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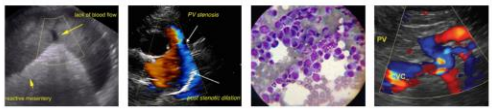

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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PATIENT
Belcher Holbrook

SPECIES
Canine

BREED
Maltese

SEX
Male Neutered

AGE
15 years

WEIGHT
8.9lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Norfolk County Veterinary Service

REFERRING VET
Dr. Richards

INVOICE
32402

DATE
8/17/22

PRESENTING CLINICAL SIGNS

History: New grade II-III/VI heart murmur. Increased respiratory sounds. Radiographs: Increased heart size, questionable brochointerstitial pattern. On 1) Gabapentin 50mg/ml 0.5ml PO am, 1ml PO pm, 2) Doxycycline 50mg/ml 0.4ml PO BID. *Sedated with Torb/Alfaxalone.

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. Subtle septal flattening in end-systole.
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. Borderline velocity.
Aortic valve/Aorta: The aortic valve appears thickened with borderline increased outflow velocity; laminar flow. No aortic insufficiency.
Right ventricle: Mild RV enlargement.
Right atrium: Mild RA enlargement
Tricuspid valve: The tricuspid valve appears mildly thickened with mild septal prolapse and moderate tricuspid regurgitation. Velocity consistent with mild to moderate pulmonary hypertension.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. The MPA and branches appear dilated. 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)	1.2
LA diam (cm)	2.8
LA:Ao (Swe)	2.3
IVS thickness (cm)	0.5
LVID diastole (cm)	2.8
PW thickness (cm)	0.6
LVID systole (cm)	1.2
FS (%)	56

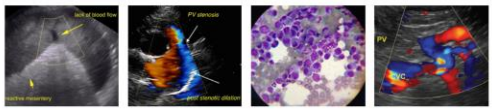
Doppler Measurements

PV Vmax (m/s)	0.5
AoV Vmax (m/s)	0.84
MR Vmax (m/s)	4.5
TR Vmax (m/s)	3.4
TR PG (mmHg)	46

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing severe mitral and moderate tricuspid regurgitation. The LA is significantly dilated indicating an elevated risk for clinical signs going forward. TR is noted with moderate elevation of pulmonary pressures. The velocity is thought to be a mild underestimation as there is subtle septal flattening and MPA dilation. PAH is of unknown significance without a significant respiratory complaint. No additional concurrent issues are documented.

Baseline CXR do not reportedly show early decompensation. Despite this, 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



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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.

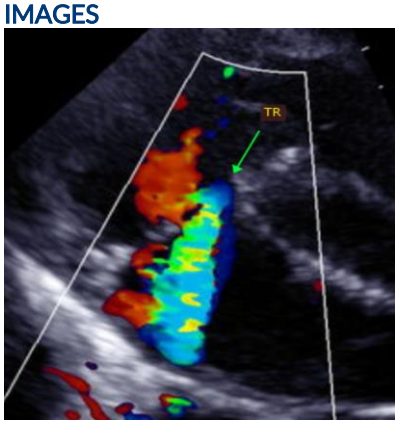
RECOMMENDATIONS

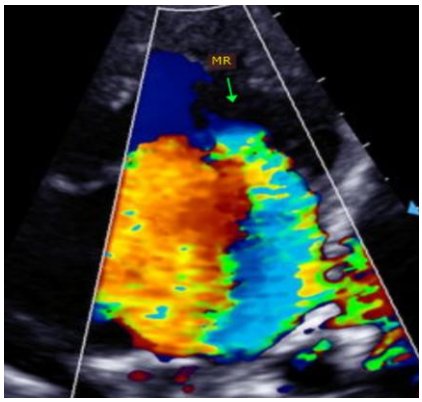
- Baseline BP recommended.
- Institute Pimobendan 0.3mg/kg PO q12h.
- Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home. If any changes occur, institute Lasix 1-2mg/kg PO q12h.
- 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.

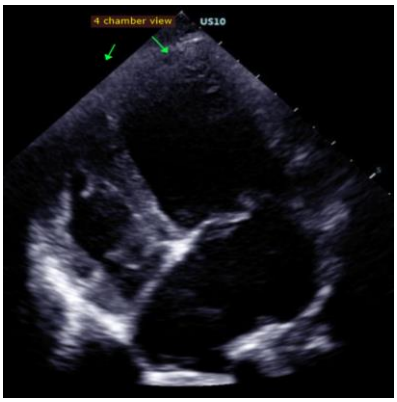
PLAN

- 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.

IMAGES







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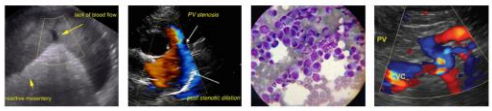

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)