



PATIENT

Angel Hemphill

SPECIES

Canine

BREED

Cairn Terrier

SEX

Female Spayed

AGE

13 years

WEIGHT

14lbs

INTERPRETED BY

Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

25824

DATE

8/17/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B2. History sinus bradycardia, intermittent SVT and long pauses: suspect sick sinus syndrome on ECG 2/23/22. Current presentation: Had increasing syncopal episodes and her sildenafil increased without improvement. Given her previous history of intermittent bradycardia, she had her diltiazem stopped, which did seem to help for a bit. The syncopal episodes started again in June at which time the sildenafil was increased further. In May, UPC was noted to higher so her enalapril was increased to address this. The sildenafil was further increased to its present dose in July in an attempt to better control her syncopal episodes. Angel continues to have episodes where she shakes and falls over with some occasional panting noted. These appear to be occurring on an every other day basis at this point. Angel is not as active but continues to eat well. She does not have any C/S/D/PU/PD but does vomit yellow bile occasionally. On exam: arrhythmia, grade III/VI murmur with PMI left apical area, PSS, lung fields. Current medications: 1) Pimobendan/vetmedin 3.75mg 1/2 tab twice a day 2) Lasix/furosemide 12.5mg prn (?) 3) Sildenafil 20mg 3/4 tab three times a day 6) Omega 3 FA 1 twice a day 7) Diltiazem 30mg discontinued 8) Plavix/clopidogrel 75mg 1/4 tab daily 9) Enalapril 2.5mg 1.5 tabs twice a day *No sedation for study.

-Pertinent previous echo findings (1/12/22 Maggie Machen Lamy, DVM, DACVIM-Cardiology): LA 2.1 cm; LA:Ao 1.4; LV 2.3 cm; mild LAE; trace MR; moderate RAE; moderate TR (4.7 m/s; 87 mmHg); severe pulmonary hypertension.

ECHOCARDIOGRAM FINDINGS

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

Left ventricle: The LV diameter is normal to slightly decreased with adequate myocardial function. LV wall thickness is increased.

Left atrium: The left atrium is mild to moderately dilated.

Mitral valve: The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Trace eccentric mitral regurgitation.

Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.

Right ventricle: The RV is prominent with mild RV hypertrophy.

Right atrium: Moderate RA dilation.

Tricuspid valve: The tricuspid valve appears mildly thickened. Moderate double jet of tricuspid regurgitation; velocity consistent with moderate to severe pulmonary arterial hypertension.

Pulmonic valve/Pulmonary artery: The pulmonic valve appears normal with normal mobility. Trace pulmonic insufficiency. Normal RVOT velocity; laminar flow. Mild MPA and branch dilation.

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

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 180bpm with an irregular rhythm. Holter monitor applied.

2-Dimensional Measurements

Ao diam (cm)	1.3
LA diam (cm)	2.2
LA:Ao (Swe)	1.7
IVS thickness (cm)	0.7
LVID diastole (cm)	2.3
PW thickness (cm)	0.8
LVID systole (cm)	0.9
FS (%)	60

Doppler Measurements

PV Vmax (m/s)	1.1
AoV Vmax (m/s)	1.4
MR Vmax (m/s)	NA
TR Vmax (m/s)	4.3
TR PG (mmHg)	75



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INTERPRETATION OF THE FINDINGS

Overall, the structural disease appears stable in this case. The left heart is mildly affected with moderate right heart enlargement. Pulmonary pressures are similar, although highly heart rate dependent. No effusions are seen, and no additional issues are identified.

The arrhythmia is quite apparent throughout the study and referral for pacemaker implementation may be warranted pending holter results. It is assumed that the arrhythmia is the cause of recurrent syncope, given a lack of improvement with Sildenafil. I would not alter the medications at this time, until the holter is reviewed.

Unfortunately, the prognosis is poor given the complexity of the issues and persistent syncopal episodes. Even if a pacemaker is warranted/elected, the structural disease is significant and may limit outcome. The patient will always be at risk for recurrent right-sided CHF, development of syncopal episodes, malignant arrhythmias and/or sudden death in the future.

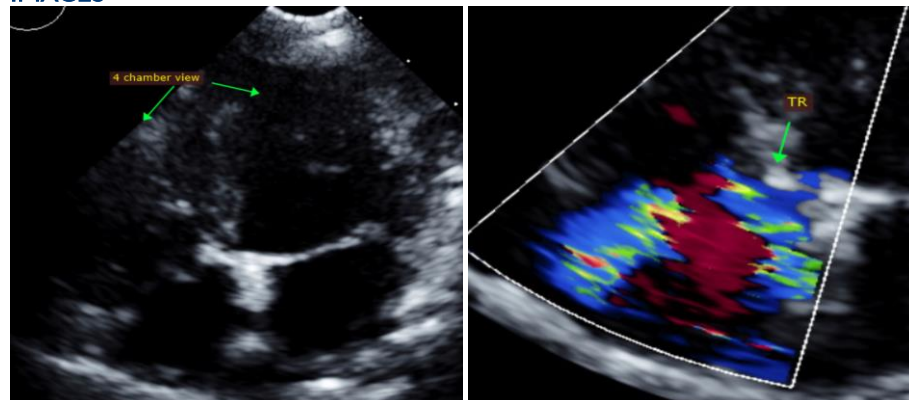
RECOMMENDATIONS

- Continue all medications as prescribed, pending holter results.
- Activity restriction is recommended prior to further evaluation.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Elective anesthesia is not advised.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

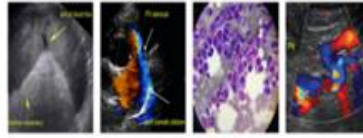
- Recheck renal values, BP and ECG every 3-4 months lifelong.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES





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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.

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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.

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Cairn Terrier

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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

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