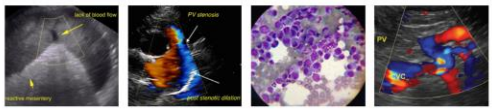


PATIENT

Michelle Brennan

SPECIES

Feline

BREED

DSH

SEX

Female Spayed

AGE

13 years

WEIGHT

7.2lbs

INTERPRETED BY

Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

East Boston Animal Hospital

REFERRING VET

Dr. Chopra

INVOICE

20782

DATE

8/29/21

PRESENTING CLINICAL SIGNS

History: Dyspnea. Radiographs - pulmonary edema. Started Furosemide 2.5mg BID. Newly diagnosed hyperthyroid. On Methimazole 2.5mg BID.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV diameter is largely normal in dimension with remodeling of the endocardium. The papillary muscles are mildly remodeled and hyperechoic.

Left atrium: The left atrium is severely enlarged. No obvious spontaneous contrast or thrombi seen.

Mitral valve: The mitral valve is mildly thickened. Moderate central MR. 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: The right atrium is moderately enlarged.

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. Normal RVOT velocity; laminar flow.

Pericardium/other: Scant pericardial effusion. Small to moderate volume pleural effusion noted. No obvious cardiac masses.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 250bpm. Tachycardia throughout the exam.

2-Dimensional Measurements

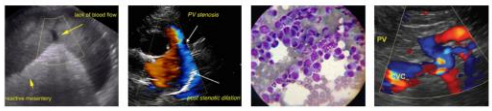
Ao diam (cm)	0.9
LA diam (cm)	1.9
LA:Ao (Swe)	2.2
IVS thickness (cm)	0.51
LVID diastole (cm)	1.8
PW thickness (cm)	0.49
LVID systole (cm)	0.8
FS (%)	57

Doppler Measurements

PV Vmax (m/s)	0.91
AoV Vmax (m/s)	1.3
MR Vmax (m/s)	5.1
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

The finding of severe biatrial dilation in the face of essentially normal LV wall thickness in this patient is most consistent with tachycardia-induced cardiomyopathy. No significant hypertrophy is noted, ruling out hypertrophic or thyrotoxic disease. Unclassified cardiomyopathy (i.e., minimal LV changes with biatrial dilation) cannot be ruled out until serial studies are performed (i.e., persistent atrial dilation despite normalization of thyroid values/tachycardia), however this is considered less likely. Moderate MR and TR are also noted, likely due to annular stretch. Serial echocardiography will be necessary to



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determine progression/regression and clinical relevance in the future once the thyroid/HR are controlled.

Regardless of categorical classification, the most concerning finding is severe biatrial dilation and pericardial/pleural effusion. Even a structurally normal heart can be pushed into a CHF state with tachycardia, which is suspected here. If this is the case, BP/T4 control should improve congestion and atrial dilation long term. Rate control is important in these cases until euthyroid; however, the first step is to fluid stabilize the patent through a tap if needed and Lasix therapy. A screening BP is highly recommended as well, with monitoring as the thyroid is normalized. Prognosis is guarded to poor due to the combination of issues; however, I am hopeful we can stabilize the patient for some time.

Due to significant tachycardia and unstable status, consider hospitalization for oxygen support and Lasix therapy and HR/ECG monitoring. If declined, oral medications can be instituted. Once stabilized, monitor at home for any change in RR/RE, exercise intolerance, and/or signs of a blood clot going forward.

RECOMMENDATIONS

- Consider hospitalization for O2/Lasix support if needed.
- Continue thyroid medication/normalization.
- Screening BP as discussed.
- Administer furosemide 1-2mg/kg PO q8h for 3-5 days, then decrease to q12h if doing well.
- In 24-48 hours if patient is improved at home, institute low dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 5-7 days with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached.
- Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges).
- Once thyroid is improved, a brief screening of atrial dimensions/LV wall and fluid status is recommended. If normalize in the future, discontinue Lasix at that time.
- Additionally, wean atenolol and discontinue with careful monitoring of HR once discontinued.

PLAN

- Recommend recheck echocardiogram 6 months post-euthyroid status to assess for progression/regression and need for continued medications.

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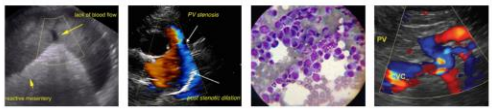

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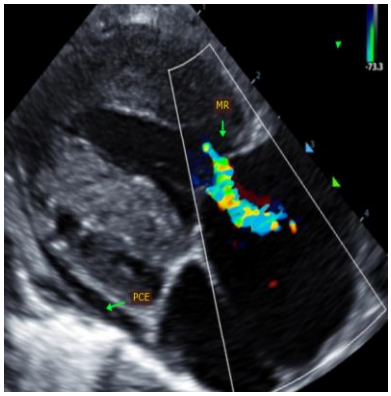
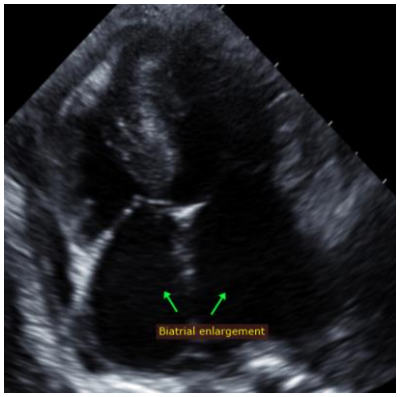
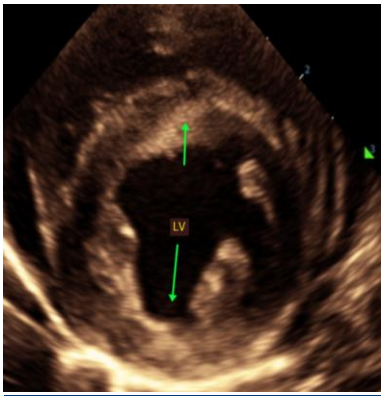
IMAGES







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
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