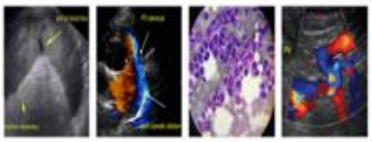
Mass Veterinary Services



SonoPath Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Tito Bordonaro

SPECIES
Canine

BREED
Cavalier

SEX
Male Neutered

AGE
10 years

WEIGHT
22.6lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
28245

DATE
1/11/23

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B2. Presently, continues to have an occasional cough daily; otherwise, great appetite and good energy. 7th September 2022: systemic blood pressure---> 180-200 added amlodipine. On exam: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear, mm pink, moist, CRT<2. BP: 140mmHg x 5. Current medications: 1) Pimobendan/vetmedin 7.5mg 1/2 tab twice a day 2) Enalapril 5mg 2 tabs daily 3) Sildenafil 20mg 1/2 tab twice a day 4) Spironolactone 5) Amlodipine *No sedation for study.
-Pertinent previous echo findings (6/29/22 MML): LA 3.7 cm; LA:Ao 2.3; LV 4.0 cm; severe LAE; LVE, hyperdynamic, severe MR; trace TR (2.6 m/s; 27mmHg).

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 150bpm (range 136-166bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. Isolated VPCs are identified; three in a 2-minute tracing. Monomorphic and singles only. No supraventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is increased with hyperdynamic function. LV wall thicknesses are normal.
Left atrium: The left atrium is severely dilated.
Mitral valve: The mitral valve is diffusely thickened with prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with a normal velocity.
Aortic valve/Aorta: The aortic valve appears thickened with borderline increased outflow velocity; laminar flow. No aortic insufficiency.
Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.
Right atrium: Normal RA dimension.
Tricuspid valve: The tricuspid valve appears mildly thickened with trace tricuspid regurgitation; normal velocity.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

2-Dimensional Measurements

Ao diam (cm)	1.7
LA diam (cm)	3.9
LA:Ao (Swe)	2.3
IVS thickness (cm)	0.73
LVID diastole (cm)	4.2
PW thickness (cm)	0.72
LVID systole (cm)	1.8
FS (%)	57

Doppler Measurements

PV Vmax (m/s)	0.85
AoV Vmax (m/s)	1.7
MR Vmax (m/s)	5.0
TR Vmax (m/s)	2.5
TR PG (mmHg)	25

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INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with continued stability. Severe mitral and trace tricuspid regurgitation are unchanged without significant progression in left or right heart dimensions. The pulmonary pressures continues to measure normal, and no additional issues are identified.

The ECG does show isolated VPCs. These are not surprising and are secondary to severe structural changes in a stressed patient. No treatment is warranted based upon what is seen here; however, close monitoring for syncope or acute lethargy is recommended.

With this degree of left heart changes, the risk extremely high for decompensation and continued cardiac supportive medications is recommended as prescribed. No obvious indication for a Lasix in an asymptomatic patient; however, with any change in breathing this should be instituted immediately. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

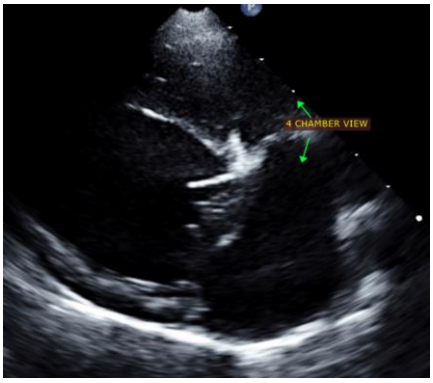
RECOMMENDATIONS

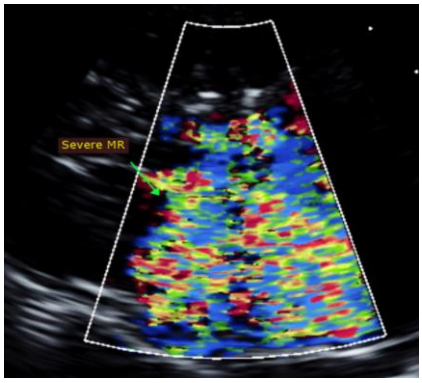
- Continue 4 medications as prescribed.
- Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Mild activity restriction is advised.
- Elective anesthesia is not advised, as there is high risk for complication. If necessary, cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, iso or sevoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 cage. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Moderate IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

PLAN

- A renal panel is recommended every 3-4 months lifelong.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES





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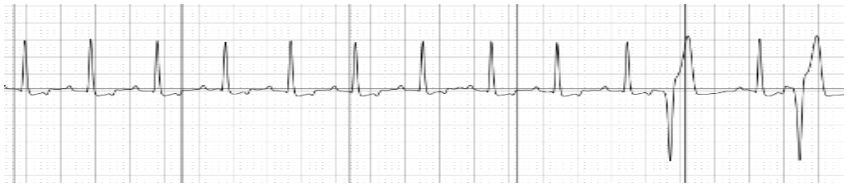

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)