RESULTS

There was no difference ($P=0.15$) in the relative renal medullary expression of 11 β HSD2 between dogs euthanased for behavioural reasons ($n=10$), non-cardiac disease ($n=6$) and CHF ($n=9$). Dogs euthanased for CHF had underlying dilated cardiomyopathy or atrioventricular valve dysplasia.

STATEMENT (CONCLUSIONS)

There is no evidence that modification of expression of 11 β HSD2 contributes to the development of canine CHF. However, translational and post-translational modifications of 11 β HSD2 and also breakdown of cortisol may be altered, and this warrants further investigation.

Echocardiographic reference intervals in UK Deerhounds

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OBJECTIVES

To screen a UK population of clinically healthy Deerhounds to generate breed specific echocardiographic reference ranges for the breed and to identify the prevalence of preclinical DCM in this population.

METHODS

A prospective, longitudinal study of asymptomatic Deerhounds ≥ 4 years of age undergoing auscultation, Doppler echocardiography with ECG and cheek swab sampling.

RESULTS

Deerhounds were classified as affected (preclinical DCM) if they scored >6 according to the ESVC taskforce ($n=13$); and normal (N) if they scored ≤ 3 according to the ESVC taskforce ($n=53$). Twelve hounds were classified as equivocal (4, 5, 6). Seven dogs had arrhythmias, of which 6 were ventricular and 1 was in atrial fibrillation. The 53 N dogs consisted of 26 males and 27 females; median left ventricular internal diameter in diastole value for the male dogs was 55 mm and 51 mm for the females. Median left ventricular internal diameter in systole value for the male N dogs was 40 mm and 37 mm for the N females. Variables of systolic function were assessed in both male and female N hounds, with median Simpson's ejection fraction being 52% and 51% respectively and median fractional shortening being 28% for both sexes. Median end-systolic volume index was 47 ml/m² in the female N population and 54 ml/m² in the male N population.

STATEMENT (CONCLUSIONS)

Deerhounds have a high prevalence of DCM, ranging from 17% (excluding the equivocal group) to 32% (including the equivocal group). They should be actively screened for disease using echocardiography.

A case-control study of end-stage hypertrophic cardiomyopathy in cats

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OBJECTIVES

Hypertrophic cardiomyopathy (HCM) is considered end-stage (ES-HCM) when systolic dysfunction develops.

Although widely reported in human literature, only case reports of ES-HCM have been reported in cats. We aimed to compare the clinical characteristics of cats with HCM and ES-HCM.

METHODS

Medical records were searched for cats with HCM, defined as LV wall thickness ≥ 6 mm without an underlying cause. A subgroup of cats with LV fractional shortening $<30\%$ were classified as ES-HCM, and case matched to cats with 'classic' HCM by breed, sex and age.

RESULTS

Prevalence of ES-HCM was estimated at 5.2% of the HCM population. The majority of cats were Domestic Shorthairs, with British Shorthairs appearing over-represented. Cats with ES-HCM were more likely to present without a murmur ($p<0.001$), with an arrhythmia ($p=0.004$) and in CHF ($p=0.006$). Echocardiographic findings showed cats with ES-HCM were likely to have regional LV wall hypokinesia ($p<0.001$), left atrial enlargement ($p<0.001$) and presence of spontaneous echo contrast/thrombus in the left atrium

Oral presentations

($p=0.01$). Survival times were significantly lower in ES-HCM cats ($p<0.001$) with a median survival time of 49 days (95% CI 20–78) compared to 413 (95% CI 112–713) for HCM cats ($p<0.001$). The major cause of death in ES-HCM cats was CHF (21/32, 65.6%), with 43.8% (14/32) of HCM cats dying of non-cardiac causes.

STATEMENT (CONCLUSIONS)

Cats with ES-HCM have a poor prognosis compared to cats with HCM in general. More work is needed to identify risk factors for progression from HCM to ES-HCM.

Evaluation of a one-hour training course in focused echocardiography for general veterinary practitioners to aid detection of cardiac emergencies

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OBJECTIVES

To assess whether one-hour training in focused echocardiography could improve general veterinary practitioners' (GVPs) ability to obtain images considered essential components of a focused echocardiogram and subjectively interpret pericardial effusion (PE), left atrial enlargement (LA) and poor systolic function.

METHODS

Forty GVPs completed a pre-training questionnaire on their confidence and use of echocardiography. This was followed by a pre-assessment of practical skills on obtaining a standing right parasternal long axis 4 chamber (RPSLA 4C), right parasternal short axis left ventricle (RPSSA LV) and RPSSA at the heart base; pre-training tests on cardiac anatomy and video image interpretation; a 1 hour lecture and practical training session; post-training assessment.

RESULTS

Anatomy and video image interpretation score significantly improved after training ($p<0.0001$). Post-training, all vets obtained a diagnostic RPSSA LV and RPSLA 4C. 90% obtained a diagnostic RPSSA view of the heart base.

Post-training, GVPs correctly subjectively identified a large volume pericardial effusion (95%), severely reduced systolic function (fractional shortening $<10\%$) (97.5%) and LA enlargement (LA:Ao $>2:1$) (95%).

STATEMENT (CONCLUSIONS)

A one hour course in focused echocardiography improved the ability of GVPs to identify cardiac anatomy on echocardiography correctly, detect LA enlargement, reduced systolic function and PE, obtain the views required to make these assessments, and improved their confidence in both image interpretation and practical acquisition.

This skill could provide a complementary diagnostic tool and aid triage of patients in an emergency setting and aid identification of patients with cardiac disease who might benefit from cardiac medications and/or referral for echocardiography.

Investigating the endothelial glycocalyx in health and disease in dogs

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OBJECTIVES

The objectives of this study were; firstly to visualise the endothelial glycocalyx using Alcian Blue perfusion for the first time in dogs and secondly to evaluate glycocalyx damage in dogs with mitral valve disease (MVD) and hypercoagulability compared to control dogs.

METHODS

Uterine and testicular artery samples were perfused with 0.1% Alcian Blue/2.5% glutaraldehyde/0.1 M sodium