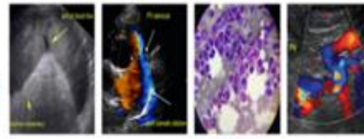

PATIENT
Sammy Jarest

SPECIES
Canine

BREED
Cocker Spaniel Mix

SEX
Male Neutered

AGE
10 years

WEIGHT
25.7lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
25697

DATE
8/10/22

PRESENTING CLINICAL SIGNS

History: Sammy was noted to have a heart murmur in July. Coughing noted. Normal resting respiratory rate but seems occasionally labored. Owner noted an abnormal heartbeat at times. No collapse episodes noted. CXR (3v)--mild cardiomegaly; mild diffuse broncho-interstitial pattern throughout lung fields; dorsal deviation of trachea; large mediastinal mass. On auscultation: transient arrhythmia, grade IV-V/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 179-180mmHg. *Sedated with propofol *FNA of mass taken at time of echocardiogram.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 120bpm (range 68-180bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. Isolated APCs identified throughout; singles only. No ventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with isolated APCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is mildly increased with adequate myocardial function. LV wall thicknesses are normal.
Left atrium: The left atrium mildly dilated although standard views are obscured.
Mitral valve: The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Moderate 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 mildly enlarged with prominence in the short axis view.
Right atrium: RA is moderately dilated.
Tricuspid valve: The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Velocity consistent with mild to moderate pulmonary hypertension.
Pulmonic valve/Pulmonary artery: The body of the MPA appears normal. There is a large, encapsulated mass associated with the heart base (5.5 x 4.0cm). Compression is identified through the distal right branch with an increased outflow velocity.
Pericardium/other: No pericardial effusion. No pleural effusion noted.

2-Dimensional Measurements

Measurement	Value
Ao diam (cm)	1.8
LA diam (cm)	3.0
LA:Ao (Swe)	1.7
IVS thickness (cm)	0.8
LVID diastole (cm)	2.8
PW thickness (cm)	0.9
LVID systole (cm)	1.3
FS (%)	54

Doppler Measurements

Measurement	Value
PV Vmax (m/s)	2.1
AoV Vmax (m/s)	1.7
MR Vmax (m/s)	NM
TR Vmax (m/s)	3.3
TR PG (mmHg)	44

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INTERPRETATION OF THE FINDINGS

A large soft tissue lesion is identified with the heart base. The mass appears extracardiac and intrapericardial with compression of the peripheral MPA visualized. This is leading to pressure overload of the right heart, as evidence by an elevated TR velocity and right heart enlargement. Other possible issues including occlusion of pulmonary venous return etc. are also possible. There is also moderately left atrial enlargement with mitral regurgitation likely reflective of primary valve disease. No additional issues are identified.

The mass is suspected to be heart based in origin; however, an exact root cannot be seen. The most common heart base tumor is a chemodectoma, however other possibilities including ectopic parathyroid tumor cannot be ruled out. Further diagnostic imaging may be useful understand the definitive origin and thoracic involvement of the mass (CXR, CT, FNA, etc.).

Going forward, regardless of tumor type the clinical issues are due to a mechanical obstruction of flow through the right heart, which confers a poor prognosis. The mass will likely continue to increase in size, further worsening the obstruction and ultimately leading to decompensation. The best we can do is utilize cardiac supportive medications to help slow the onset of congestive signs; however, this is likely unavoidable. Diuretics are a band aid over a much bigger issue and may or may not be effective. Please note medications below.

There are some options for palliating this type of cancer, including radiation and chemotherapy. Full systemic screening to assess for metastasis may be useful (AUS, labs, etc.) when deciding what is appropriate. Consultation with an Internist or Oncologist is recommended in light of echo results.

As a further complicating factor, APCs are noted on the ECG. While single APCs are largely benign, a couplet is identified, and the patient is certainly at risk for atrial fibrillation and/or sustained SVT. Given a patient without syncopal episodes, I would not necessarily treat this at this time; however, certainly monitoring for clinical signs such as syncope is suggested going forward.

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

- Consider medical management as follows: institute Lasix 1-2mg/kg PO q12h, Spironolactone 1-2mg/kg PO q12h, and Pimobendan 0.3mg/kg PO q12h.
- Consider consultation with an Oncologist or Internist for chemotherapeutic options, etc.
- Full systemic evaluation to screen for metastatic lesions is recommended (CXR, AUS, etc.)
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

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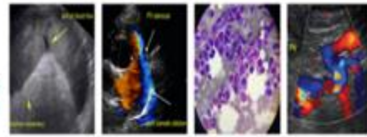

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Clinical Sonography & Telecytology
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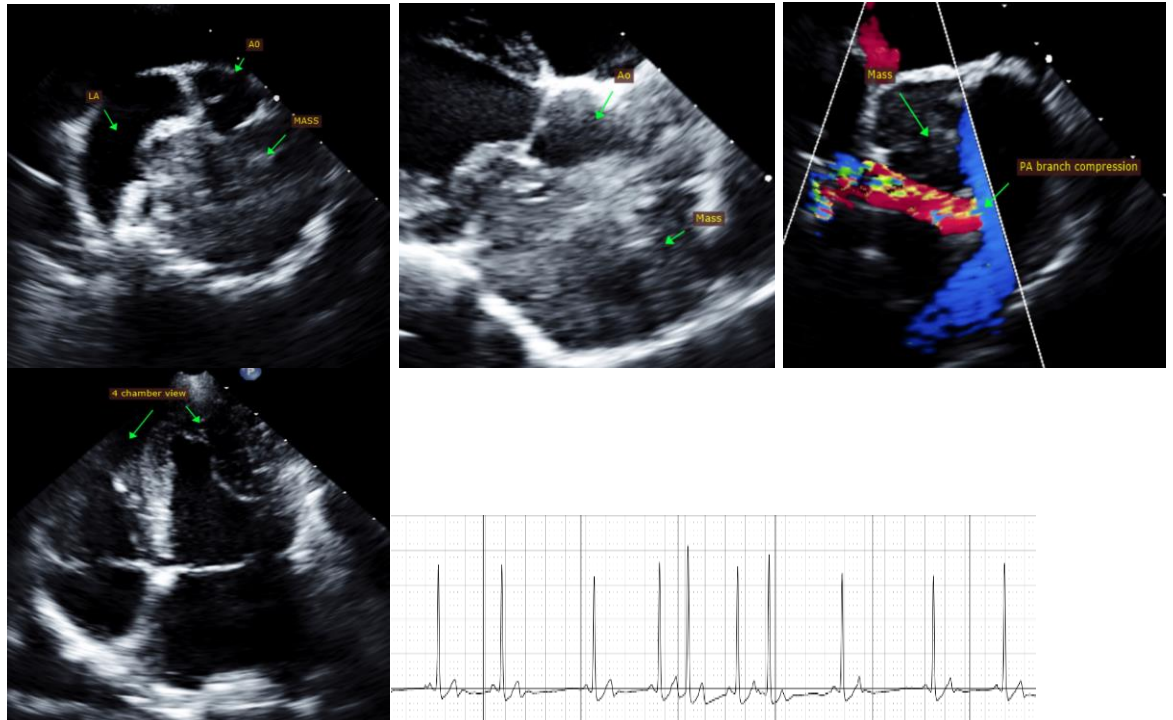
PLAN

- Monitor renal panel/BP in 1-2 weeks then every 3-4 months going forward. If doing well and BP is >130mmHg, institute ACE-I 0.5mg/kg PO q12h.
- If symptoms develop and quality of life suffers despite medical management, euthanasia should be considered.
- Recheck echocardiogram in 3-4 months pending clinical improvement.

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)