



PATIENT

Juju Hazen

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

8 months

WEIGHT

9.8lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Norfolk County
Veterinary Service

REFERRING VET

Dr. Leoni

INVOICE

25469

DATE

7/21/22

PRESENTING CLINICAL SIGNS

History: Was seen at referral hospital on 7/4/22 for rectal prolapse. Was noted to have a new grade IV/VI systolic murmur not originally ausculted as kitten. Not clinical for heart disease. *Sedated with butorphanol/alfaxalone.

ECHOCARDIOGRAM FINDINGS

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

Left ventricle: The LV chamber is decreased; adequate myocardial function. The LV wall thicknesses are markedly increased. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are severely hypertrophied and hyperechoic. False tendon. The endocardium appears mildly remodeled.

Left atrium: The left atrium is normal, although a mild horizontal component is appreciated. No smoke or thrombi seen.

Mitral valve: The anterior leaflet of the mitral valve appears mildly thickened. Systolic anterior motion is seen on 2D imaging. Moderate eccentric MR.

Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Markedly increased aortic outflow velocity with a fixed profile. 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 normal in dimension.

Tricuspid valve: The tricuspid valve appears normal with trivial tricuspid regurgitation.

Pulmonary valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity.

Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 230bpm.

2-Dimensional Measurements

Ao diam (cm)	0.94
LA diam (cm)	1.2
LA:Ao (Swe)	1.2
IVS thickness (cm)	0.8
LVID diastole (cm)	1.0
PW thickness (cm)	0.9
LVID systole (cm)	0.4
FS (%)	64

Doppler Measurements

PV Vmax (m/s)	1.5
AoV Vmax (m/s)	6.2
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

The diagnosis and cause of the murmur is hypertrophic obstructive cardiomyopathy (HOCM). This indicates some degree of LV thickening (marked in this case) with a dynamic LVOT obstruction (SAM). The MV is mildly thickened, which may suggest a valvular component. Regardless, there is no left atrial dilation, indicating the risk for progression to spontaneous CHF and/or a thrombotic event is currently low. That being said, marked LV hypertrophy in a very young patient is highly concerning going forward. It is worth noting that the outflow obstruction appears fixed, which may simply reflect severity of hypertrophy as a contributing factor. No additional issues are identified.

While no medications have been shown to definitively alter long term outcome at this stage of disease, atenolol is often initiated to decrease the outflow obstruction. This is certainly recommended in this case given the degree of hypertrophy and marked LVOT



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obstruction. Prognosis is guarded given the severity of disease in this relatively young cat. Patient will always be risk for progression to CHF, development of blood clots and/or sudden death in the future.

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RECOMMENDATIONS

- Administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached.

BREED
 DSH

- Screening BP/T4 if not recently performed.
- Anesthetic risk is considered elevated, with high risk for fluid overload, spontaneous CHF, hypotension, etc. Judicious IV fluid rates are advised to avoid fluid overload.

SEX
 Male Neutered

- Drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid ketamine, telazol, acepromazine and Dexdomitor.

PLAN

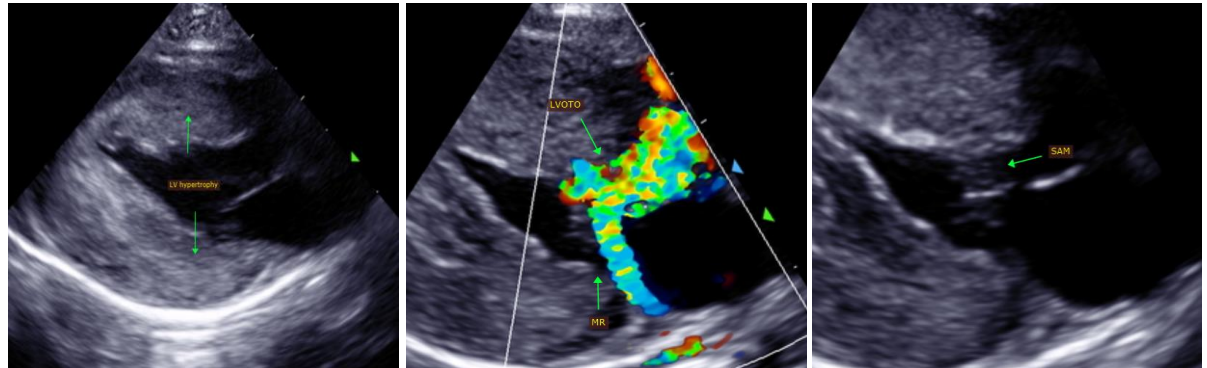
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- Recommend recheck echocardiogram in 6 months to assess rate of progression, sooner if any issues arise in the interim.

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IMAGES

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 Pamela Harrigan,
 RDCS

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.

HOSPITAL NAME
 Norfolk County
 Veterinary Service

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.

REFERRING VET

Dr. Leoni

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