

Yorkshire Vets

MONTH 2010

MEDICINE REFERRAL SERVICE

ISSUE TWO



*Internal Medicine
Referrals available
at our Thornbury
Hospital*

Bacterial Endocarditis in Dogs: A Review

The classic bacterial endocarditis case is a large breed, pedigree dog. Some have congenital heart defects, others have a focus of chronic sepsis elsewhere. Interestingly canine patients suffering from the common causes of immunosuppression diabetes mellitus, hyperadrenocorticism and hypothyroidism don't seem to have particularly increased susceptibility.

On paper, confirming a diagnosis of endocarditis can be complicated. The existence of the Duke University scoring scheme -based on major and minor criteria, is testament to this. However, there is a difference between what constitutes a 'definite diagnosis' in an academic scenario and what constitutes sufficient evidence to treat as probable endocarditis. In practice a high proportion of cases present as severely pyrexial patients with lameness, a newly-exacerbated murmur and valve lesions visible on echocardiography. In this event a provisional diagnosis of infective endocarditis is relatively safe. Care must be taken not to over-interpret degenerative mitral valve lesions which can be highly variable in appearance. However, really florid vegetations, aortic valve lesions and especially aortic

regurgitation are strong evidence for infective endocarditis. The ultrasonographic examination should also take in the thoracic cavity generally for possible pyothorax, the kidneys and spleen for evidence of thromboembolic infarction and the prostate in male dogs for evidence of abscessation.

Blood culture, although having its place, can be frustrating in practice as many patients have already received antibiotics (although this doesn't preclude isolating the pathogen) and the results will not be available for several days. It is sometimes useful to examine urine sediment as the presence of rods or cocci gives a strong clue as to the likely cause of valve lesions and may influence initial choice of antibiotic.

The majority of cases are caused by Staphs, Streps or Gram-negative rods. Pending blood culture results, we would normally start treatment with a combination of empirical intravenous co-amoxiclav (Augmentin) or cefuroxime (Zinacef) and intravenous Marbofloxacin (Marbocyl). A response is usually seen within 48 hours. Failure to respond at this stage despite lack of an alternative diagnosis should lead to a re-evaluation. The increasing prevalence of

MRSA requires that this possibility be borne in mind especially in patients with cocci in urine or a history of previous hospitalisation or owners with increased risk of carriage. Most MRSA isolates encountered in Leeds-Bradford have been sensitive to trimethoprim-sulphonamide and, although unlicensed, intravenous TMP/SMX is a reasonable second-line empirical option. If there are bacterial rods in urine then intravenous agents such as amikacin, ceftazidime or ticarcillin are options to be considered. Anaerobes are very rarely implicated.

Above Ultrasound Capture:

Right parasternal long-axis view from an dog with endocarditis of the aortic and mitral valves. Whereas infective mitral valve leaflets can be hard to distinguish from degenerative changes, aortic valve destruction or vegetations are always strongly suggestive of bacterial endocarditis. In this unfortunate patient the anterior aortic valve cusp is perforated causing severe valvular incompetence

Contacts at Thornbury for
Medical Referrals:

Roger Wilkinson MA VetMB CertVD CertSAM MRCVS
Edward Morton MA VetMB MRCVS
Andrew Chance BVSc MRCVS



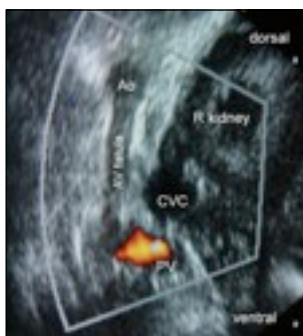
Hepatic Arteriovenous Fistulae

In the last month we have seen two dogs with arterio-venous fistulae.

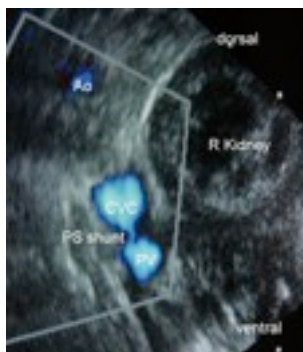
This is an unusual condition which relies heavily upon ultrasonography for a diagnosis. Unlike patients with a classic porto-systemic shunt, initial presenting signs are often gastrointestinal rather than encephalopathic. Both of this week's cases presented at about one year old with a history of chronic vomiting and diarrhoea. The fundamental abnormality is a congenital connection (often multiple) between the hepatic artery and portal vessels. These shunts are usually confined within a single hepatic lobe. Resulting portal hypertension ultimately leads to the development of multiple acquired extra-hepatic porto-systemic shunts from the portal vein directly or indirectly to the vena cava. Blood is then shunted from aorta to portal vein and thence to vena cava! Signs of hepatic encephalopathy frequently follow months to years later. The long term prognosis is guarded to poor as there remains no really satisfactory surgical treatment. Excision of the affected lobe has

been reported as successful in only 15-30% of cases. While embolisation of the AV fistula has been described it requires fluoroscopy and there remains a significant risk of morbidity due to acquired porto-systemic shunts in the longer term.

Transverse scan at the level of the cranial pole of the right kidney showing the aorta (Ao) dorsally and a shunt vessel coursing ventrally to empty with turbulence into the portal vein (PV)



1cm further caudal one of many portosystemic shunts is visible between portal vein and caudal vena cava (CVC)



Yorkshire Vets
515 Bradford Road
Thornbury
Bradford
BD3 7BA
Tel: 01274 663301
Fax: 01274 668857
Email:

yorkshirevetsreferral@googlemail.com

Mon-Fri: 8-7pm

Sat: 8:30-4pm

Sun: 9-3pm

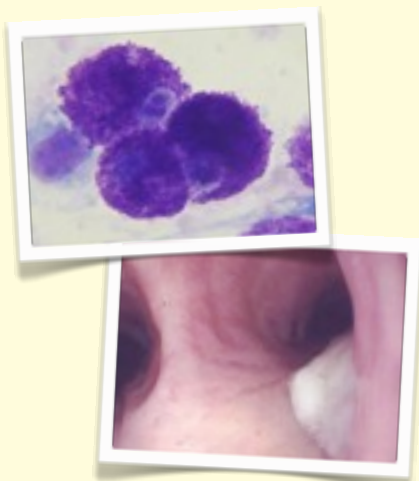
Medical Appointments Available
Monday to Friday by appointment
only

Please telephone or email for further
information

Medical Services Available

We are happy to discuss any medical cases and can usually provide same-day attention for urgent cases. We offer:

- 24 hour nursing
- Ultrasonography, echocardiography, colour doppler.
- Endoscopy (upper GI, colonoscopy, bronchoscopy, rhinoscopy)
- Inhouse 24-hour lab with blood gases, ionised calcium, electrolytes, coagulation, biochemistry, lasercyte haematology, PLI and cytology.
- Blood pressure, capnography.
- Large isolation ward for infectious cases -MRSA, parvovirus, etc.



We offer a full medical referral service and will aim to keep you up to date with all cases referred to us as often as possible. Assistance on all cases after discharge is also available.