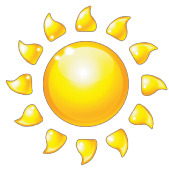




SOUTHERN COUNTIES VETERINARY SPECIALISTS



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Summer 2011

NEWSLETTER

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Multidisciplinary
veterinary referral
service based in
Ringwood,
Hampshire.



SPECIALIST REFERRAL SERVICES

ANAESTHESIA	CARDIOLOGY	DERMATOLOGY
DIAGNOSTIC IMAGING	INTERNAL MEDICINE	
MEDICAL/SURGICAL ONCOLOGY	NEUROSURGERY	ORTHOPAEDICS
PHYSIOTHERAPY	SPINAL SURGERY	SOFT TISSUE SURGERY

Win a bottle of champagne!

Incomplete ossification of the humeral condyle (IOHC) is a condition of the distal humerus seen with some frequency in dogs, particularly English springer spaniels. IOHC is believed to predispose to humeral condylar fracture (fig 1).



Fig 1. Y-T fracture in an English springer spaniel with a contralateral IOHC fissure.

IOHC has also been reported as a cause of lameness in the absence of, or prior to fracture. A failure to recognise IOHC in a lame dog and treat it appropriately may result in catastrophic condylar fracture. IOHC fissures may be apparent on x-rays, although CT is the optimal imaging modality (fig 2).



Fig 2. Bilateral IOHC fissures apparent on CT imaging.

Our orthopaedics department is conducting a study to determine the prevalence of IOHC in English springer spaniels.

The presumed aetiology is that the medial and lateral parts of the humeral condyle fail to fuse during ossification resulting in a cartilaginous plate between the two parts of the condyle.

We published a case in the Journal of Small Animal Practice recently¹ of a fissure propagating through the humeral condyle of an American cocker spaniel, which suggested that the typically understood aetiology of IOHC might not be the full story. The prevalence of fissures in springers is unknown, and our survey aims to determine this in a population of springers with no forelimb lameness.

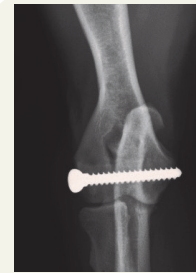


Fig 3. Prophylactic transcondylar screw.

We perform free-of-charge CT scans of the elbows of English springer spaniels under sedation using our new 4 slice scanner. Springers are eligible for the study if they are free of lameness and are over 6 months of age. The benefit to the client is the knowledge that their dog does not have a fissure which may result in a condylar fracture. If a fissure is present, a prophylactic transcondylar screw is advised (fig 3), although the client is under no obligation to have this surgery. **We make things very simple, fitting in with the owner's timetable, and all we need is an email or a telephone call to start the ball rolling. Any veterinary surgeon referring three suitable springers will receive a complimentary bottle of champagne!**

¹ Witte P.G., Bush M.A., Scott H.W. (2010) Propagation of a partial incomplete ossification of the humeral condyle in an American cocker spaniel JSAP 51(11): 591-593

Please contact the study coordinator, Phil Witte
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Heart murmurs in asymptomatic cats

Deciding if a heart murmur is clinically significant in an asymptomatic cat is difficult.

Hypertrophic cardiomyopathy (HCM) is the most common heart disease in cats, however there is surprisingly little information about its true prevalence. The information that is available suggests that HCM could affect about 16% of the cat population. **Heart murmurs also seem to be very common in cats.** Again there is very little information about the true prevalence of heart murmurs, but numbers of 20-34% are reported in a limited number of studies.

Unfortunately determining which cats are at risk of developing clinically significant disease is difficult and echocardiography remains the most reliable way of assessing these patients. Some other tests can be helpful in certain circumstances.

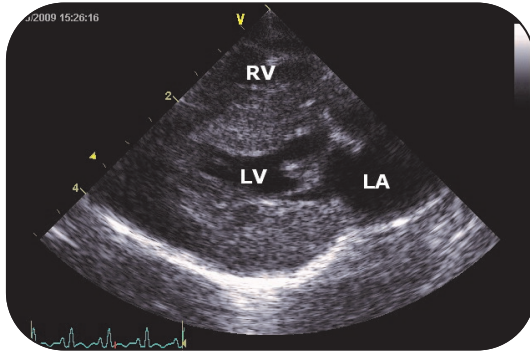


Image 1: Severe hypertrophy of septum and free wall. Hypertrophic cardiomyopathy.

Murmur: Very loud murmurs ($\geq 5/6$) are often caused by congenital disease. Ventricular septal defect, the most common congenital abnormality in cats, typically results in a very loud right-sided murmur. Medium and low grade murmurs can be benign. However, echocardiography commonly reveals myocardial changes (typically hypertrophic cardiomyopathy) in cats with a murmur.

Other auscultatory abnormalities:

Gallop rhythms or arrhythmias, although less common than heart murmurs, nearly always indicate significant heart disease is present.

Radiographs: If cardiomegaly is found, then the murmur is most likely significant; however normal radiographs do not rule out clinically significant heart disease.

ECG: If there is an arrhythmia or a conduction abnormality

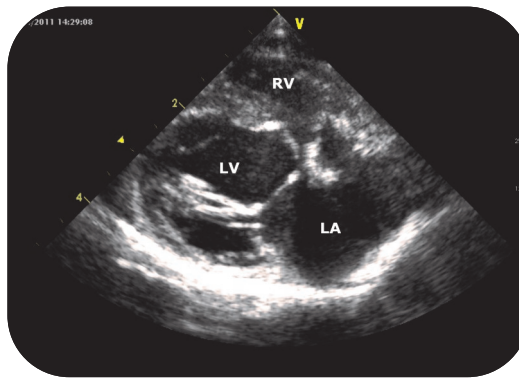


Image 2: Enlargement of left ventricle and left atrium. Unclassified cardiomyopathy.

(bundle branch block or fascicular block), then heart disease is often present. Unfortunately a normal ECG does not rule out significant heart disease.

Biomarkers: Elevated NT-proBNP and Troponin-I have been shown to be elevated in cats with heart disease. According to current literature, NT-proBNP is probably superior to Troponin-I in identifying heart disease in cats. If an elevated value is found (> 270 pmol/L), then the cat may have heart disease and if values are normal (< 100 pmol/L), then significant heart disease is unlikely. Careful sample handling or the use of special sample transport tubes is required to ensure reliable results.

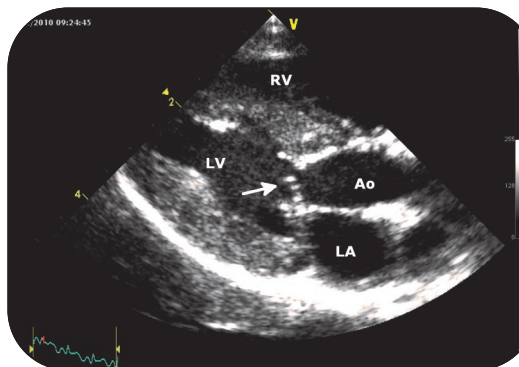


Image 3: Systolic anterior motion. Part of the mitral valve (arrow) moves towards the septum during systole resulting in left ventricular outflow tract obstruction.

Why echocardiography? Echocardiography allows for detailed assessment of both heart structure and function. Echocardiographic examination can nearly always be achieved without sedation, making it a safe and cost-effective test. Diagnosis is achieved in many cases, allowing us to decide on the most appropriate plan for the affected cat.

There are different types of cardiomyopathies in cats (see below) and identifying the particular subtype is important as disease progression and prognosis vary. Echocardiography can also identify risk factors for serious complications; such as left atrial enlargement and presence of spontaneous echo contrast, that often precede the devastating consequences of aortic thromboembolism or impending congestive heart failure.

Some cats have equivocal findings making it difficult to completely exclude cardiomyopathy based on a single echocardiographic examination. However, the risk of cats with equivocal findings developing clinically significant disease in the short to medium term is usually low.

Types of feline cardiomyopathy:

- hypertrophic cardiomyopathy
- hypertrophic obstructive cardiomyopathy
- restrictive cardiomyopathy
- dilated cardiomyopathy
- unclassified cardiomyopathy
- endomyocardial restrictive cardiomyopathy

In summary, murmurs are not always associated with clinically significant heart disease, but do warrant further investigation as many cats will only develop physical signs of heart failure shortly before death. Radiographic abnormalities, abnormal ECG and biomarker findings may indicate heart disease is present, but are often normal in cats with heart disease. However, abnormalities on radiography, ECG or biomarkers could help to convince owners that further investigation (echocardiography) should be considered. Finding an arrhythmia or gallop rhythm on auscultation usually indicates heart disease and warrants further investigation. Although some useful information can be achieved from abnormal ECG, radiographs or biomarker findings, echocardiography remains the test of choice for diagnosing heart disease in cats.

For information about our Cardiology department please visit www.scvetspecialists.co.uk

Physiotherapy Case Study

All of our orthopaedic and neurological patients receive physiotherapy postoperatively to ensure optimal recovery. At SCVS we have two full-time physiotherapists and a state-of-the-art physiotherapy suite.

Our suite is equipped with:

- Underwater treadmill
- Therapeutic ultrasound
- Electrical stimulation
- Low level laser
- Therapeutic exercise equipment

Additionally clients are instructed in techniques to reinforce these treatments at home, enhancing their pet's recovery.

Rehabilitation goals include:

- Increasing joint motion
- Improving muscle strength and coordination
- Decreasing pain and inflammation
- Restoring balance and endurance

Case Study 'Molly'

Molly is a 4 year old female Jack Russell terrier

History

Molly had been playing in the garden when her owner found her sitting on her hind quarters with her forelimbs rigidly extended. She was seen as an emergency at her own veterinary practice and was referred to the SCVS neurology department for further investigation.

On presentation Molly was non ambulatory, had strong coordinated movements of the forelimbs but severe paraparesis/paraplegia (worse on the right). Neurolocalisation was to segments T3-L3. Forelimb extension was ascribed to the Schiff Sherrington phenomenon. Contrast enhanced CT revealed a right-sided disc extrusion at L1-L2. Right sided hemilaminectomy was performed and a substantial amount of degenerate nuclear material was retrieved from the vertebral canal.

Physiotherapy

Molly stayed in the clinic for 10 days. Immediately following surgery she was non ambulatory with flaccid paralysis of the right hind limb and

weak voluntary movement in the left hind limb. Hind limb myotatic reflexes were increased. Bladder and bowel function were normal.

Days 1 -3

Molly was very tense along the suture site after surgery, so additional analgesia was applied for two days using low frequency **transcutaneous electrical nerve stimulation (TENS)** either side of the spinal column.

TENS activates endogenous neural pain control systems, reduces muscle spasm and stimulates blood flow. In Molly's case analgesia was also supplemented by the use of **acupuncture** (see figure 1).



Fig. 1

Cryotherapy was applied to the incision site to reduce inflammation and to provide supplementary analgesia.

Massage of all limbs was performed along with passive range of movement (**PROM**) to all joints. Toe pinching, using the withdrawal reflex was applied to the hind limbs to promote active muscle contraction. Neuromuscular electrical stimulation (**NMES**) was applied to the right hind limb on day three for direct stimulation of the primary anti-gravity muscle groups. **Ice massage** to both forelimbs was also used to help reduce spasticity.



Fig. 2

Days 3 -7

On day four strong voluntary movement was observed in both hind limbs and myotatic reflexes had returned to normal. NMES, massage and PROM were continued, cryotherapy was changed to **heat application** over the incision site and the neck to reduce muscle spasm. Molly was placed over a

physio-roll (see figure 2) for assisted standing and weight shifting, core strengthening and to apply patellar reflex exercises. Molly was able to stand in our **underwater treadmill (UWT)** and assisted **therapeutic exercises** (see figure 3) were performed including cycling of both hind limbs and weight shifting. Immediately after the sessions in the treadmill there was a marked improvement in Molly's demeanour and she started to wag her tail!



Fig. 3

Days 7 -10

By day seven Molly was weakly ambulatory with bilateral hind limb motor function. By day 10 there was strong voluntary movement in both hind limbs. Sit to stand exercises were implemented to strengthen the hind limbs.

Home exercises

Molly was discharged on day 10. The owners were shown how to perform **therapeutic exercises**. To ensure that she developed the correct gait pattern and to give her additional support a **Thera-Band stretch strap** was supplied for home use. Home exercises also included continued use of the **physio-roll**, sit to stand and slow walking with the **Thera-Band**. Molly attended the physiotherapy clinic for **UWT** sessions two to three times a week initially.

Days 10 - 28

Molly continued to come to the clinic for **UWT** sessions and additional **therapeutic exercises** to improve her gait and strengthen core muscles. She was also given balance and weight shifting exercises using an **air filled wobble cushion**. Molly was showing only mild proprioceptive deficits in the right hind limb when re-examined by the neurologist on day 28 and lead exercise was introduced. She has since made a full recovery with no evidence of residual neurological dysfunction.

For information about our Physiotherapy department please visit www.scvetspecialists.co.uk

SCVS NEWS

New Neurologist

Sergio Rodenas will be leaving us shortly. Sergio has worked hard over the last two years to expand and develop the neurology service into one of the busiest in the south of England. We are sorry to see him go but wish him well with his future. We have recruited a neurologist from America, Stephen Hanson DVM, MS, Diplomate ACVIM (Neurology), who will be joining us in September. Stephen is a board certified neurologist who is moving from private practice in southern California to join SCVS. He graduated in 1992 and subsequently undertook a residency at Colorado State University. Stephen has been a neurology specialist for nearly 15 years and has a wealth of experience in all aspects of small animal neurology and neurosurgery.



Stephen Hanson

New Medic

Our new internal medicine referral service is expanding. We are pleased to announce the arrival of Aran Mas in September. Aran will join our existing medicine specialist Florence Juvet and together they will provide a comprehensive 24/7 medicine referral service 365 days a year. Aran qualified from the University of Barcelona in 2004. She has worked in private small animal practice in Spain and completed internships at the University of Barcelona and at Davies Veterinary Specialists before completing a residency in Internal Medicine at the University of Liverpool. She is currently a clinician/teacher in medicine and oncology at the University of Liverpool. Aran is hoping to sit her European Diploma exams this year.



Aran Mas

Film Nights

These informal CPD sessions for referring vets are held on the first Thursday of every month from 7.30-9.00pm at our centre in Ringwood. They involve x-ray film reading and open discussion based on some of our recent cases. Delegates are also encouraged to bring their own radiographs of interesting or challenging cases for group discussion. The meetings are run by our diagnostic imagers Manuel Pinilla and Inma Ferrandis. Although the meetings are FREE, numbers are limited to allow delegate participation. Please book in advance by contacting the practice. Places are reserved on a first-come, first-served basis. Light refreshments are provided.

CPD dates

Management of allergic skin disease in dogs

The pollen is out, the temperature is rising and many dogs are already becoming a lot more itchy. Our dermatologist Filippo DeBellis will give a guide to recent developments and thoughts in managing these challenging cases.

- ◆ **Wednesday, 15 June** - Legacy Botleigh Grange, Botleigh, Southampton
- ◆ **Tuesday, 21 June** - Crown Hotel, Blandford

Kindly sponsored by Virbac

Film Nights

Dates for the rest of 2011 are as follows:

07/07/11 04/08/11 01/09/11 06/10/11 03/11/11 01/12/11

For further details on our free CPD please visit our website

www.scvetspecialists.co.uk

ANAESTHESIA

Alastair Mair
BVM&S, CertVA, MRCVS

CARDIOLOGY

Stephen Collins
BVetMed, CertVC, MRCVS
Tobi Wagner
DrMedVet, Dip ECVIM-CA (Cardiology), MRCVS
European Specialist in Veterinary Cardiology
Mark Patteson (consultant)
MA, VetMB, PhD, DVC, CertVVR, MRCVS
RCVS Specialist in Cardiology

DERMATOLOGY

Filippo DeBellis
DVM, CertVD, DipECVD, MRCVS
European Specialist in Veterinary Dermatology

DIAGNOSTIC IMAGING

Inma Ferrandis
DVM, CertVDI, MRCVS
Manuel Pinilla
DVM, CertVDI, DipECVDI, MRCVS
European Specialist in Veterinary Diagnostic Imaging
Travis Saveraid (consultant)
DVM, Diplomate ACVR
American Specialist in Diagnostic Imaging

MEDICINE

Florence Juvet
DVM, DipECVIM, MRCVS
European Specialist in Small Animal Internal Medicine

NEUROLOGY/ NEUROSURGERY

Katia Marioni-Henry
DVM, PhD, DipACVIM (Neurology), DipECVN, MRCVS
American and European Specialist in Neurology
Sergio Rodenas
DVM, DipECVN, MRCVS
European Specialist in Neurology

ORTHOPAEDIC SURGERY

Harry Scott
BVSc, CertSAD, CBiol, FSB, DSAS (Orth), FRCVS, CCRP
RCVS Specialist in Small Animal Surgery (Orthopaedics)
Mark Bush
MA, VetMB, CertSAS, MRCVS
Philip Witte surgical resident
BSc, BVSc, MRCVS

PHYSIOTHERAPY

Donna Scott
BEd, Dip Animal Physio, CCRP
Elyse Spooner
RVN, CCRP

SOFT TISSUE SURGERY

Tony Ryan
MVB, CertSAS, DipECVS, MRCVS
European Specialist in Small Animal Surgery