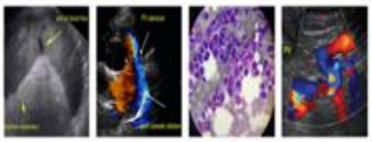
Mass Veterinary Services



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

PATIENT
Raphael Calvanese

SPECIES
Canine

BREED
Chihuahua

SEX
Male Neutered

AGE
6 years

WEIGHT
7.5lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
28818

DATE
2/7/23

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B1. Presently, Raphael is doing well with a good appetite and activity level. Coughing more. On exam: NSR, grade IV/VI murmur with PMI left apical area, PSS, lung fields clear, mm pink, moist, CRT<2. BP: 135-140 mmHg. Current medications: Diphenoxylate with atropine 2.5mg 1/2 tab twice a day *No sedation for study.
-Pertinent previous echo findings (8/23/22 MML): LA 1.5 cm; LA:Ao 1.5; LV 2.2 cm; mild LAE; mild-moderate MR; no TR detected.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is mildly increased with hyperdynamic myocardial function. LV wall thicknesses are normal.
Left atrium: The left atrium is moderately dilated.
Mitral valve: The mitral valve is diffusely thickened with mild prolapse into the left atrial lumen. Moderate 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 normal with mild 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.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 140bpm.

2-Dimensional Measurements

Ao diam (cm)	1.1
LA diam (cm)	1.7
LA:Ao (Swe)	1.6
IVS thickness (cm)	0.6
LVID diastole (cm)	2.5
PW thickness (cm)	0.5
LVID systole (cm)	0.8
FS (%)	68

Doppler Measurements

PV Vmax (m/s)	1.0
AoV Vmax (m/s)	1.4
MR Vmax (m/s)	5.3
TR Vmax (m/s)	2.4
TR PG (mmHg)	23

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with evidence of progression. The LA and LV are increased comparatively with progressive MR. A small tricuspid leak has developed however, pulmonary pressures appear normal. No additional issues are identified.

Given the combination of issues, Pimobendan is recommended as below. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (B2).

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The cough is likely multi-factorial in origin with some degree of mainstem bronchi compression suspected. Baseline CXR is recommended with institution of Hydrocodone as needed.

Prognosis is guarded long-term with risk for progression in the future.

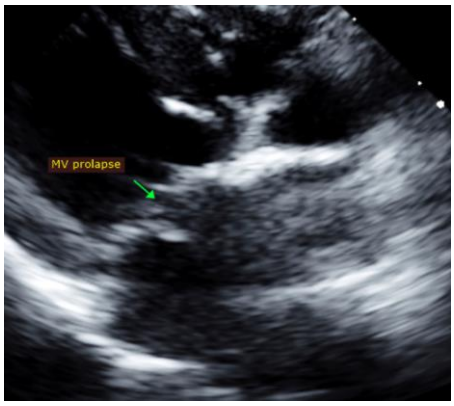
RECOMMENDATIONS

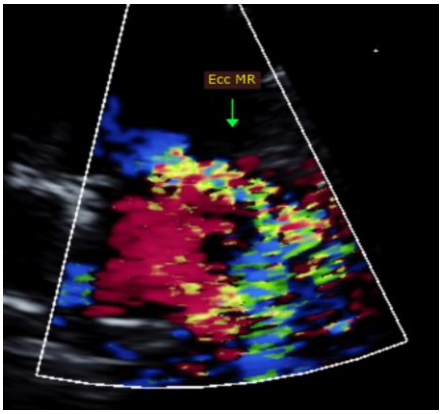
- Institute heart muscle support Pimobendan 0.3mg/kg PO q12h.
- Consider CXR/Hydrocodone as discussed.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Once on Pimobendan for 3-5 days, anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is 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.

IMAGES



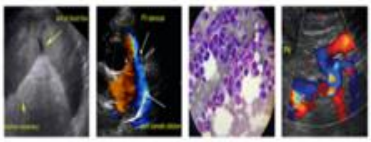


The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

Mass Veterinary Services



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