , our behaviour therapist, and she is happy to continue to see cases as referrals, as she has for the last 8 years. This gives her much better facilities in which to see clients , and handle aggressive dogs. The Centre also has an indoor training arena, and we run small group training there. As you know this is often a vital part of the rehabilitation of dogs with difficult behaviour problems, and we find that having all under one roof is a big advantage.

The Centre also has a new heated hydrotherapy pool, with facilities for free swimming, or swimming against jets in hoist or tri-ropes. Our hydrotherapists run post-op rehabilitation, fitness, obesity, and old arthritic dog courses. They are happy to suggest treatment regimes or to follow any you request. We also work closely with a physiotherapist, Fay Fretton, who sees patients at the Centre.

To refer a client to the Centre, please phone 01425 480721.

# MEDICINE REFERRALS

We have decided to temporarily stop taking medicine referrals. Mark Richer, who has been working with us for the last 18 months, is continuing with his clinical pathologist's hat on. He will now be here for part of the week involved in developing our laboratory, and continuing in his work with TDDS Labs for the rest. **Any ongoing cases will continue to be seen.**

We are sorry that we will no longer be providing what is an important discipline. However, we hope that this will only be temporary, and our plan is to continue to develop our whole referral service.