systolic function in healthy dogs and dogs with pulmonary artery hypertension (PAH). We hypothesized that RV outflow tract (RVOT) function might provide a simple, useful estimate of RV function and PAH. Specifically, we measured RVOT fractional shortening (RVOT-FS) to determine if this index helps identify RV dysfunction in dogs with PAH (tricuspid regurgitation velocity-TRV >3 m/sec).

One hundred fifteen dogs [42 healthy dogs, 40 dogs with mitral valve disease (MVD) without PAH and 33 dogs with PAH] underwent complete echocardiographic evaluation. We acquired 2D guided M-mode recordings of the RV outflow tract from the parasternal short axis view at the level of the aortic root. We placed the M-mode line perpendicular to RVOT and parallel to the commissure of the aortic valve between the non-coronary and left-coronary cups. RVOT-FS was calculated as: RVOT dimensions (end-diastole − end-systole)/end-diastole *100. A mean of 3 measurements from each dog was used for the statistical analysis.

Healthy dogs and MVD dogs without PAH had higher RVOT-FS than dogs with PAH ($P < 0.000001$). No dogs with RVOT-FS >51% had PAH. All dogs with TRV >4 m/sec had RVOT-FS <44%. A cut-off of 44% had 100% specificity and 60% sensitivity for identifying PAH. No relationship of body weight, left-atrial-to-aortic ratio or heart rate and RVOT-FS could be identified ($P > 0.1$).

Our data suggest that RVOT-FS might help identify a subset of dogs with PAH. RVOT-FS was significantly modified in dogs with severe and moderate PAH, suggesting a RV systolic dysfunction only in these classes of PAH.

Disclosures: No disclosures to report.

ESVC-P-9
COMPARISON OF M-MODE AND TWO-DIMENSIONAL ECHOCARDIOGRAPHY IN EVALUATING THE LEFT ATRIUM TO AORTA RATIO IN CATS. F. Marchesotti[1], T. Vezzosi[2], E. Zini[1], O. Domenech[1]. [1]Istituto Veterinario di Novara, Granozzo Con Monticello (NO), Italy, [2]Department of Veterinary Sciences, University of Pisa, San Piero a Grado (PI), Italy

Assessment of the left atrial (LA) size is crucial in cats with cardiomyopathies because LA dilation, which results from an increased diastolic filling pressure, predisposes towards the development of congestive heart failure and arterial thromboembolism. In addition, LA dilation has been shown to be a negative prognostic factor in cats affected by hypertrophic cardiomyopathy. The aim of this study was to evaluate the agreement between M-mode and two-dimensional (2D) echocardiography in the assessment of LA size in cats.

The study was retrospective and observational. Cats with and without heart diseases were included. The LA and aorta (AO) were measured in M-mode and 2D using a standard right parasternal short axis view at the aortic valve level. A left atrium to aorta ratio (LA/AO) >1.5 was considered indicative of LA enlargement. Cohen's kappa agreement was calculated and Bland-Altman plots were obtained.

A total of 188 client-owned cats were included: 104 with heart disease and 84 without heart disease. LA and AO dimensions in M-mode were 13.9 ± 3.7 mm and 8.7 ± 1.5 mm, respectively, and in 2D were 14.1 ± 3.5 mm and 8.8 ± 1.4 mm, respectively. Bland-Altman plots showed that the mean difference for the evaluation of AO dimensions between 2D and M-mode was 0.1 ± 1.0 mm and that of LA was 0.1 ± 1.4 mm. LA/AO measured in 2D and M-mode was 1.6 ± 0.5 and 1.6 ± 0.5, respectively, with a median difference between the two methods of 0.0 ± 0.2. Cohen's kappa yielded a good agreement between the two methods in the interpretation of LA/AO ratio (kappa = 0.760; 95% CI: 0.54–0.99), with 184 agreements out of 188 (97.6%).

In conclusion, 2D echocardiography resulted in a slightly higher estimation of the LA and AO diameters in comparison to M-mode, but not for the LA/AO. Because a good agreement was documented between M-mode and 2D evaluation of the LA/AO, the two methods can be used interchangeably to measure this echocardiographic index in cats.

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ESVC-P-10
SURVIVAL AND PROGNOSTIC FACTORS IN CATS WITH RESTRICTIVE CARDIOMYOPATHY: A REVIEW OF 103 CASES. C. Locatelli[1], D. Pradelli[2], G. Campo[3], I. Spalla[4], P.G. Brambilla[3], A. Savarese[1], C. Bussadori[2]. [1]Univerisity of Milan, Milan, Italy, [2]Clinica Veterinaria Gran Sasso, Milano, Italy, [3]University of Milan, Milano, Italy, [4]Royal Veterinary College, Brookmans Park, UK

Restrictive cardiomyopathy (RCM), which approximately accounts for 20% of referred feline (CMs), is a primary myocardial disorder characterized by diastolic dysfunction and a poor prognosis. Large studies focusing on RCM in the cat are scant. The aims of this retrospective study were to describe epidemiological characteristics and to analyze prognostic factors affecting survival in cats with RCM.

The clinical archives of the Clinica Veterinaria Gran Sasso (Italy) and of the cardiology unit of DIMEVET (University of Milan, Italy) from 1997 to 2015 were reviewed for all cats diagnosed with RCM based on an echocardiographic exam. The diagnosis was based on distinctive echocardiographic phenotype of left atrial/biatrial enlargement, normal left ventricular (LV) wall thickness, and restrictive LV filling pattern with pulsed Doppler echocardiography. Inclusion criteria were any patient with a complete case record and an echocardiographic diagnosis of RCM. Cats diagnosed with another form of cardiomyopathies CMs, with congenital heart disease, with hypertension or hyperthyroidism or those with incomplete case records were excluded. Follow-up status and cause of death were determined by reviewing the medical records or by phone interviews with the owners.

One hundred three cats (61 male and 42 female) were included in the study with a mean age of 10 years (SD 4.45) and a median weight of 3.8 kg (IQR 3.2–5 kg); most of the cats were domestic shorthair (67%) or Persians (18%). Almost all cats were showing clinical signs (96%). Dyspnea was the most common clinical sign, being evident in 82.5% of the cats. Dyspnea was attributable to pleural effusion (PE) in 50 cats, pulmonary edema in 22 cats and both in 13 cats. Hind limb paresis or paralysis due to aortic thromboembolism was evident in 14 cats. Follow-up information was available for 67 cats. Median survival time (MST) in cats with RCM was 133 days. A statistically significant different ($P = 0.004$) MST was identified in cats with dyspnea (68 days) and in cats without dyspnea (731 days). Likewise a statistically significant ($P = 0.004$) different MST was identified in cats with PE (68 days) and in cats without PE (186 days).

MST of cats with dyspnea/PE is in this study significantly shorter than MST in cats without dyspnea/PE. The present results confirmed that cats with RCM had short survival time (MST 133 days), but worse prognosis should be prospected to the owner in cats with dyspnea or PE. Better prognosis may be prospected only in cats without dyspnea.

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ESVC-P-11
PLASMA COENZYME Q10 CONCENTRATION DOES NOT PREDICT SURVIVAL IN CANINE CARDIOVASCULAR PATIENTS. A. Domanjko Petric[1], B. Verk[1], P. Jazbec Križman[2], A. Nemec Svete[1]. [1]Veterinary Faculty, Ljubljana, Slovenia, [2]Institute of Chemistry, Ljubljana, Slovenia

A decreased level of coenzyme Q10 (CoQ_{10}) in plasma and myocardium has been found in cardiovascular diseases in human patients. Moreover, low levels of CoQ_{10} have been found to be an independent predictor of mortality in chronic heart failure in human patients. The aim of our study was to investigate the survival of referred population of canine cardiovascular patients; with regard to the therapy (Yes/No) and plasma CoQ_{10} concentration at the first visit.

Seventy-two client-owned dogs were included in the present study, 29 of them were healthy controls. The other 43 dogs were referred cardiovascular patients with various diseases that were classified into ISACHC classes (International Small Animal Cardiac Health Council; ISACHC). Cardiovascular disease was confirmed on the basis of history, clinical examination, thoracic radiographs, electrocardiogram and echocardiography. The effect