



PATIENT

Bentley Hanratty

SPECIES

Canine

BREED

Leonberger

SEX

Male Neutered

AGE

11 years

WEIGHT

99.2lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Angell Animal
Medical Center

REFERRING VET

Dr. Cox

INVOICE

26192

DATE

9/3/22

PRESENTING CLINICAL SIGNS

History: Past history of DCM treated with clopidogrel 75mg SID, Sotalolol 80mg BID and Pimobendan 10mg BID. He presented after a collapse episode.

ECHOCARDIOGRAM FINDINGS

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

Left ventricle: The LV diameter is normal with markedly depressed myocardial function. LV wall thicknesses are normal.

Left atrium: The left atrium is normal.

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

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

Right ventricle: The RV appears normal in dimension. No obvious RVH.

Right atrium: RA is normal. Concern for early tamponade. A large mixed echogenicity mass is noted, likely stemming from the right AV groove. Regions of cavitation are noted; max dimension 4.9 x 3.8cm in best-viewed cross section. The mass is overlying the right atrium with suspicion for compression and/or early infiltration.

Tricuspid valve: The tricuspid valve appears mildly thickened with mild tricuspid regurgitation.

Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.

Pericardium/other: Moderate volume pericardial effusion. No obvious pleural effusion noted.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 140bpm.

2-Dimensional Measurements

| | |
|--------------------|-----|
| Ao diam (cm) | 3.2 |
| LA diam (cm) | 2.8 |
| LA:Ao (Swe) | 0.9 |
| IVS thickness (cm) | 1.2 |
| LVID diastole (cm) | 4.3 |
| PW thickness (cm) | 1.1 |
| LVID systole (cm) | 3.8 |
| FS (%) | 10 |

Doppler Measurements

| | |
|----------------|-----|
| PV Vmax (m/s) | 0.5 |
| AoV Vmax (m/s) | 0.7 |
| MR Vmax (m/s) | NA |
| TR Vmax (m/s) | NA |
| TR PG (mmHg) | NA |

INTERPRETATION OF THE FINDINGS

The cause of the clinical signs is pericardial effusion secondary to cardiac neoplasia associated with the right heart. The most likely tumor type given the signalment and location is a hemangiosarcoma (HSA). Other tumor types are less likely, including chemodectoma or ectopic parathyroid tumor. Regardless, there is accumulation of fluid in pericardial space, which is consistent with early tamponade and an emergency pericardiocentesis is recommended. Cytology of the effusion is recommended to help confirm a definitive diagnosis, although often of low yield. Of increased concern, the mass appears to be at a minimum compressing the right atrium with potential infiltration. This is difficult to definitively visualize from all views, and advanced imaging such as a thoracic CT scan may be warranted. As an entirely separate issue, there does appear to be evidence of DCM, as was previously diagnosed. This is a highly unusual combination of



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issues; however, the former is the cause of clinical signs at this time. The left atrium is normal, indicating low risk for complications from DCM imminently. Finally the aortic root is dilated and a baseline BP recommended. No arrhythmias are appreciated and no additional issues identified.

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The prognosis with cardiac hemangiosarcoma is poor, with an MST of only 2-3 months. The emergent limiting factor is often recurrent hemorrhage, and a pericardial window or subtotal pericardiectomy may relieve clinical signs. Chemotherapy and/or radiation can also be discussed with an Oncologist and may extend average survival time. HSA also has a high metastatic rate, and full systemic screening is recommended for metastatic lesions. Patients with cardiac neoplasia are at high risk for recurrent hemorrhage and development of tamponade, malignant arrhythmias/sudden death in the future.

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Concurrent significant DCM is obviously of note in this case; however, without left atrial enlargement this of less clinical significance at this time. Follow up and treatment should be dictated by previous evaluation of both the arrhythmia and structural disease; however, the limiting factor in this case is likely hemangiosarcoma. 0

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No additional cardiac medications are clearly indicated at this time. Over the counter herbal supplement Yunnan Baiyao may help decrease risk of bleeding, however true benefit is speculative (1 capsule PO BID).

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Patient will always be at risk for recurrent pericardial bleeds, development of arrhythmias and/or sudden death going forward.

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RECOMMENDATIONS

- Consider diagnostic/therapeutic pericardiocentesis as discussed.
- Full systemic evaluation is advised.
- Baseline BP recommended.
- Consider advanced imaging such as a thoracic CT scan.
- Continue Sotalol and Pimobendan as previously recommended. Plavix is typically not recommended in DCM/HSA cases, and can be discontinued.
- Consider Yunnain Baiyao 1 capsule PO q12h (available over the counter).
- Elective anesthesia is not advised.
- Moderate activity restriction is advised.
- Monitor at home for signs of recurrent/worsening pericardial effusion including pale gums, difficulty breathing, lethargy/collapse, exercise intolerance, abdominal distention, vomiting, and/or inappetence. In this instance, reassessment of effusion status is recommended on an urgent basis, to confirm need for a pericardial tap.
- Monitor for signs of tumor growth/compression, including congestive heart failure.

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PLAN

- Recheck echocardiogram is recommended in 2-3 months to reassess tumor dimension, sooner if recurrent clinical issues.

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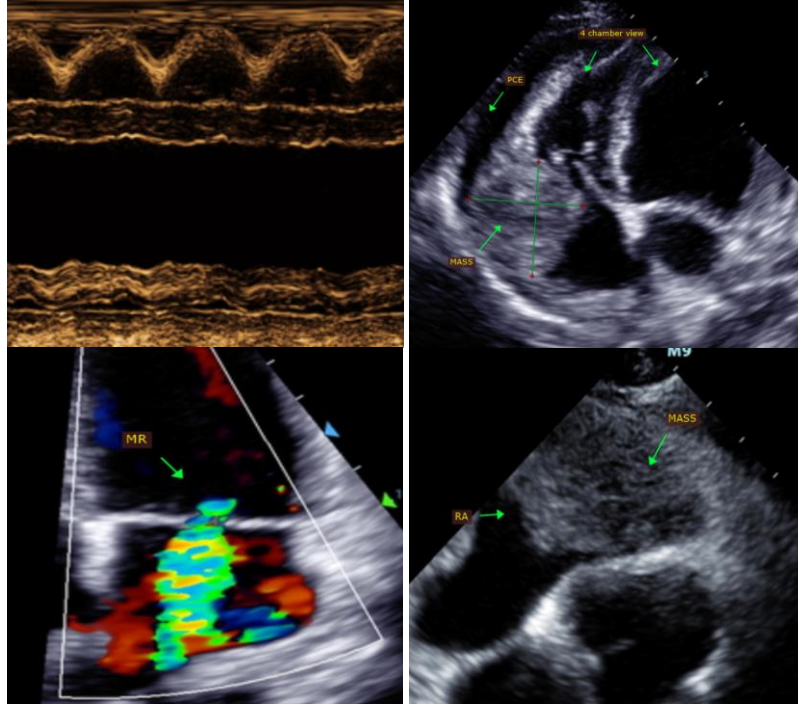
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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Pamela Harrigan,
 RDCS

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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