



PATIENT

Daisy O'Neill

SPECIES

Canine

BREED

Terrier Mix

SEX

Female Spayed

AGE

14 years

WEIGHT

13.8lbs

INTERPRETED BY

Maggie Machen
 Lamy, DVM
 DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
 RDCS

HOSPITAL NAME

Wignall Animal
 Hospital

REFERRING VET

Dr. Detelich

INVOICE

20515

DATE

8/12/21

PRESENTING CLINICAL SIGNS

History: Presented with coughing; no murmur. Radiographs: patchy consolidation R>L caudal lung fields, enlarged cardiac silhouette, tracheal collapse. BP: 165mmHg.

ECHOCARDIOGRAM FINDINGS

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

Left ventricle: The LV diameter is normal with adequate 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. No 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 mildly dilated with prominence in the short axis view. No obvious RVH.

Right atrium: RA is normal. Concern for early tamponade.

Tricuspid valve: The tricuspid valve appears mildly thickened. A small hyperechoic lesion is visualized associated with the atrial surface of the anterior leaflet (see below). Mild 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: Mild to moderate volume pericardial effusion. Moderate volume pleural effusion noted. A large mixed echogenicity mass is noted, an exact origin is difficult to determine; however, the heart base is suspected. Max diameter noted: 5.6 x 5.7cm.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 150bpm.

2-Dimensional Measurements

Ao diam (cm)	1.6
LA diam (cm)	1.78
LA:Ao (Swe)	1.1
IVS thickness (cm)	0.89
LVID diastole (cm)	2.5
PW thickness (cm)	0.90
LVID systole (cm)	1.4
FS (%)	45

Doppler Measurements

PV Vmax (m/s)	1.3
AoV Vmax (m/s)	1.3
MR Vmax (m/s)	NA
TR Vmax (m/s)	2.7
TR PG (mmHg)	30

INTERPRETATION OF THE FINDINGS

A large tumor is identified, likely associated with the aortic root; however, this is difficult to confirm given the size. The most likely tumor type given the location is a chemodectoma; however, there is also concern for hemangiosarcoma in this patient (atypical signalment). There is also a small lesion associated with the tricuspid valve which is of unknown significance (ancillary neoplastic lesion, atypical degeneration, thrombus,



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etc). The overall cardiac structure and function are normal, without significant leaks or dysfunction.

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The amount of effusion seen today is mild to moderate with concern for early tamponade, which is supported by concurrent pleural and abdominal effusions. It is also possible that the tumor is compressing distal pulmonary vasculature, particularly given mild subjective RV enlargement.

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Given that the only symptom is a cough, we have two options at this juncture. First would be to go ahead and perform a pericardiocentesis, given suspicion for early tamponade and to obtain a diagnostic sample simultaneously (ie confirm a tumor bleed is present). An alternative approach would be further diagnostics such as thoracic CT scan, abdominal ultrasound, etc. with close monitoring for any further clinical signs and need for fluid removal. Discussion with the owner is advised. If a pericardiocentesis cannot be done safely at your practice, referral to a multi-specialty center/ER should be considered, particularly given the unusual nature of the presentation.

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Effusion aside, given the size of the mass and location further tumor growth may lead to congestive signs such as, collapse, ascites or additional effusions. If this develops in the future, diuretic therapy may have to be utilized.

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Assuming the diagnosis is confirmed, the prognosis with cardiac chemodectomas is typically fair, with an MST of 1-2 years. This case carries a much more **guarded to poor prognosis, given the size of the mass at time of diagnosis and development of effusions**. The limiting factor is often recurrent hemorrhage, and a pericardial window or subtotal pericardiectomy may relieve clinical signs. Other sequelae include impingement of cardiac blood flow secondary to tumor growth, or metastasis to the thorax or abdomen. Full systemic evaluation may be useful to screen for metastatic lesions. Finally, consultation with an Oncologist or Internist may be indicated to explore Chemotherapy and/or radiation treatment options.

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No cardiac medications are clearly indicated at this time. Over the counter herbal supplement Yunnan Baiyao (aka Yunnan Paiyao) 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.

RECOMMENDATIONS

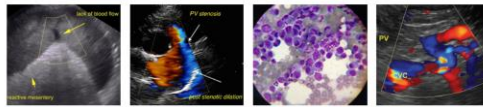
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- Consider diagnostic/therapeutic pericardiocentesis as discussed.
- Full systemic evaluation is advised.
- Consider referral to a Specialty facility for advanced imaging as discussed.
- Consider Yunnain Baiyao 1 capsule PO q12h (available over the counter).
- Elective anesthesia is not advised.



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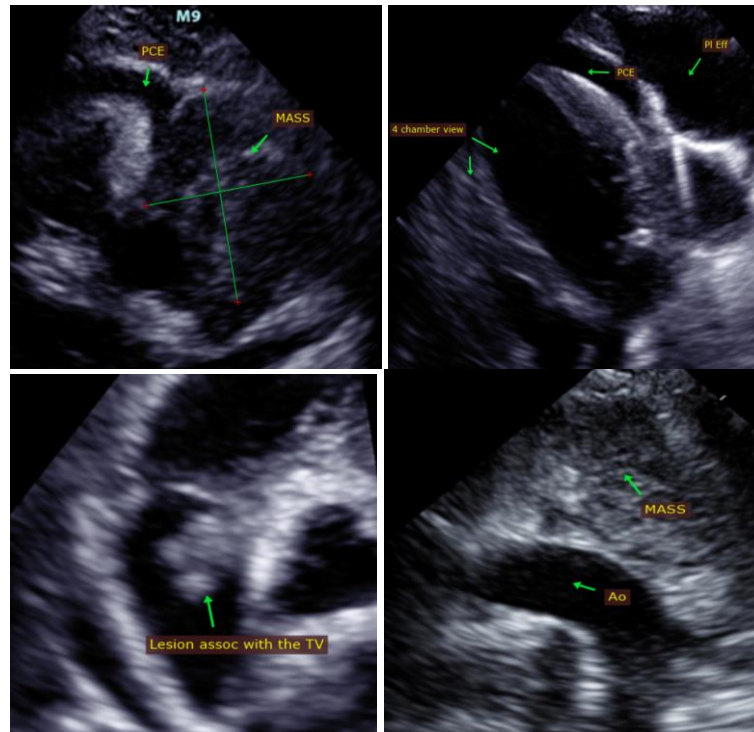
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- Moderate activity restriction is advised.
- Monitor at home for signs of recurrent/worsening pericardial effusion including pale gums, difficulty breathing, lethargy/collapse, exercise intolerance, abdominal distention, vomiting, and/or inappetence. 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.

PLAN

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

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.

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