Two hundred and ninety dogs (161 males/129 females), 11.6±2.9 years of age, 12.5±9.2 kg of body weight fulfilled the inclusion criteria. The 22% of males and the 30% of females were neutered. The most represented breeds were mongrel (40%), miniature Poodle (12%), York Shire Terrier (7%), and Cavalier King Charles (5%). Dogs were 29% B1, 13% B2, 54% C and 4% D ACVIM class. While the 72% of the dogs were normoazotemic (sCr <1.4 mg/dl), 13.5% were staged in IRIS 2, 13% in IRIS 3 and 1.5% in IRIS 4.

The prevalence of anemia in dogs with MVD was 17% (50/290): 40 showed mild (30≤ Hct ≤37%) and 10 moderate (20≤ Hct ≤29%) anemia. Sixteen dogs were in B1, 5 in B2, 27 in C and 2 in D ACVIM class; 34 were normoazotemic (68%). Anemic dogs showed a significant higher sCr. Normoazotemic dog showed significant higher Hb, Hct and RBC both in the overall population and in the anemic group. In the overall population dogs in different IRIS class showed statistically different Hb, Hct and RBC and Hb was significantly lower in decompensated HF dogs.

In conclusion although a relationship between anemia and azotemia/CKD was documented in our study, it is important to emphasize that most of the anemic dog were normoazotemic: anemia is not an exclusive finding of cardiorenal syndrome and should be considered as possible complication in dogs with MVD alone.

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**ESVC-P-14**

**LEFT ATRIAL DYSFUNCTION IN DOGS WITH SYMPTOMATIC CHRONIC MITRAL VALVE DISEASE.** M. Mantovani, J.R. Castro, A.M. Gimenes, L.C. Petrus, C.N. Duarte, M. Ueda, P.H. Itikawa, B. Real, L.F. Beccari, G.T. Goldfeder, M.H.M.A. Larsson, D. Schwartz. School of Veterinary Medicine and Animal Science, University of São Paulo, Sao Paulo, Brazil

The objective of this study was to evaluate left atrial (LA) function by left atrial total fractional area change (LA-FACtotal) and left atrial ejection fraction (LAEF) in dogs affected with chronic mitral valve disease (CMVD) naturally acquired with and without congestive heart failure (CHF). Our hypothesis was that LA-FACtotal and LAEF decrease with severity of CMVD. Eighty dogs were included in a prospective observational cross-section clinical study, grouped according to CMVD severity based on echocardiographic evaluation and clinical signs. The dogs were equally distributed in each group: A, B1, B2 and C, according to American College of Veterinary Internal Medicine staging system. Indicators of LA function were calculated with the following equations: LA-FACtotal = 100 × (LAmaximum area - LAminimum area)/LAmaximum area, measured by apical 4 view; and LAEF = 100 x (LAmaximum volume - LAminimum volume)/LAmaximum volume, by biplane area-length method from the left apical 4 and 2-chamber views. LA-FACtotal showed lower values ($P < 0.0001$) in group C (31.88%, P25–75% = 26.47–41.12) compared with groups A (52.75%, P25–75% = 48.08–56.07), B1 (48.38%, P25–75% = 42.57–51.91) and B2 (46.15%, P25–75% = 41.17–50). Group C had lower LAEF (40.69%, P25–75% = 34.89–52.09) than groups A (68.12%, P25–75% = 64.96–69.91), B1 (58.72%, P25–75% = 52.25–64.60) and B2 (56.98%, P25–75% = 52.08–61) ($P < 0.0001$). Left atrial function, assessed by LA-FACtotal and LAEF, was reduced in dogs with CMVD and CHF compared with healthy and asymptomatic CMVD groups.

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**ESVC-P-15**

**CARDIORENAL SYNDROME IN DOGS WITH MITRAL VALVE DISEASE: A PROSPECTIVE STUDY.** E. Martinelli[1], P. Brambilla[2], C. Locatelli[2], S. Crosara[1], A.M. Zanaboni[2], C. Quintavalla[1]. [1]University of Parma, Parma, Italy, [2]University of Milan, Milan, Italy

Recurrent episodes of heart and/or kidney failure are considered one of the causes leading to worsening heart/renal functions in human patients. The aim of this prospective study was to assess the influence of heart/kidney worsening on elected parameters of heart/kidney function in dogs affected by mitral valve disease (MVD).

Between July 2012 and May 2013, dogs affected by MVD in ACVIM class B2 and without comorbidities were included in the study group. The control group was constituted by healthy dogs, matched with the cases for age (older than 6 years) and gender.

All the dogs underwent physical examination, thorax radiography, ECG, echocardiography, systemic blood pressure assessment, a complete blood count, serum biochemical analysis, including assessment of serum creatinine (sCr), serum urea nitrogen (UREA) and glycaemia (GLY) and urine analysis with urine protein/creatinine ratio (UPC). Dogs were re-evaluated every 6-month until October 2014. Statistical analysis was performed using IBM SPSS Statistics 20 (p value significant if <0.05).

Twenty-one dogs affected by MVD (cases) were included and 20 healthy dogs (controls) were randomly selected among the eligible population. The 33% of cases experienced at least one episode of congestive heart failure (CHF), but none of these patients developed chronic kidney disease (CKD). The 14% of cases developed CKD while remaining in ACVIM class B2. No dogs in the control group developed CKD or MVD. Correlations between worsening renal function (WRF - sCr elevation ≥0.3 mg/dl or 25% from baseline), furosemide administration, UPC levels, radiographic parameters of heart enlargement and echocardiographic parameter were investigated. Only a statistically significant difference in IRIS class between the groups according to WRF and in the echocardiographic parameter left atrium to aortic root (LA/Ao) according to furosemide amount were observed. Both these results were expected. None of the cases included experienced renal damage (WRF or IRIS class change or UPC change) concomitant to episodes of CHF. The persistence of normal renal condition regardless of CHF events and therapy administration was unexpected. In conclusion, experiencing CHF seems not to directly affect renal function. To authors' opinion, the use of WRF, better than single sCr and UREA levels, may be useful in the long term management of aged patients affected by MVD. However, the small number of cases included in this study represents a great limit. We consider this work a pilot study.

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**ESVC-P-16**

**PREVALENCE OF HYPERTROPHIC CARDIOMYOPATHY ON A POPULATION OF 150 CATS.** M.M. Monzo[1], L. Rubens[2], L. Lobo[3]. [1]CardioCare, Lisboa, Portugal, [2]Hospital Veterinário de Massamá, Lisbon, Portugal, [3]Hospital Veterinário do Porto, Porto, Portugal

Hypertrophic cardiomyopathy (HCM) is a primary myocardial disease characterized by inappropriate thickening of the myocardium in absence of other causes of hypertrophy including Hypertension, Hyperthyroidism, aortic stenosis and acromegaly. It is also the most common heart disease in cats. HCM presents a wide variety of clinical sings depending on the severity and location of the hypertrophy.

Cats affected with HCM have a mean age of 5.5–6.5 years old at the time of the diagnosis however this disease can affect cats as young as 3 months although this later age is unusual

HCM is a heterogeneous disease both in terms of phenotypic degree of hypertrophy and clinical outcome. Hallmark histopathological hallmarks lesions of HCM are myocyte disarray, small coronary arteriosclerosis and interstitial fibrosis replacement

In order to confirm HCM echocardiography has to be made. Primary hypertrophy diagnosis is made based on the presence of ventricular hypertrophy, symmetric or asymmetric, in the absence of systemic disorders.

The purpose of this study was to assess the prevalence of HCM in a feline population. In order to achieve this goal echocardiograms were made in all cats older of 6 years clinically asymptomatic with or without cardiac murmur. All echocardiograms were made according to the guidelines of the ACVIM published in 1993. Diagnosis of ventricular hypertrophy was made from the right parasternal window using the B mode to measure the diameter of the LVFW and the IVS in diastole. Cats with more than