

PATIENT

Emma Bridges

SPECIES

Canine

BREED

Minature Australian Shepherd

SEX

Female Spayed

AGE

13 years

WEIGHT

15.06lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Barnstable Animal Hospital

REFERRING VET

Dr. Ware

INVOICE

20410

DATE

8/6/21

PRESENTING CLINICAL SIGNS

History: Presents for non-productive cough. On exam: grade II/VI systolic murmur; cough on tracheal palpation; lungs clear. Radiographs: 'cardiomegaly; no evidence of venous congestion or cardiogenic edema. Mild pulmonary pattern is non-specific and could represent bronchitis, fibrosis or exuberant age-related change. Mild dynamic narrowing of caudal lobar bronchi indicates that chondromalacia and bronchial collapse may contribute to the respiratory signs.

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, 10mm/mV. The underlying rhythm is sinus in origin with an average heart rate of 100bpm (range 68-136bpm). P for every QRS complex and vice versa. P and QRS morphologies are positive. Isolated VPCs throughout; 4 in total. Monomorphic, singles only. No supraventricular premature beats, pauses or other dysrhythmias observed.

ECG diagnosis: Normal sinus rhythm with respiratory variation. Isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV diameter is normal. The LV wall thicknesses are normal. Severely hypokinetic apex, most consistent with a previous infarct. Severe LV diastolic dysfunction is noted as well with little to no early diastolic filling and increased A waves.

Left atrium: The left atrium is mildly dilated

Mitral valve: The mitral valve is normal with no prolapse into the left atrial lumen. Trace/mild mitral regurgitation.

Aortic valve/Aorta: The aortic valve appears trileaflet with normal mobility. Borderline moderately elevated aortic outflow velocity. A sub-aortic narrowing can be seen below the valve. Mild 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. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.

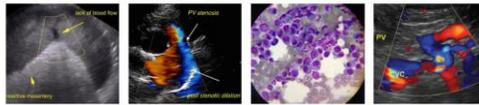
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

2-Dimensional Measurements

Ao diam (cm)	1.77
LA diam (cm)	1.94
LA:Ao (Swe)	1.1
IVS thickness (cm)	1.1
LVID diastole (cm)	2.4
PW thickness (cm)	1.0
LVID systole (cm)	1.6
FS (%)	35

Doppler Measurements

PV Vmax (m/s)	0.5
AoV Vmax (m/s)	3.6
MR Vmax (m/s)	NA
TR Vmax (m/s)	2.1
TR PG (mmHg)	18



PATIENT

Emma Bridges

SPECIES

Canine

BREED

Minature Australian Shepherd

SEX

Female Spayed

AGE

13 years

WEIGHT

15.06lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Barnstable Animal Hospital

REFERRING VET

Dr. Ware

INVOICE

20410

DATE

8/6/21

INTERPRETATION OF THE FINDINGS

Unusual findings. The cause of the murmur is moderate (borderline) subaortic stenosis (SAS) causing an elevated blood flow velocity through the LVOT and aortic valve. The peak gradient seen here is consistent with a moderate abnormality; however, the LV shows no significant evidence of chronic pressure overload. Mild AI is noted which should be monitored going forward. Finally and potentially most importantly, the apex of the LV is hypokinetic which is most consistent with a previous infarct. There is also significant diastolic dysfunction with impaired relaxation. It is unusual that there is no obvious thinning of the region; however, the change is significant. Interestingly, the LA is minimally dilated indicating the disease appears well compensated for at this time. No additional issues are identified in this study.

The ECG also shows isolated VPCs which are likely secondary to the LV abnormalities discussed above. The VPCs appear to be singles only and should be monitored going forward. No obvious indication for anti-arrhythmic therapy at this time.

Typically, the prognosis with this degree of SAS is good, particularly given the age of the patient. The abnormal LV motion should be monitored however, as this may predispose to more significant complications going forward. Given the totality of the findings, Pimobendan is reasonable in this patient as below. No additional medications are indicated at this time. Prognosis is guarded long term. Patients will always be at risk for sustained arrhythmias, collapse, and/or sudden death going forward. Mild activity restriction is advised.

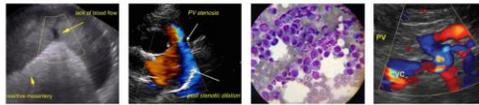
Despite these findings, the cough is unlikely to be cardiac in origin and primary respiratory causes should be considered. Consider further respiratory work up/treatment (hydrocodone, taper course of steroids, Enrofloxacin, TTW/BAL, etc.).

RECOMMENDATIONS

- Institute Pimobendan 0.2-0.3mg/kg PO q12h.
- Monitor for development of labored breathing, exercise intolerance or collapse episodes, as SAS patients are more predisposed to development of arrhythmias than to CHF.
- Mild exercise restriction is advised lifelong.
- Omega fatty acid supplementation (1000mg 1-2x daily) may be of some long-term benefit for dogs predisposed to arrhythmias.
- Elective anesthesia should be avoided if possible.
- Consider further respiratory therapy/workup as discussed.

PLAN

- Recommend recheck echocardiogram in 6 months to screen for progression, sooner if any clinical signs arise.



PATIENT

Emma Bridges

SPECIES

Canine

BREED

Minature Australian Shepherd

SEX

Female Spayed

AGE

13 years

WEIGHT

15.06lbs

INTERPRETED BY

Maggie Machen Lamy, DVM
 DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

Barnstable Animal Hospital

REFERRING VET

Dr. Ware

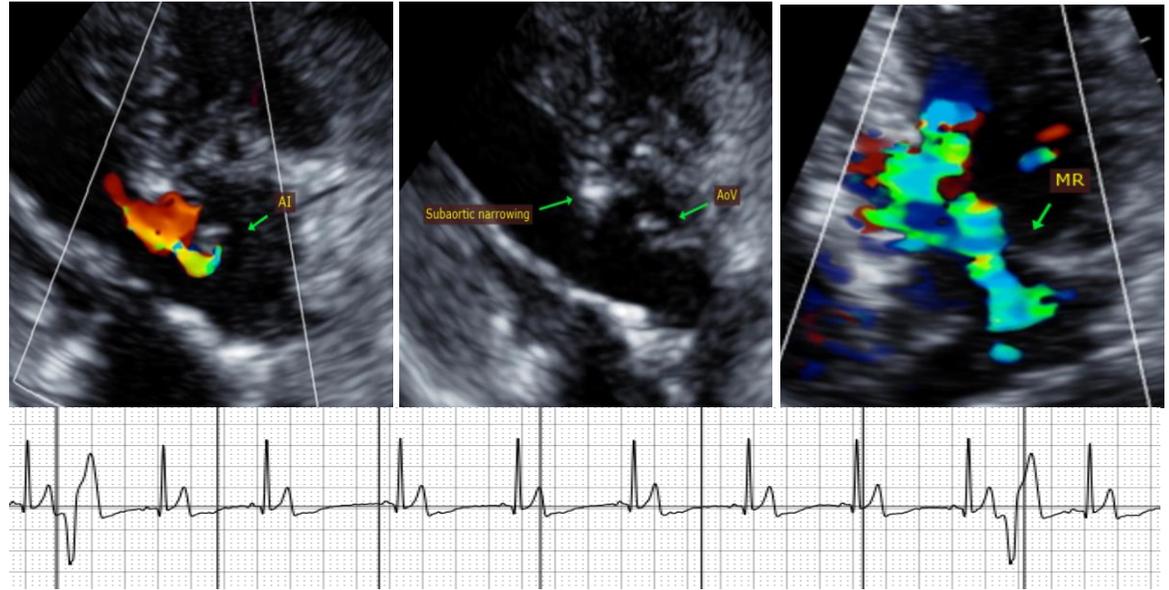
INVOICE

20410

DATE

8/6/21

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)
 info@sonopath.com