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Pet Animal Ultrasound Service
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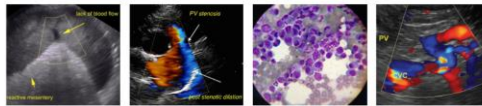


SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Camy Dietrich

SPECIES
Canine

BREED
Maltese

SEX
Female Spayed

AGE
14 years

WEIGHT
8.8lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Wignall Animal Hospital

REFERRING VET
Dr. DeMarco

INVOICE
27258

DATE
11/3/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B2. Camy has increased coughing, collapsing trachea. Grade V/VI heart murmur. Radiographs: Subjectively, previously noted pulmonary module slightly larger, stable lung changes from prior radiographs; no evidence of CHF. Current meds: Hydrocodone Bitartrate Homatropine MBR 5mg/1.5mg/ml - 1.25ml TID. Pimobendan 5mg - 1/4t BID.
-Pertinent previous echo findings (1/27/22): LA 2.38 cm, LA: Ao 1.91, LV 2.71 cm, severe LAE, severe MR, mild TR (2.73 m/s; 29mmHg, high normal).

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: LV is mildly dilated with hyperdynamic myocardial function.
Left atrium: The left atrium is severely dilated.
Mitral valve: Mild thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Severe eccentric mitral regurgitation, 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: RV dimension and morphology is normal.
Right atrium: Normal RA dimension.
Tricuspid valve: The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Velocity consistent with early pulmonary hypertension.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. Normal pulmonic outflow velocities. No pulmonic insufficiency.
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)	1.3
LA diam (cm)	3.0
LA:Ao (Swe)	2.4
IVS thickness (cm)	0.6
LVID diastole (cm)	3.0
PW thickness (cm)	0.6
LVID systole (cm)	0.9
FS (%)	70

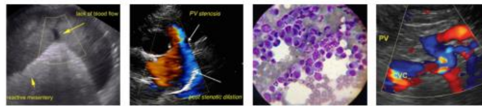
Doppler Measurements

PV Vmax (m/s)	1.0
AoV Vmax (m/s)	1.2
MR Vmax (m/s)	5.6
TR Vmax (m/s)	3.2
TR PG (mmHg)	42

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. Severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is elevated going forward. Early pulmonary hypertension is noted, which was not documented previously. No additional issues are identified. Compared to what is available from the prior study, there is evidence of progression from moderate to severe disease.

A cough in this patient with this degree of heart disease is likely multi-factorial in origin, including mainstem bronchi compression and/or potentially some degree of upper or lower airway disease given the breed. Early CHF/pulmonary edema should also be considered; however, this is less likely based upon radiographic findings. Recommend addition of Spironolactone and an ACE-I to current Pimobendan therapy for potential



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long-term benefit. Close monitoring at home for need for Lasix therapy. Pending response, 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.

Long term prognosis is guarded; however, I am hopeful we can stabilize the patient for some time on medications. Once CHF develops, they are generally able to maintain a good quality of life for an average of 8-12 months. Patient will always be at risk for progression to CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

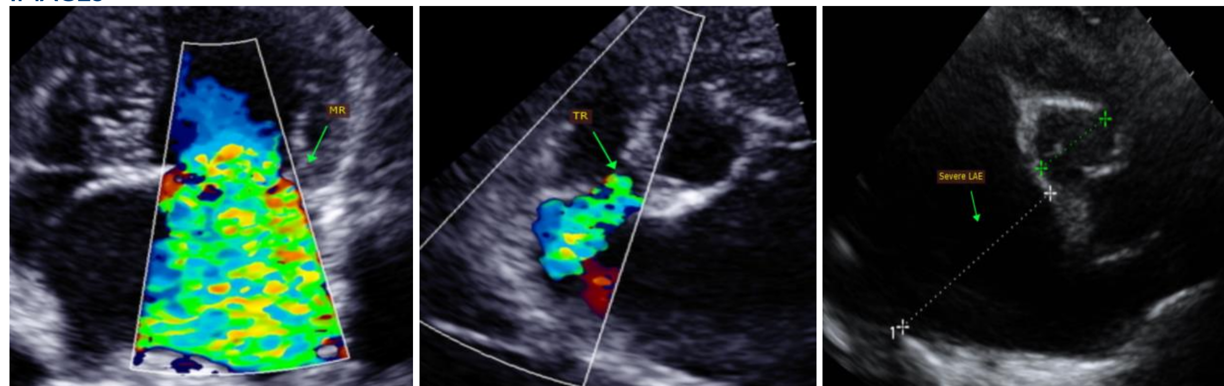
RECOMMENDATIONS

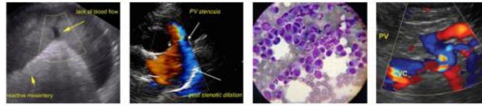
- Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.
- Continue Pimobendan 0.3mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Consider hydrocodone with homatropine for QOL (0.2-0.4mg/kg PO up to q4-6 hours PRN for cough; available in 5/1.5mg tabs and 5mg/5ml liquid suspension).
- Consider a course of Baytril depending on severity of the cough.
- Elective anesthesia is not advised.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Monitoring of sleeping breathing rates is the best way to screen for progression to CHF at home.

PLAN

- A renal panel is recommended in 1-2 weeks, then every 3-4 months lifelong.
- A recheck echocardiogram is recommended in 4-6 months to screen for progression, sooner if clinical signs arise.

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