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Pet Animal Ultrasound Service
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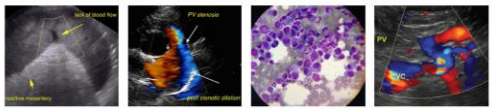

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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PATIENT
Stinky Nelson

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
15 years

WEIGHT
11.2lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Eduardo Rodriguez III, RCS

HOSPITAL NAME
Wood River Animal Hospital

REFERRING VET
Dr. Fischer

INVOICE
29684

DATE
3/17/23

PRESENTING CLINICAL SIGNS

History: New III/VI murmur with gallop found on routine annual exam. PE WNL other than murmur and mild muscle wasting. Lab work (CBC, Chem, UA, TT4) unremarkable other than CK 3200(ref 60-440), but previously 6200. Clinically normal patient. Needs dental prophy.

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 mildly increased There is a mildly hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly remodeled. 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. Significant systolic anterior motion is noted. Mild eccentric MR secondary to SAM.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Severely 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.
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 200bpm.

2-Dimensional Measurements

Ao diam (cm)	1.0
LA diam (cm)	1.24
LA:Ao (Swe)	1.24
IVS thickness (cm)	0.63
LVID diastole (cm)	1.6
PW thickness (cm)	0.62
LVID systole (cm)	0.8
FS (%)	60

Doppler Measurements

PV Vmax (m/s)	0.93
AoV Vmax (m/s)	4.6
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 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. Hypertension and hyperthyroid disease should be ruled out as contributing factors.

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 the significance of the obstruction, I would recommend initiation, if at all possible, at this time. Prognosis is guarded due to the highly variable nature of feline subclinical cardiomyopathy.

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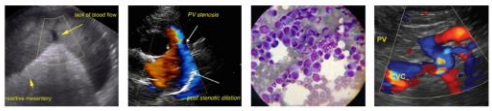

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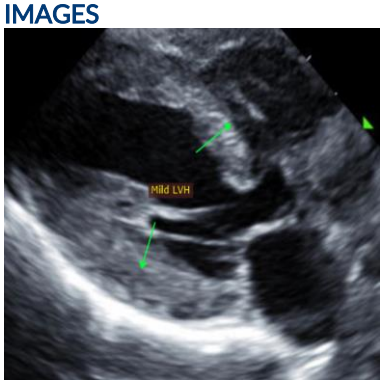
RECOMMENDATIONS

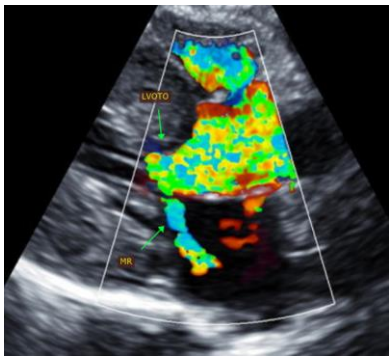
- If elected, administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached.
- Reassess BP as discussed.
- Anesthetic risk is considered mild,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

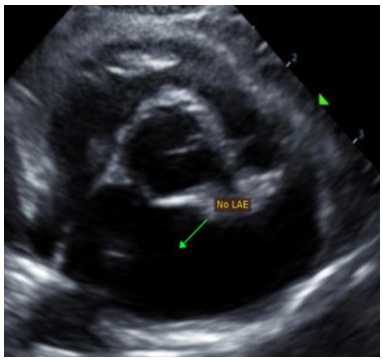
PLAN

- 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







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)