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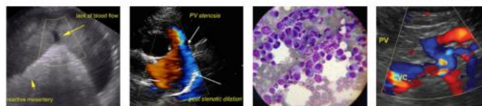


SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Nibbs O'Brian

SPECIES
Feline

BREED
DLH

SEX
Male Neutered

AGE
14 years

WEIGHT
13lbs

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
22951

DATE
3/5/22

PRESENTING CLINICAL SIGNS

History: Grade II/VI systolic murmur; no clinical signs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is decreased with adequate myocardial function. The LV wall thicknesses are mildly increased. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly hypertrophied and hyperechoic. The endocardium appears mildly remodeled.
Left atrium: The left atrium is normal. No smoke or thrombi seen.
Mitral valve: The anterior leaflet of the mitral valve appears largely normal. Systolic anterior motion is seen on 2D imaging. Moderate eccentric MR secondary to SAM.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Elevated aortic outflow velocity seen on Spectral doppler. 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 no tricuspid regurgitation.
Pulmonary valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. The RVOT velocity is elevated on color flow suggesting a dynamic obstruction.
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)	0.9
LA diam (cm)	1.0
LA:Ao (Swe)	1.1
IVS thickness (cm)	0.62
LVID diastole (cm)	1.1
PW thickness (cm)	0.60
LVID systole (cm)	0.4
FS (%)	61

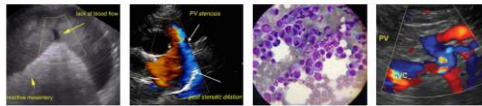
Doppler Measurements

PV Vmax (m/s)	3.3
AoV Vmax (m/s)	3.3
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 (mild in this case) with a dynamic LVOT obstruction (SAM) and secondary MR. The LV chamber is decreased in size and volume depletion should be ruled out as a possible contributing issue. Regardless, there is no left atrial dilation, indicating the risk for progression to spontaneous CHF and/or a thrombotic event is relatively low. Additionally, a dynamic RVOT obstruction is noted which is a benign finding that will also contribute to murmur intensity. No additional issues are identified. Hyperthyroidism and/or hypertension should be ruled out as contributing factors in this patient.

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. If there is difficulty medicating at home, an alternative approach would be closely monitoring for progression in the next 6 months. Discussion with the owner is advised. Prognosis is



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guarded given the highly variable rates of progression with subclinical feline cardiomyopathy.

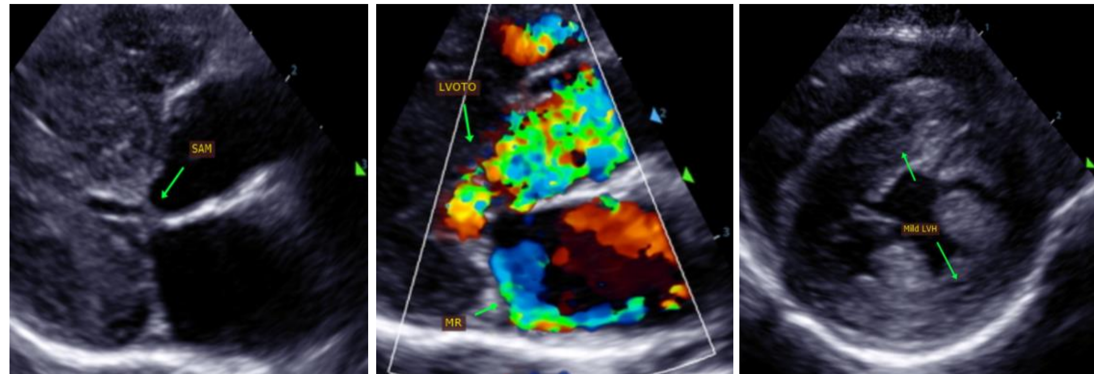
RECOMMENDATIONS

- Baseline lab work is strongly recommended.
- If able, 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.
- Screening BP/T4 every 6 months.
- Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Additionally, steroids should be used with caution on older cats, as even a 'normal' geriatric heart can develop evidence of intolerance and fluid retention.
- Monitor for any clinical evidence of cardiac compromise, including respiratory changes and/or signs of a blood clot event (paralysis, neurologic changes, etc.).

PLAN

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

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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