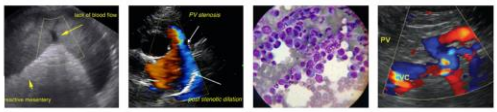
Mass Veterinary Specialty Services
1-413-734-1292



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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PATIENT
Milo Weigand

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
7 years

WEIGHT
12.63lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Specialty Services

REFERRING VET
Dr. Masloski

INVOICE
21621

DATE
10/20/21

PRESENTING CLINICAL SIGNS

History: Recheck echo. Milo was noted to have a heart murmur in October 2019. An echocardiogram done in January of 2020 revealed an ASD with MV insufficiency. Milo was started on low dose aspirin. He is presently doing well but is in need of some oral work. Good appetite and energy. CV/RESP: NSR, grade III/VI murmur with PMI on sternum, PSS, lung fields clear, compressible thorax, BP: 220 mmHg x 3 (nervous). Medications: Aspirin 81mg 1/2 tab every other day. *Sedated with propofol for study.
-Pertinent previous echo findings: LA 10 cm; LA:Ao 1.0; IVS 0.50 cm; PW 0.40 cm; normal chamber sizes, no SAM, ASD, MR.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is normal with adequate myocardial function. The LV wall thicknesses are asymmetric with moderate septal thickening and mild free wall hypertrophy. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly hypertrophied. 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, color flow and spectral doppler. Mild eccentric MR secondary to SAM.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Mild to moderately increased aortic outflow velocity with a dynamic 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. No obvious ASD.
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. Normal RVOT velocity on Doppler.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 210bpm.

2-Dimensional Measurements

Ao diam (cm)	1.0
LA diam (cm)	1.0
LA:Ao (Swe)	1.0
IVS thickness (cm)	0.73
LVID diastole (cm)	1.2
PW thickness (cm)	0.66
LVID systole (cm)	0.42
FS (%)	66

Doppler Measurements

PV Vmax (m/s)	0.51
AoV Vmax (m/s)	2.8
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. This indicates some degree of LV thickening (mild to moderate in this case) with a dynamic LVOT obstruction (SAM) and secondary MR. There is no left atrial dilation, indicating the risk for progression to spontaneous CHF and/or a thrombotic event is currently low. No additional issues are identified and there is no evidence of an obvious ASD. This is discordant with the prior echo results and is difficult to explain. Regardless, the

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development of LV hypertrophy is relatively new and may suggest progressive disease going forward. Hypertension and hyperthyroid disease should be ruled out as contributing factors. This patients' blood pressure is severely elevated on exam; however, he is also notably stressed. Consider reassess as a sole visit prior to determining if additional vasodilator therapy is truly warranted.

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; however, given tachycardia and progressive LVH, I would recommend initiation, if at all possible, at this time. Anticoagulation therapy is of no known benefit prior to significant atrial dilation and aspirin can be discontinued. Prognosis is guarded due to the highly variable nature of feline subclinical cardiomyopathy.

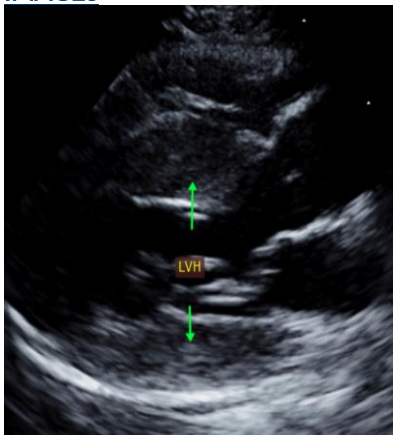
RECOMMENDATIONS

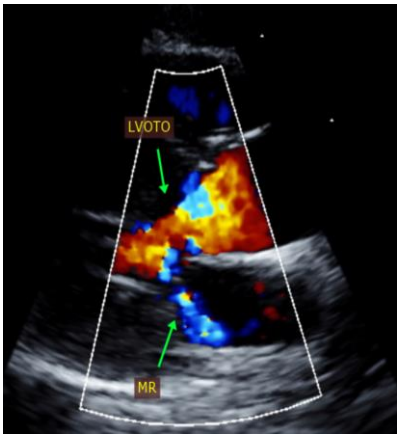
- If elected, administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached.
- Discontinue aspirin.
- Reassess BP as discussed.
- Anesthetic risk 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.).

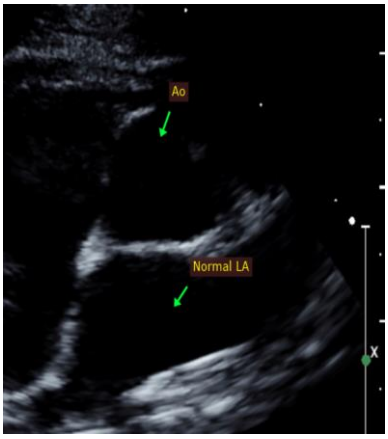
PLAN

- Monitor BP and T4 every 6 months going forward.
- Recommend recheck echocardiogram in 6-12 months to assess rate of progression, sooner if any issues arise in the interim.

IMAGES







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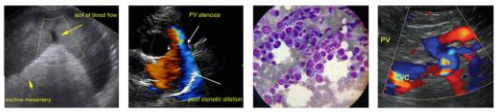

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. 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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)