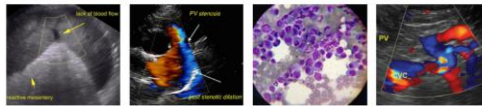


PATIENT
Darren Saffle

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
10 years

WEIGHT
26 lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mashpee Veterinary Hospital

REFERRING VET
Dr. Oldham

INVOICE
26426

DATE
9/19/22

PRESENTING CLINICAL SIGNS

History: Obese. H/O a heart murmur; grade III/VI. Labs wnl.

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 188bpm with a largely regular rhythm. The underlying rhythm is sinus in origin. P and QRS morphologies are positive. Isolated VPCs throughout; 7 in a 54s tracing. No supraventricular ectopic beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is increased with depressed myocardial function. The LV wall thicknesses are irregular with basilar hypertrophy (mild) contrasting apical thinning. The apex appears hypokinetic. There is a diffusely hyperechoic endocardium consistent with fibrosis. The endocardium appears remodeled. The papillary muscles remodeled and asymmetric.
Left atrium: The left atrium is severely dilated with spontaneous contrast seen in the auricle. No obvious thrombi seen.
Mitral valve: The mitral valve is normal in structure and mobility. No obvious systolic anterior motion is seen. Mild mitral regurgitation.
Aortic valve/aorta: The aortic valve is normal in morphology and mobility. No aortic insufficiency. Decreased outflow velocity.
Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.
Right atrium: The right atrium is normal in dimension.
Tricuspid valve: The tricuspid valve appears normal with mild tricuspid regurgitation.
Pulmonic valve/pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Decreased RVOT velocity; laminar flow.
Pericardium/other: Trivial pericardial effusion. No pleural effusion noted. No obvious cardiac masses.

2-Dimensional Measurements

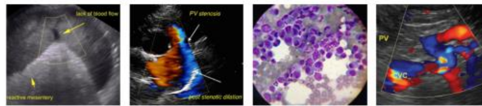
Ao diam (cm)	1.0
LA diam (cm)	2.3
LA:Ao (Swe)	2.3
IVS thickness (cm)	0.56
LVID diastole (cm)	2.0
PW thickness (cm)	0.65
LVID systole (cm)	1.7
FS (%)	15

Doppler Measurements

PV Vmax (m/s)	0.66
AoV Vmax (m/s)	0.87
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

The presumed diagnosis is end-stage/burnout hypertrophic cardiomyopathy. This is based upon basilar hypertrophy (albeit mild) contrasting apical thinning and hypokinesis. An infarcted region is suspected based upon this appearance. The LV is also mildly dilated with dysfunction, presumably as a secondary compensatory response. Severe left atrial dilation is identified with significant smoke (spontaneous contrast) suggesting high risk for complication and/or a blood



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clot event. Finally, the ECG confirms isolated frequent VPC's as well, which are not surprising given this degree of disease. No treatment for the arrhythmia is advised; however, VPCs suggest an elevated sudden death going forward.

Regardless of categorical classification, this degree of atrial dilation and arrhythmic disease confers high lifelong risk for spontaneous congestive heart failure and immediate lifelong medications are warranted as below.

The long-term prognosis is poor even with medications and no reported symptoms; however, most cats are able to maintain a good quality of life for some time on medications (mean survival 8-12 months). There will always remain risk for recurrent/progressive CHF, malignant arrhythmias, and/or development of blood clots/sudden death in the future.

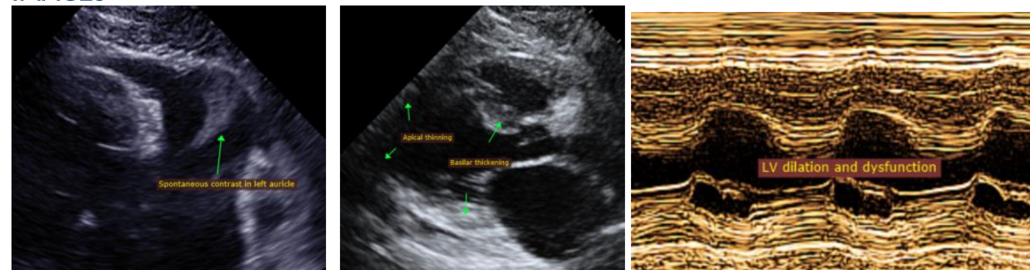
RECOMMENDATIONS

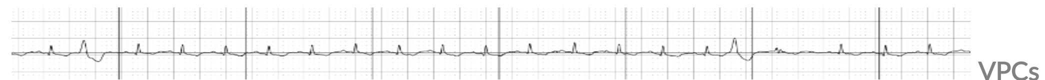
- If patient appears or becomes unstable/tachypneic, consider hospitalization for supportive care.
- Institute Lasix 1mg/kg PO q12h.
- Institute Pimobendan 1.25mg PO q12h (off label use).
- Institute Plavix 18.75mg PO SID (NOTE: this medication is very bitter and may causing foaming at the mouth- coat in entirety).
- Elective anesthesia is not advised.
- Monitor for any clinical evidence of cardiac compromise, including respiratory changes and/or signs of a blood clot event (paralysis, neurologic changes, etc).
- Monitor sleeping breathing rate and effort at home as the best way to screen for recurrent congestion.

PLAN

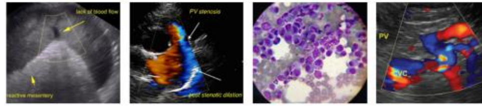
- Recheck renal values and BP in 10-14 days, then every 3-4 months lifelong. If doing well and normotensive (>130mmHg in hospital), consider addition of an ACEI 0.5mg/kg PO q12h.
- Recommend recheck echocardiogram and ECG in 6 months to screen for progression, sooner if clinical signs arise.

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.



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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