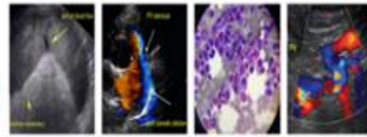
Mass Veterinary Services



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

PATIENT
Beau Belval

SPECIES
Canine

BREED
Australian Shepherd

SEX
Male Neutered

AGE
14 years

WEIGHT
59.3lbs

INTERPRETED BY
Maggie Machen Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
25291

DATE
7/13/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B2; history VPCs. Currently, Hyporexic and lethargic x several days. Also coughing with some foamy vomit. Not eating on a regular basis so is not getting his medications regularly. On exam: transient arrhythmia, grade II/VI murmur with PMI left apical area, PSS, lung fields clear. GP: 150 mmHg x 5. Current medications: 1) dasquin 2) Amlodipine 2.5mg 1 tab daily 3) Galliprant daily 4) Pimobendan/vetmedin 5mg 1.5 tabs twice a day *No sedation for study.
-Pertinent previous echo findings (10/6/21 Maggie Machen Lamy, DVM, DACVIM-Cardiology): LA 4.1 cm; LA:Ao 1.67; LV 4.4 cm; moderate LAE; borderline LVE; moderate MR; trace TR.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 20mm/mV. The average heart rate is 110bpm (range 88-125bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. Isolated VPCs throughout; monomorphic and singles only. Some interpolated beats.
ECG diagnosis: Sinus rhythm with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is borderline with adequate myocardial function. LV wall thicknesses are normal.
Left atrium: The left atrium is moderately dilated.
Mitral valve: The mitral valve is mildly thickened with minimal prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with an elevated velocity.
Aortic valve/aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. Trace 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 trace tricuspid regurgitation. Normal velocity.
Pulmonic valve/pulmonary artery: The pulmonic valve is normal in morphology and mobility. Trivial pulmonic insufficiency. Normal RVOT velocity; laminar flow.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

2-Dimensional Measurements

Measurement	Value
Ao diam (cm)	2.5
LA diam (cm)	3.8
LA:Ao (Swe)	1.5
IVS thickness (cm)	0.9
LVID diastole (cm)	4.4
PW thickness (cm)	0.9
LVID systole (cm)	2.8
FS (%)	36

Doppler Measurements

Measurement	Value
PV Vmax (m/s)	0.5
AoV Vmax (m/s)	1.2
MR Vmax (m/s)	5.8
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

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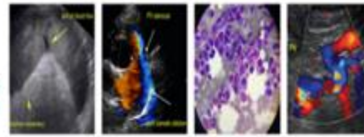

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INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with evidence of stability. Moderate mitral and trace tricuspid regurgitation are similar to previous, with a mild improvement in left atrial dilation. The LV is unchanged and trace AI is stable/mild. No additional issues are identified.

The ECG is similar to the previous study as well with isolated VPCs throughout. These are largely unchanged from both a morphology and frequency standpoint and appear relatively stable. As was previously discussed, a holter monitor would be the gold standard in this case to determine if treatment is warranted; however, the findings appear relatively unchanged.

These findings would not explain current hyperoxia, lethargy and cough. Systemic evaluation is advised to screen for underlying causes, in addition to CXR, hydrodone etc. Continue Pimobendan as prescribed, although it is reasonable to temporarily discontinue due to GI upset. No obvious indication for additional medications at this time.

Prognosis remains guarded long-term with risk for spontaneous CHF, development of arrhythmias, LA tear and/or sudden death going forward.

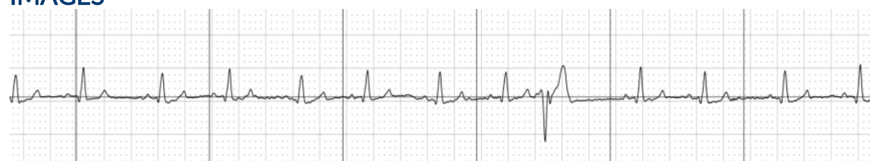
RECOMMENDATIONS

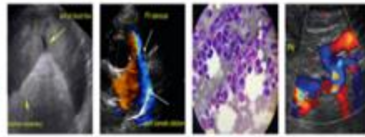
- Continue Pimobendan 0.25-0.3mg/kg PO q12h (temporarily discontinue if needed).
- Consider holter monitor as previously discussed.
- Consider systemic evaluation as discussed.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit
- Anesthetic risk is considered moderately elevated. Avoid ketamine, telazol, Dexdomitor (or other alpha-2 agonists) and acepromazine. Recommend having lidocaine CRI available for use in the event of worsening ventricular arrhythmias under anesthesia (CRI 50—75mcg/kg/min). 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, while considering comorbidities, hydration status, BP, etc.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

- Recommend conservative monitoring with a recheck echocardiogram and ECG in 6 months, sooner if any development of clinical signs.

IMAGES





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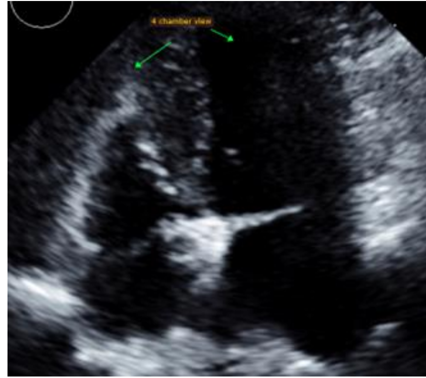

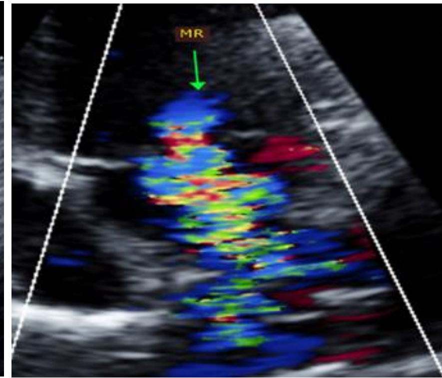

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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