Occurrence of Hypertrophic Cardiomyopathy in a Large Cohort of British Shorthair Cats
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## ORAL PRESENTATIONS – Thursday, June 10

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| 9:15 am | 2   | Dennis Trafny     | Cardiac Troponin-I Concentration is Elevated Pre and Post-Pacing in Dogs With Bradyarrhythmias: Is Myocarditis a Potential Etiology? |
| 9:30 am | 3   | Kristine Yee      | Diagnostic Test Parameters in Cats With Heart Disease and their Correlation With NT-proANP, NT-proBNP and Troponin I Measurements |
| 9:45 am | 4   | Gemma Fraga Veloso| Expression of Urocortins in Canine Myocardium and Plasma Levels in Dogs With Cardiac Disease |
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3:15 pm 171 Fiona Tam Safety and Palatability of Polyethylene Glycol 3350 as an Oral Laxative in Cats
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6:00 pm 180 Jevan Christie Fecal Sensitivity as a Tool to Differentiate Between Non-Neoplastic and Neoplastic Spirocerca Lupi Nodules Using a Modified Centrifugal Flotation Method

POSTER PRESENTATIONS

On Display: Thursday, June 10, 9:30 am - 4:30 pm; Friday, June 11, 9:30 am – 4:30 pm; Saturday, June 12, 9:30 am – 2:30 pm
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183 Aparecido Camacho Heart Rate Variability in Boxer Dogs With Arrhythmogenic Right Ventricular Cardiomyopathy
184 Denise Schwartz Six Minute Walk Test Standardization for Dachshund, Poodle and Labrador Retriever Dogs
185 Aparecido Camacho Effects of Treadmill Training Over Autonomic and Hemodynamic Functions in Healthy Dogs
186 Masashi Mizuno Effects of Running on the Renin-Angiotensin-Aldosterone System in Dog
187 Sara Granström Occurrence of Hypertrophic Cardiomyopathy in a Large Cohort of British Shorthair Cats
188 Aparecido Camacho Clinical Characterization of Hypertensive Hypertrophic Cardiomyopathy in Dogs With Chronic Kidney Disease (CKD)
189 Aparecido Camacho Heart Rate Variability in Dogs With Mitral Endocardiosis or Natural Morbid Obesity
190 Carley Saelinger Comet-Tail Artificial in Normal Dogs and Dogs With Cardiogenic Pulmonary Edema
191 Takashi Ebisawa Clinical Usefulness of Measuring Plasma Atrial Natriuretic Peptide Concentrations for Assessing the Severity in Dogs With Degenerative Mitral Valve Disease
192 Pierre Menaut Circulating Natriuretic Peptides Concentrations in Hyperthyroid Cats
193 Caryn Reynolds Weekly Variability of Plasma NT-proBNP Measurements in Cats With and Without Heart Disease
194 Aliya Magee Use of Abciximab to Determine Platelet Reactivity in Healthy Cats
195 Carolina Carlos Sampedrano Effects of High Versus Normal Salt Diets on Cardiovascular Variables in Healthy Aged Cats: A 6-Month Study
196 Takeshi Mizuno Relationship Between Prognosis and Immune Response in Dogs After Mitral Annuloplasty
197 Shigeki Yamano Endogenous Erythropoietin Levels and Iron Utilization in Dogs With Degenerative Mitral Disease
198 Yoko Fuji Prevalence of Right to Left Shunt Due to Patent Foramen Ovale Concurrent with Pulmonary Stenosis in Dogs
199 Megan Sleeper Dobutamine Stress Testing in Portuguese Water Dogs with Juvenile Dilated Cardiomyopathy
200 Sabine Riesen Pharmacokinetics of Oral Ivermectin in Healthy Cats
201 Michael Katz Thiacyclol Anesthesia Reveals Predominant Role for the Central Mechanism of Respiratory Sinus Arrhythmia in the Dog
202 Lauren Calland In-Hospital Electrocardiograph Versus 24-Hour Holter Monitor for Assessing Heart Rate in Dogs With Atrial Fibrillation
203 Ashley Saunders Bradysyndromias Requiring Pacemaker Implantation in Chagas Positive Dogs

SMALL ANIMAL – ONCOLOGY
204 Kensuke Nakamura Contrast-Enhanced Ultrasonography With Sonazoid® for Characterization of Focal Splenic Lesions
205 Silvia Lucas Evaluation of Oxidant/Antioxidant Total Status and Erythrocyte Antioxidant Defense in Cats With Lymphoma
206 Elizabeth Lechner Oxidative Stress in Dogs With Lymphoma Before and After Administration of Droxanubucin: A Pilot Study
hearts (476 ± 42 m; min = 400 m; max = 556 m; 95% CI 459–498).

In conclusion, regardless of anatomical differences between Poodles and Dachshunds, they walk similar distances. Based on a previously obtained equation (Distance = 55.3 + 8.3 TC + 0.9 L + 2.1 RH), predicted distances were overestimated for Labradors and Dachshunds, demonstrating that standardization is required for different breeds.

**ABSTRACT #185**

**EFFECTS OF TREADMILL TRAINING OVER AUTONOMIC AND HEMODYNAMIC FUNCTIONS IN HEALTHY DOGS.**

JPE Pascon, D Paulino-Junior, E Zacchê, FN Gava, EMG Ortiz, AA Camacho. College of Agricultural and Veterinary Sciences, São Paulo State University, Campus of Jaboticabal, Brazil.

Regular physical activity has been widely used in human cardiovascular therapy, promoting better autonomic control, heart function, life quality and decreasing sudden death risks. In dogs, however, there is not a standardized guideline to be used. This research has the goals of evaluating the effects of standardized treadmill training over the autonomic and hemodynamic functions of healthy dogs.

Six dogs (4 Beagles; 2 mixed breed), with mean weight of 13.1 Kg, were enrolled in this study. Twenty-four hour time domain heart rate variability (HRV), and echocardiography were analyzed before and after four weeks, days five a week, 40 minutes a day training. The intensity of training was individually determined by a maximal heart rate (MHR), observed in a maximal progressive effort test. Gradually, the intensity of training was increased in 50% of MHR, in the first week, to 60%, 70% and 80% of MHR in the second, third and fourth weeks, respectively. The paired t test was used to compare data before and after training. The improvement in functional capacity of the dogs was attested by a better performance on the physical test after training, achieving higher levels of intensity (9.0 km/h to 11.1 km/h; p = 0.0155) and decreasing the area under the curve of lactate (31.2 to 26.0; p < 0.0001). Increase in parasympathetic tone on HRV was verified by SDANN (155.5 50% until 2 km/h before training and 8 km/h after training).

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Familial hypertrophic cardiomyopathy (HCM) has previously been described in British Shorthair cats (BSH), but until now, no reports have been published on how prevalent the disease is within this breed. The aim of this study was to assess the occurrence of HCM in a large cohort of BSH and to evaluate the effect of gender, weight and age as potential risk factors to presence of the disease.

The study was conducted as a prospective study including all BSH presented at the Small Animal Hospital for HCM screening in the period of April 2006–August 2009. All cats were examined by the same two trained ultrasonographers using a Vivid 7 ultrasonographic system (GE Medical) with a 10 S phased array transducer (8–10 MHz). Measurements of the left ventricle were obtained by conventional 2D- and M-mode imaging of right parasternal long- and short axis views. Diagnosis of HCM was based on an overall assessment of echocardiographic findings, but cats were classified as to have a concentric hypertrophy if the interventricular septum (IVS) and/or left ventricular free wall (LVFW) measured > 5.5 mm in diastole. To rule out other causes of left ventricular concentric hypertrophy, a complete blood count, biochemical profile, thyroxin level and blood pressure were measured in affected cats. In the statistical analyses occurrence of HCM was expressed as a percentage at age, weight and echocardiographic variables of standard deviation (SD). A logistic regression analysis was used to test the effect of gender, weight and age on HCM as outcome and a p-value of < .05 was considered significant.

A total of 282 cats were examined, 189 (67.0%) females and 93 (33.0%) males. The average age of the cohort was 40 (± 29) months and the average weight was 4.5 (± 1.1) kg. Twenty-three cats (8.2%) were classified as HCM positive, 14 (4.9%) as equivocal and 242 (85.8%) as HCM negative. Three cats (1.1%) were diagnosed with other heart disease and excluded from further analysis. The average diastolic wall thickness of the IVS and LVFW in the HCM affected cats were 7.0 (± 1.2) mm and 7.1 (± 2.4) mm, respectively. In the HCM negative group the corresponding measurements were 3.9 (± 0.5) mm and 3.8 (± 0.5) mm. Male cats had a significantly higher occurrence of HCM (20.4%) compared with the females (2.1 %) correspondingly (OR of 12.7 (95% CI 4.2–38.6) for male gender (p < 0.001). No effect of weight and age on presence of HCM could be identified. Eighteen of the HCM positive cats had diffuse, symmetrical hypertrophic changes of the entire left ventricle, whereas 5 had an asymmetric or regional hypertrophy of the left ventricular myocardium.

The conclusion of this study is that the BSH in our cohort had a high occurrence of HCM. Most affected cats presented with pronounced, diffuse hypertrophic changes affecting the IVS, LVFW and papillary muscles. As in many other breeds, male gender predisposed to development of the disease.