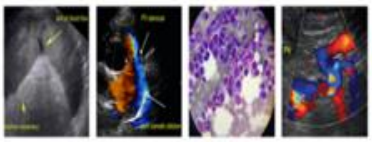
Mass Veterinary Services



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

PATIENT
Busco Philbrick

SPECIES
Canine

BREED
Yorkshire Terrier Mix

SEX
Male Neutered

AGE
13 years

WEIGHT
14.44lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
32220

DATE
8/8/23

PRESENTING CLINICAL SIGNS

History: Busco is referred to evaluate a heart murmur. An echocardiogram done in June 2018 was consistent with a mild MVD with 2+ MR; mild LAE, 1+ TR (report not available) Busco has been slowing down with walks lately with some occasional coughing noted after exercise. He is eating well. On exam: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear, mm pink, moist, CRT<2. BP: 220mmHg x 5. Current medications: 1) Benazepril 10mg 1/2 tab daily 2) Aspirin 81mg 1/2-tab q 4 days 3) Vetriscience cardio health supplement daily *Sedated with propofol for study.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is borderline increased with mildly depressed 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. Severe eccentric mitral regurgitation. Decreased velocity.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Decreased 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 mildly thickened with mild tricuspid regurgitation. Normal velocity.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Decreased 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 150bpm.

2-Dimensional Measurements

Ao diam (cm)	1.5
LA diam (cm)	2.7
LA:Ao (Swe)	1.8
IVS thickness (cm)	0.6
LVID diastole (cm)	3.1
PW thickness (cm)	0.6
LVID systole (cm)	2.2
FS (%)	29

Doppler Measurements

PV Vmax (m/s)	0.5
AoV Vmax (m/s)	0.7
MR Vmax (m/s)	4.1
TR Vmax (m/s)	1.8
TR PG (mmHg)	13

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. 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. Additional mild abnormalities are suspected to be due to heavy sedation, such as mild LV dysfunction and low outflow velocities. No additional issues are identified.

Given LA dilation, 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 reported blood pressure is elevated and should be reassessed for accuracy particularly given no reported clinical signs of severe hypertension (retinal changes, etc.) or evidence of LVH on echo. Ideally obtain serial measurements in a controlled, low stress environment and continue until 3 consecutive readings plateau within 5mmHg of variability. If persistently >180mmHg despite a relatively calm demeanor, recommend institution of amlodipine to effect. Additionally, if deemed accurate, screening for predisposing underlying causes of SHT is recommended (Cushings, PLN, adrenal tumor, etc.), as primary disease is relatively uncommon and a rule out diagnosis.

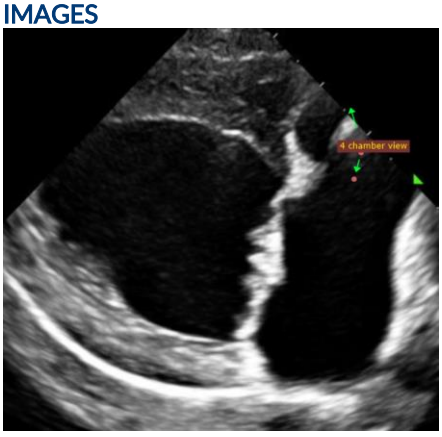
RECOMMENDATIONS

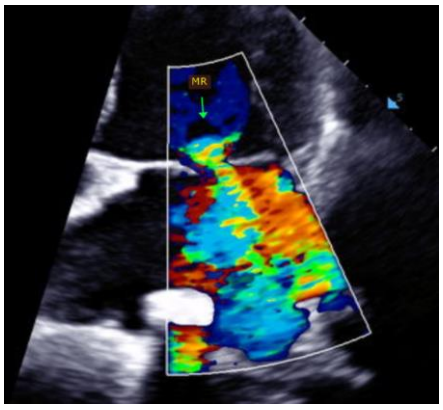
- Institute heart muscle support Pimobendan 0.3mg/kg PO q12h.
- Reassess BP as discussed and treat if indicated.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Once on Pimobendan for 3-5 days, anesthetic risk is considered mild if needed. Cardiac protective 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





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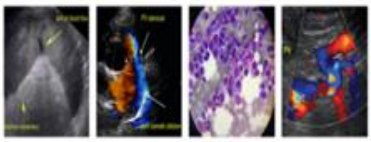

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)