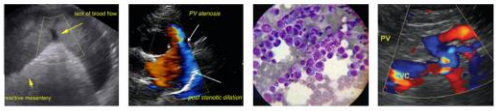
Mass Veterinary Specialty Services
1-413-734-1292



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

PATIENT
Coach Molta

SPECIES
Canine

BREED
Bichon Frise Mix

SEX
Male Neutered

AGE
8 years

WEIGHT
23.3lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Specialty Services

REFERRING VET
Dr. Masloski

INVOICE
21138

DATE
9/21/21

PRESENTING CLINICAL SIGNS

History: Coach is referred to evaluate a heart murmur. He coughs when excited but no labored breathing. He does have tracheal collapse. He has not been eating consistently since his diet was changed. He has been a bit lethargic, and his stools have been dark in color. CV/RESP: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 110mmHg x 4. Currently no medications *No sedation.

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, 20mm/mV. The average heart rate is 120bpm (range 100-136bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. Isolated APCs throughout; singles only. No ventricular premature contractions, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with isolated APCs.

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 mild 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: Mild right ventricular dilation.
Right atrium: Mild RA dilation.
Tricuspid valve: The tricuspid valve appears mildly thickened with septal prolapse and mild to moderate tricuspid regurgitation. Velocity consistent with mild pulmonary hypertension.
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)	1.4
LA diam (cm)	3.8
LA:Ao (Swe)	2.7
IVS thickness (cm)	0.63
LVID diastole (cm)	4.1
PW thickness (cm)	0.62
LVID systole (cm)	2.1
FS (%)	50

Doppler Measurements

PV Vmax (m/s)	0.83
AoV Vmax (m/s)	1.4
MR Vmax (m/s)	5.8
TR Vmax (m/s)	3.2
TR PG (mmHg)	40

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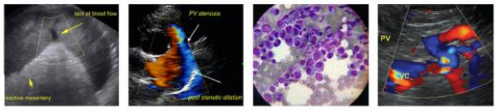

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INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing severe mitral and mild to moderate tricuspid regurgitation. The LA is significantly dilated indicating an elevated risk for clinical signs going forward. Early pulmonary hypertension is noted which should be monitored going forward. No additional concurrent issues are documented.

With this degree of left heart changes, the risk for spontaneous congestive heart failure is elevated and cardiac supportive medications are indicated as below. A weak diuretic (spironolactone) is included given high risk for decompensation in the future even with no reported symptoms. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (late B2). Unfortunately, the patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

The ECG shows isolated atrial premature contractions (APCs). In a dog with this severity of heart disease, these are likely due to severe atrial enlargement. What is seen here does not warrant therapy and is likely exacerbated by stress. This patient will be at risk going forward for development of atrial fibrillation and monitoring for associated clinical signs is advised (acute lethargy or collapse).

RECOMMENDATIONS

- Institute Pimobendan 0.3mg/kg PO q12h.
- Institute spironolactone 1-2mg/kg PO q12h.
- 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 in 1-2 weeks, then every 3-4 months lifelong.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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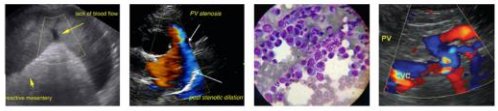

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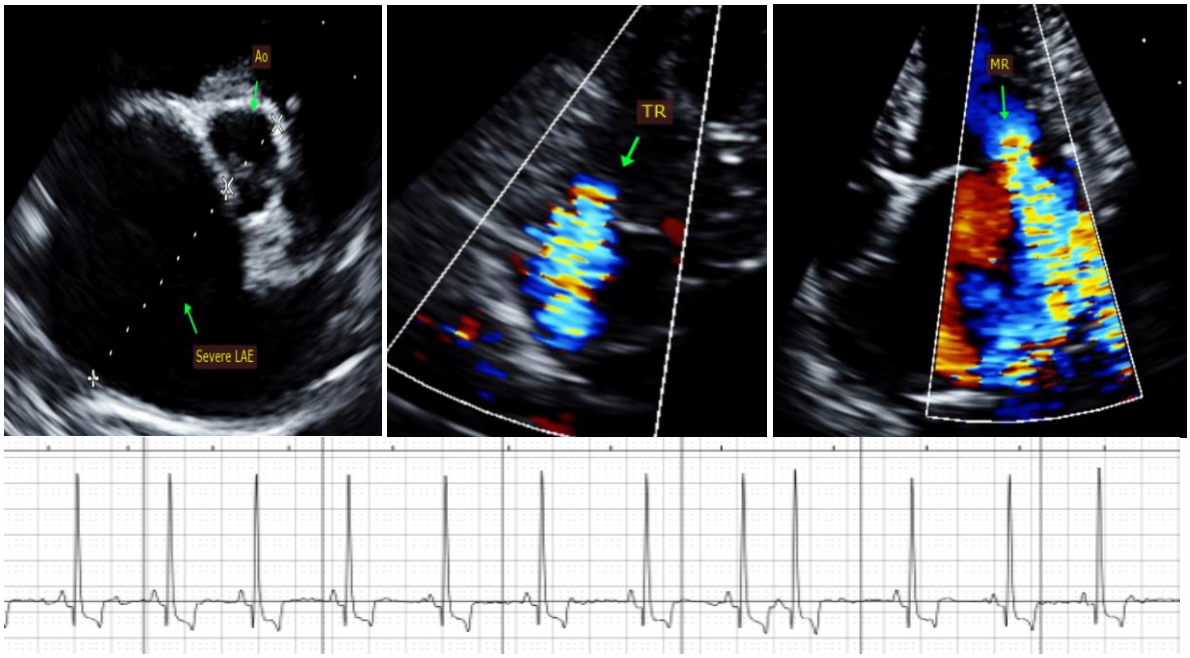

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)