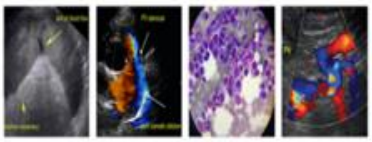
Mass Veterinary Services



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

PATIENT
Neiko Root

SPECIES
Canine

BREED
Maltese

SEX
Male Neutered

AGE
14 years

WEIGHT
4.5lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
22754

DATE
2/22/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B1. Current presentation: Some coughing this morning. Significant coughing approximately one month ago x one week which responded to an increase in hycodan. His appetite has been declining somewhat, but his activity level remains normal. On auscultation: NSR, grade IV/VI murmur with PMI left apical area, PSS, lung fields clear, no cough with tracheal palpation. BP: 160mmHg x 5.
-Current medications: 1) Denamarin daily 2) Cosequin 1/2 tab daily 3) Ursodiol 120mg/ml 0.2mls twice a day 4) Prozac 10mg 1/2 tab daily 5) Hydrocodone with homatropine/hycodan 0.2mls twice a day 6) Proviable paste *Sedated with propofol for study.
-Pertinent previous echo findings (6/2021 MML): Mild LAE, no LVE, mild MR, trace TR. LA: 1.5, LV; 1.67.

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 normal outflow velocity; laminar flow. Mild to moderate aortic insufficiency.
Right ventricle: Mild right ventricular enlargement.
Right atrium: Mild RA enlargement.
Tricuspid valve: The tricuspid valve appears normal with no tricuspid regurgitation.
Pulmonic valve/Pulmonary artery: The pulmonary artery is prominent with branch dilation. Trivial pulmonic insufficiency. Normal RVOT velocity; laminar flow.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 120bpm.

2-Dimensional Measurements

Ao diam (cm)	1.1
LA diam (cm)	2.2
LA:Ao (Swe)	2.2
IVS thickness (cm)	0.4
LVID diastole (cm)	2.5
PW thickness (cm)	0.5
LVID systole (cm)	0.9
FS (%)	64

Doppler Measurements

PV Vmax (m/s)	0.76
AoV Vmax (m/s)	2.0
MR Vmax (m/s)	5.2
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with evidence of significant progression. Mild mitral regurgitation has progressed to severe with increased left heart dimensions comparatively. There is also concern for early pulmonary hypertension based upon MPA and branch dilation. Finally, a significant aortic leak is noted, which was not apparent on the prior studies. The reported blood pressure is mildly elevated, likely indicating a primary issue.

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A cough in this patient with severe heart disease is likely multi-factorial in origin, including mainstem bronchi compression and/or potentially some degree of upper or lower airway disease. Early CHF/pulmonary edema should also be considered; however, this is less likely based upon the reported history of a mild symptom. Recommend institute cardiac supportive medications including a weak diuretic (spironolactone) and advise close monitoring at home for need for Lasix therapy. Pending response, more aggressive cough suppression (up to q4-6 hours) may also be helpful for mechanical cough. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.

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.

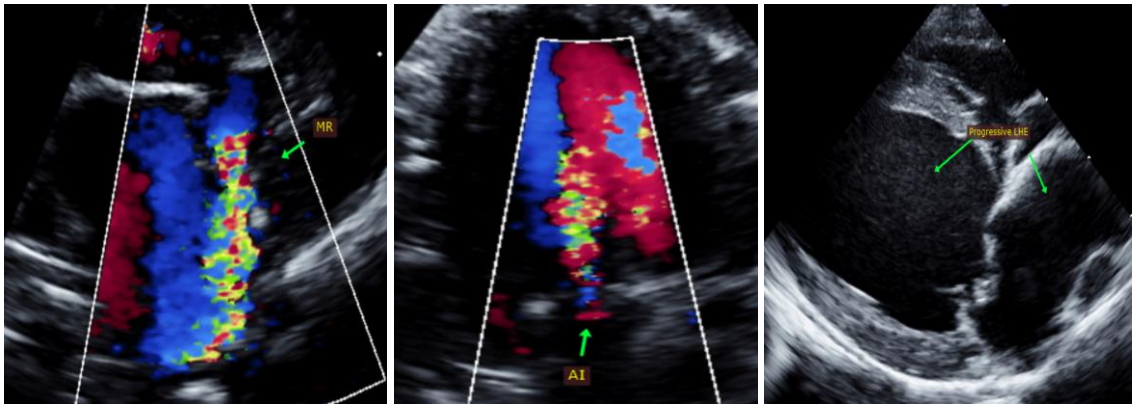
RECOMMENDATIONS

- Institute Pimobendan 0.3mg/kg PO q12h.
- Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.
- Institute spironolactone 1-2mg/kg PO q12h.
- Consider more aggressive hydrocodone if needed for QOL.
- 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.

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.

IMAGES



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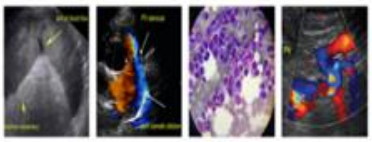

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)