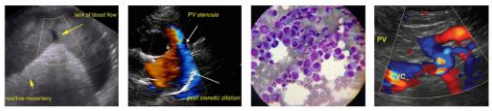


PATIENT

Otis Deperry

SPECIES

Canine

BREED

Lab

SEX

Male Neutered

AGE

12 years

WEIGHT

87lbs

INTERPRETED BY

Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

Wood River Animal Hospital

REFERRING VET

Dr. Fischer

INVOICE

22268

DATE

12/3/21

PRESENTING CLINICAL SIGNS

History: Presented 12 hours prior after collapsing episode - laterally recumbent with sustained VTach. Bolus of Lidocaine reverted to normal rhythm. Hospitalized on CRI; currently 50mcg/kg/hr. Previously low HCT and positive fecal occult blood - resolved once discontinuing Meloxicam. Having bi-cavity ultrasound exams. On Galliprant and Gabapentin

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 100bpm. The underlying rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. Isolated VPCs throughout; monomorphic and primarily singles. Occasional couplets; however, lack of a tight coupling interval may suggest an idioventricular focus. No supraventricular ectopic beats, pauses or dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with isolated VPCs. VT previously appears relatively controlled.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is normal with mildly depressed myocardial function. A soft tissue lesion is identified, adjacent to the antero-lateral papillary muscle that appears to be originating in the posterior LV wall. The affected region of the LV appears hypokinetic. The remainder of the LV appears normal in dimension/morphology.
Left atrium: The left atrium is mildly dilated.
Mitral valve: The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Mild eccentric 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.
Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.
Right atrium: Normal RA dimension.
Tricuspid valve: The tricuspid valve appears normal with 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: No pericardial or pleural effusion noted. No obvious cardiac masses.

2-Dimensional Measurements

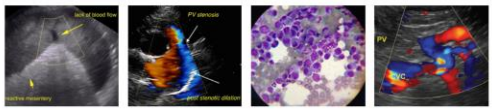
Ao diam (cm)	2.4
LA diam (cm)	3.3
LA:Ao (Swe)	1.3
IVS thickness (cm)	1.0
LVID diastole (cm)	4.5
PW thickness (cm)	1.2
LVID systole (cm)	3.4
FS (%)	25

Doppler Measurements

PV Vmax (m/s)	0.4
AoV Vmax (m/s)	0.77
MR Vmax (m/s)	5.0
TR Vmax (m/s)	2.4
TR PG (mmHg)	24

INTERPRETATION OF THE FINDINGS

Cardiac neoplasia is identified, with a mass associated with the wall of the LV (see below). This appears to be adjacent to the papillary muscle rather than originating from it. This is a highly



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unusual finding, making speculation on tumor type difficult. Rule outs include hemangiosarcoma, fibroelastoma, metastatic lesion, etc. The affected region of the LV appears hypokinetic, which is likely the cause of mildly depressed function/FS. Mild mitral and tricuspid valve disease is also observed, without significant LA and LV dilation which is comparatively insignificant. No additional issues are identified.

Of great clinical concern is ventricular tachycardia (VT) has developed, presumably secondary to the mass lesion. The most recent ECG shows relatively good control with lidocaine CRI, with a normal sinus rhythm and persistent isolated VPCs. Sotalol should be instituted ASAP, with weaning of the CRI over the next 8-12 hours to assess persistent control.

Going forward, there are options for further evaluation, work up and potentially palliative care. The location is clearly a limiting factor, as removal is not possible without cardiac bypass. Full systemic work up is the recommended next step including AUS, in search of primary or secondary lesions that may be amenable to sampling in search of a definitive diagnosis. If able to be obtained, chemotherapy and other treatment options could be discussed with an Oncologist.

Given left heart involvement, consider Pimobendan for supportive therapy. Omega fatty acid supplementation may be of some long term benefit for both arrhythmias and valve disease. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes in the future. Unfortunately the p**rognosis is poor with potential for syncope, collapse and/or sudden death going forward**. An embolic event is possible given the location/size of the lesion.

RECOMMENDATIONS

- Administer loading dose of Sotalol 80mg PO; followed by 40mg PO q12h.
- Attempt to wean CRI over the next 8-12 hours once Sotalol is on board (starting in 4-6 hours). If VT returns despite oral medication, reinstitute Lidocaine CRI as needed with concurrent mexilitene PO (5-7mg/kg PO q8h). If the arrhythmia is not well controlled despite these steps, referral or euthanasia may become necessary.
- Institute Pimobendan 0.3mg/kg PO q12h.
- Full systemic work up as discussed (AUS, lab work, CXR, etc). Consider referral as discussed.
- Omega fatty acid supplementation and mild salt restriction may be of some long term benefit.
- Activity restriction is advised lifelong.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

- Once patient is stabilized and discharged, a recheck ECG ior ideally a holter is recommended in 1-2 weeks. Once controlled, recheck ECG and/or holter every 4-6 months.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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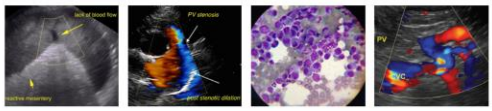

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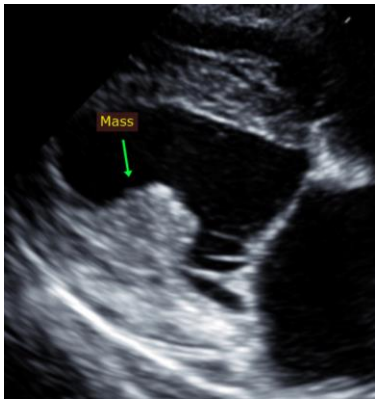

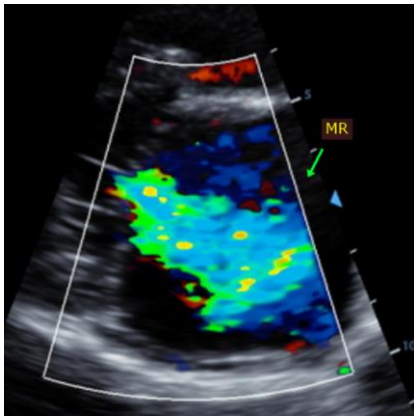

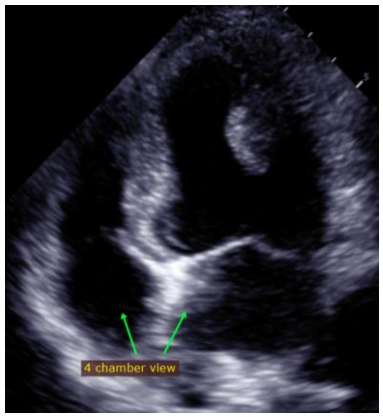

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. 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