Oral presentations

Can we screen UK Dobermanns for Dilated Cardiomyopathy (DCM) with cardiac biomarker blood tests?

**Joanna Dukes-McEwan¹, Ruth Willis²,
Kathryn Garven³, Jordi Lopez Alvarez⁴,
Pedro Oliveira⁴, Paul Motskula⁵**

- 1 University of Liverpool, Neston, United Kingdom
- 2 Dick White Referrals, Six Mile Bottom, United Kingdom
- 3 MBM Veterinary Group, Kilmarnock, United Kingdom
- 4 Davies Veterinary Specialists, Higham Gobion, United Kingdom
- 5 Anderson Moores Veterinary Specialists, Winchester, United Kingdom

OBJECTIVES

Dobermanns have high prevalence of DCM. Gold-standard screening is annual echocardiographic (E) and Holter monitoring (H). Cardiac Troponin I (cTnI) and N-terminal pro-BNP (NTproBNP), have been reported individually to identify affected Dobermanns. The objectives were (i) to investigate whether both cTnI & NTproBNP were superior to either alone (ii) to report sensitivity (Se) and specificity (Sp) of each biomarker in identifying DCM.

METHODS

Prospective study. High sensitivity cTnI and 2nd generation NTproBNP were assayed (IDEXX). Dogs were selected for gold-standard screening by participating cardiologists. ROC curve analysis to give area under the curve (AUC) for each biomarker. Cut-offs to optimise both sensitivity (Se) and specificity (Sp) were determined. A combined analysis included a combined score of biomarker abnormalities.

RESULTS

118 Dobermanns were included (55 male, 63 female), aged 2.13–12.23 years old. 59 were normal, 52 had DCM. 7 equivocal (excluded).

ROC analysis: cTnI AUC = 0.87, NTproBNP AUC = 0.81. Se & Sp for the current laboratory reference ranges for cTnI was 0.77 and 0.86, and for NTproBNP was 0.69 and 0.81. To optimise both Se & Sp, cut-offs of 0.06 ng/mL for cTnI (Se/Sp 0.838) and 626 pmol/L for NTproBNP (Se/Sp 0.787) are proposed to identify both forms of DCM in Dobermanns. Using the combined score and the new cut-offs, the AUC increased to 0.876.

STATEMENT (CONCLUSIONS)

Cardiac biomarker screening using both cTnI and NTproBNP may identify Dobermanns with DCM, and both biomarkers may be superior to either alone. Further evaluation is indicated in dogs with abnormal cardiac biomarker results.

Pulmonary Hypertension in cats: Causes and Echocardiographic Assessment

**Joao Escalda, Siddharth Sudunagunta,
Hannah Hodgkiss-Geere**

University of Liverpool, Neston, United Kingdom

OBJECTIVES

To document the underlying causes of pulmonary hypertension (PH) in cats and to evaluate the accuracy of the most common echocardiographic variables used in dogs to predict PH. A secondary objective was to assess progression after treatment of the primary cause.

METHODS

A retrospective review of cats with PH presented to one referral centre. Cats were enrolled if they had PH, diagnosed by tricuspid regurgitation (TR) >2.8 m/s or pulmonary regurgitation > 2.2m/s. Cats without PH (TR < 2.5m/s or without measurable TR) were selected as a control group. Ten quantitative echocardiographic variables were assessed in all groups, including: main pulmonary artery/aorta ratio (MPA/AO); Pulmonary acceleration time; Pulmonary acceleration time/ ejection time ratio; tricuspid annular plane systolic excursion (TAPSE), Tei Index, and four right ventricular TDI variables. Receiver operating characteristic (ROC) curves were performed for each variable.

RESULTS

PH was diagnosed in 29 cats. Left-sided heart disease was the most common cause (14/29), with restrictive cardiomyopathy and hypertrophic cardiomyopathy being the most represented diseases, with 6 cases each. Congenital and respiratory diseases were diagnosed in 7 cases each. MPA/AO was the best parameter tested

Delivered by BSAVA to:

Guest (guest)

IP: 54.237.206.68

On: Wed, 26 Apr 2023 11:24:07