



PATIENT

Bella Fopp

SPECIES

Canine

BREED

Mix

SEX

Female Spayed

AGE

10 years

WEIGHT

73.2lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

24524

DATE

6/1/22

PRESENTING CLINICAL SIGNS

History: Hyporexic; distended abdomen. Panting/whining. No cough. Previously healthy. On auscultation - no murmur or arrhythmia; muffled heart sounds; fair-good pulses. BP: 140-150mmHg.

*Following the study, pericardiocentesis and abdominocentesis performed. Pericardiocentesis removed 100ml of serosanguinous yet blood-tinged fluid. IL of clear fluid removed from the abdomen.

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 unremarkable.

Right atrium: RA is normal. Concern for tamponade with collapse of the RA wall.

Tricuspid valve: The tricuspid valve appears largely normal with no significant TR.

Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Mildly elevated RVOT velocity suggestive of compression.

Pericardium/other: Moderate volume pericardial effusion. A large hypoechoic mass is noted, an exact origin is difficult to determine; however, the heart base is suspected. Max diameter noted: 4.9 x 3.7cm.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 180bpm.

2-Dimensional Measurements

Ao diam (cm)	2.0
LA diam (cm)	2.5
LA:Ao (Swe)	1.2
IVS thickness (cm)	1.1
LVID diastole (cm)	3.7
PW thickness (cm)	1.0
LVID systole (cm)	2.3
FS (%)	38

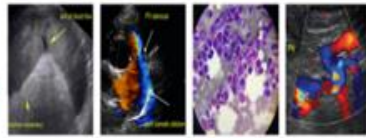
Doppler Measurements

PV Vmax (m/s)	2.2
AoV Vmax (m/s)	NM
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

A large tumor is identified, likely associated with the aortic root. The most likely tumor type given the location is a chemodectoma; however, hemangiosarcoma cannot be ruled out. The overall cardiac structure and function are normal, without significant leaks or dysfunction.

The amount of effusion seen today is significant with concern for tamponade. This is supported by abdominal effusion. It is suspected that the tumor is compressing distal pulmonary vasculature, based upon the finding of serosanguinous effusion removed from the pericardium. A tumor bleed is also a possibility going forward and some combination is possible to explain the blood-tinged nature of the fluid.



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Dual-cavity centesis was certainly indicated and will hopefully provide some relief for the short-term. It is reasonable to utilize cardiac medications as below, although this is a band aid over a much bigger issue.

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Consider advanced diagnostics in this case such as thoracic CT scan to fully understand the extent of the mass. Additionally chemotherapeutic options could be considered with an Oncologist, as well as full systemic evaluation to screen for metastasis. Overall the prognosis is poor to grave in this case, and simply attempting symptomatic therapy is reasonable with close monitoring for any further clinical signs and need for repeat fluid removal. If the patient's clinical signs return in a short period of time despite therapy, humane euthanasia should be elected.

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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 advanced thoracic imaging, chemotherapy, systemic screening as discussed.
- Institute Lasix 1mg/kg PO q12h.
- Institute Spironolactone 1mg/kg PO q12h.
- Institute Pimobendan 0.3mg/kg PO q12h.
- 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

- If patient's quality of life suffers, humane euthanasia should be elected.
- If patient does well at home, echocardiogram is recommended in 2-3 months to reassess tumor dimension, sooner if recurrent clinical issues.

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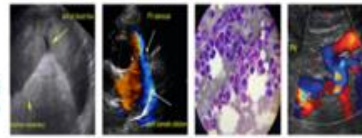
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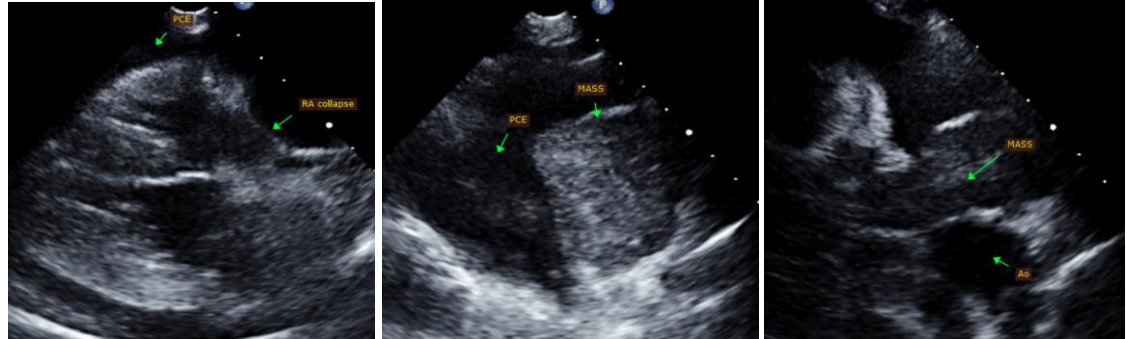
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IMAGES



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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Echocardiogram performed by:

Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)