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Pet Animal Ultrasound Service
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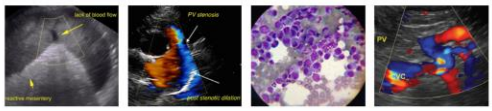


SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Ellie Kam

SPECIES
Canine

BREED
French Bulldog

SEX
Female Spayed

AGE
10years

WEIGHT
38.6lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Norfolk County Veterinary Service

REFERRING VET
Dr. Poor

INVOICE
32413

DATE
8/17/23

PRESENTING CLINICAL SIGNS

History: Historical grade II-III/VI systolic murmur. Atopy. WBC 5.43, ALT 138, albumin normal. Presented on 8/13 for urgent care. Belly firm. Pitting edema right side. 4 view abdomen and thorax. Ascites, pleural effusion. On Lasix 25mg BID.

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 appears mildly enlarged.
Mitral valve: The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Moderate central mitral regurgitation with a normal velocity.
Aortic valve/aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency. A massive mixed echogenicity lesion is seen associated with the heart-base adjacent to the aorta (at least 5.6 x 9.0cm in dimension).
Right ventricle: RV appears moderately dilated.
Right atrium: Moderate RA dilation. The tumor appears to be infiltrating the right atrium (see below).
Tricuspid valve: The tricuspid valve appears mildly thickened with moderate tricuspid regurgitation; velocity consistent with elevated pulmonary pressures.
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 effusion. No pleural effusion noted. Large volume ascites.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 166bpm.

2-Dimensional Measurements

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

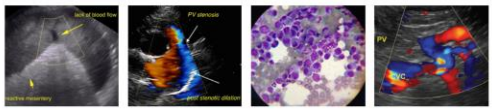
Doppler Measurements

PV Vmax (m/s)	0.7
AoV Vmax (m/s)	1.3
MR Vmax (m/s)	5.6
TR Vmax (m/s)	2.9
TR PG (mmHg)	34

INTERPRETATION OF THE FINDINGS

Primary cardiac neoplasia is identified leading to right-sided congestive heart failure (ascites). The mass is extremely large and is infiltrating the right heart. This is leading to elevated filling pressures and resulting in pitting edema and ascites. Mild chronic degenerative valve disease is also identified, which is hemodynamically insignificant in comparison.

Given the size of the mass, signalment and location, the most likely diagnosis is a chemodectoma; however, a less common tumor such as ectopic parathyroid, hemangiosarcoma, etc. cannot be entirely ruled out without a biopsy. The issue is more of a mechanical obstruction than true pulmonary hypertension, and sildenafil will be of little



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benefit. The best we can do is relieve the pressure within the abdomen through tapping when needed and use of medications for congestive heart failure to help slow fluid accumulation. Renal values/effusion status/quality of life should be assessed in 5-7 days, then every 2-3 month. I am cautiously optimistic that we can decrease fluid volume by some degree for the short term; however, the size of the mass and infiltrative nature confers a **grave prognosis at this juncture**. Diuretics are a band aid over a much bigger issue as the tumor continues to grow. As a last effort, steroids can be attempted for their anti-neoplastic benefit; however, I would attempt diuretic therapy first. **If QOL suffers at any point in the future, euthanasia should be considered.**

Going forward there are some options for palliating this type of cancer, including radiation and chemotherapy. Consultation with an Oncologist is recommended if elected.

Unfortunately, this is an end-stage condition at this juncture. High risk will always remain for recurrent effusions (pericardial, pleural or abdominal) and development of arrhythmias/sudden death at home. Monitor at home for progressive abdominal distention, labored breathing and/or lethargy and collapse.

RECOMMENDATIONS

- Institute Lasix 1-2mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Institute Pimobendan 0.3mg/kg PO q12h.
- Institute ACEI 0.5mg/kg PO q24h, pending BP >130mmHg.
- Periodic centesis as needed when patient becomes inappetant, dyspneic or uncomfortable.
- Consider referral for advanced diagnostics (CT/MRI) as discussed.
- Consider consultation with an Oncologist.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Anesthesia is not advised.
- Monitor for development of associated clinical signs (collapse, abdominal distention, cough, labored breathing).
- Moderate exercise restriction is advised.

PLAN

Recheck renal values in 5-7 days to ensure tolerance of medications, sooner if any decline in appetite or energy level. Once stable, recheck labs every 3-4 months.

Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

If quality of life suffers at any point, humane euthanasia should be elected.

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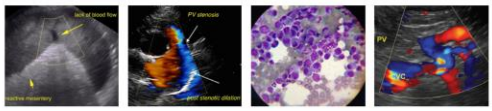

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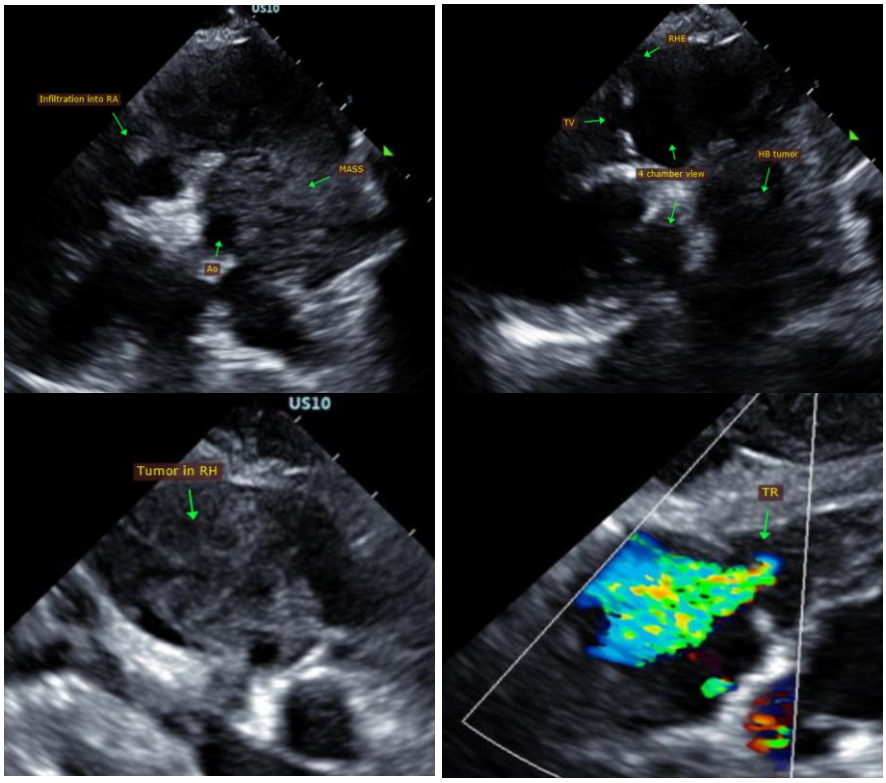
IMAGES



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.

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

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