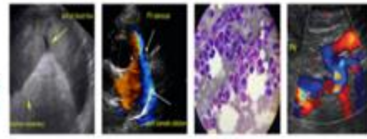
Mass Veterinary Services



SonoPath
Clinical Sonography & Telecytology
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1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Toby Sibley

SPECIES
Canine

BREED
Poodle Mix

SEX
Male Neutered

AGE
12 years

WEIGHT
10.06lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
23751

DATE
4/19/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History valvular heart disease - Stage B2. Current presentation: Today has been on Pimobendan for mitral regurgitation with left atrial enlargement noted on prior echocardiograms. He had a collapse/syncopal event in December with chest films revealing cardiomegaly; normal EKG. He has a history hypothyroidism - most recent thyroid level in October WNL. One additional collapse episode. Eating well with normal activity level. He does cough with excitement. On exam today: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 180mmHg x 5. Current medications: 1) Thyroxine 0.1mg 1/2 tab daily 2) Pimobendan/vetmedin 5mg 1/4 tab twice a day *No sedation for exam. -Pertinent previous echo findings (1/20/22 Noel Watkins, DVM): LA 1.98 cm; LA:Ao 1.8; LV 2.56 cm; LAE; moderate-severe MR; mild TR (no Vmax noted).

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 68-214bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. No ectopic beats, pauses or dysrhythmias observed.
ECG diagnosis: Suspect profound respiratory sinus arrythmia with dramatic rate variation. Brief supraventricular arrythmias are not entirely ruled out.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: Mildly increased LV diameter with hyperdynamic myocardial function. LV wall thicknesses are normal.
Left atrium: The left atrium is moderately dilated.
Mitral valve: Diffuse thickening of mitral valve leaflets (anterior>posterior) with mild prolapse into the left atrial lumen. Moderate to severe eccentric mitral regurgitation with a normal velocity.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic 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 subjectively normal with mild tricuspid regurgitation. Velocity consistent with early 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

Measurement	Value
Ao diam (cm)	1.1
LA diam (cm)	2.3
LA:Ao (Swe)	2.1
IVS thickness (cm)	0.6
LVID diastole (cm)	2.9
PW thickness (cm)	0.6
LVID systole (cm)	0.9
FS (%)	69

Doppler Measurements

Measurement	Value
PV Vmax (m/s)	0.92
AoV Vmax (m/s)	1.9
MR Vmax (m/s)	5.8
TR Vmax (m/s)	2.8
TR PG (mmHg)	31

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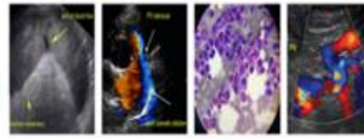

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INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with moderate to severe mitral and mild tricuspid regurgitation. Compared to what is described in the prior study, there is slight progression in left heart dimensions. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication, however risk for progression to spontaneous congestive heart failure in the future is elevated. Early pulmonary hypertension is documented, which should be monitored going forward. No additional issues are identified.

Given these findings, continued Pimobendan is certainly recommended as below. Additionally, an ACE-I can be considered given a mildly elevated blood pressure and mild progression seen here. No obvious cause for occasional collapse episodes is seen such as a ruptured chord, and if these recur with frequency, further evaluation may be warranted (holter, reassess pulmonary pressures, etc.). Insufficient cardiac output may be a simple enough explanation if the episodes occur with exertion. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (B2).

The ECG is most consistent with a profound respiratory sinus arrythmia, although the max heart rate >200bpm is somewhat unusual. The origin appears sinus; however, occasional APCs are possible. Regardless, no sustained arrythmias are seen, making this likely clinically insignificant. Continue to monitor for any acute onset of lethargy in the future.

RECOMMENDATIONS

- Continue Pimobendan as prescribed.
- Institute ACE-I 0.5mg/kg PO q12h.
- If syncope increases in frequency and is independent of exertion, further evaluation may be warranted.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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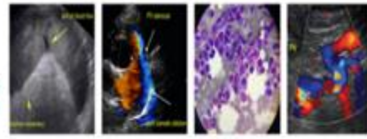

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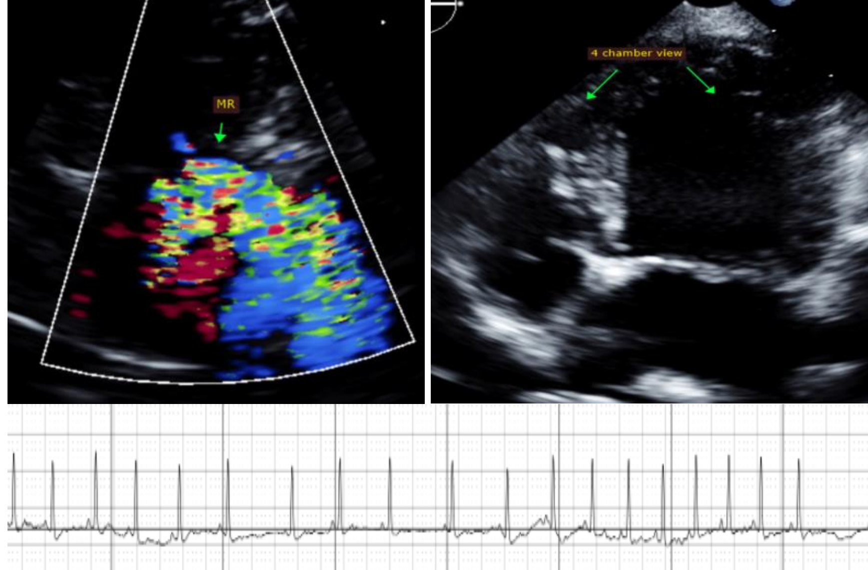
IMAGES



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)