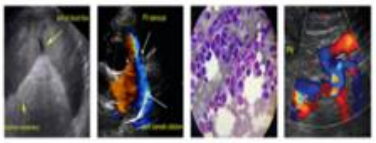
Mass Veterinary Services



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

PATIENT
Tyreal Henderson

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
4 years

WEIGHT
10.88lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
27234

DATE
11/2/22

PRESENTING CLINICAL SIGNS

History: Tyrael is referred to evaluate a heart murmur. A thyroid level done in October was normal. History chronic kidney disease. Adopted one month ago. Good appetite and maintains normal activity. On exam: NSR, grade IV/VI parasternal murmur, PSS, lung fields clear, compressible thorax, mm pink moist, CRT<2.

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 normal with regions of irregularity. There is a mildly hyperechoic endocardium consistent with mild fibrosis. The papillary muscles appear normal. The endocardium appears mildly remodeled.
Left atrium: The left atrium and auricle are normal. No spontaneous contrast or thrombi seen.
Mitral valve: The anterior leaflet of the mitral valve is mildly elongated and thickened. Abnormal anterior motion is seen during systole. Trace mitral regurgitation.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Mildly elevated 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.
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; laminar flow.
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)	1.3
LA:Ao (Swe)	1.3
IVS thickness (cm)	0.54
LVID diastole (cm)	1.5
PW thickness (cm)	0.49
LVID systole (cm)	0.8
FS (%)	47

Doppler Measurements

PV Vmax (m/s)	0.9
AoV Vmax (m/s)	2.5
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 mitral valve dysplasia leading to an obstructive LVOT flow pattern and trace MR. What is unusual in this case is the LVOTO is mild and there is no significant LVH. This may be due to dramatic heart rate variability with worsening obstruction with tachycardia (not appreciated here). No LA dilation is present, indicating low risk for complication at this time. No additional issues are identified.

With typical mitral valve dysplasia in cats, Atenolol is indicated to decrease the LVOT obstruction and relieve LV pressure overload. Given what is seen here, I would not utilize this drug at this time. Follow up is certainly advised to screen for progression and need for the medication.

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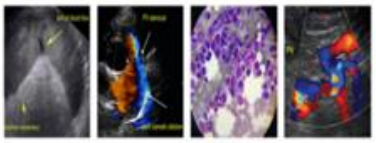

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Long term prognosis is guarded given the age of the patient and highly variable nature of subclinical feline heart disease. Many cats will remain asymptomatic until mid-life or beyond, while others develop CHF within the first years. Close monitoring for progression of LA dilation in the future will help determine long term prognosis.

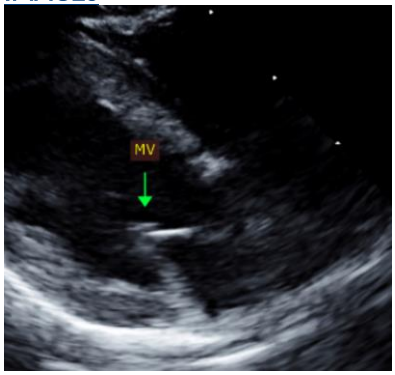
RECOMMENDATIONS

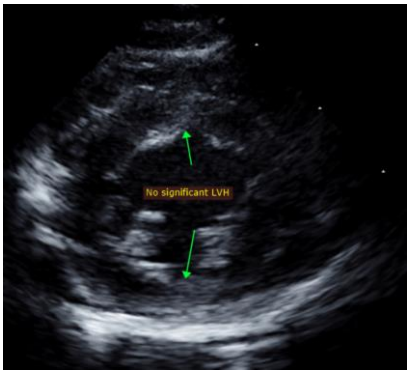
- No medications are warranted at this time.
- Anesthetic risk is considered mildly elevated, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance.
- Monitor for any clinical evidence of cardiac compromise, including respiratory changes and/or signs of a blood clot event (paralysis, neurologic changes, etc.).

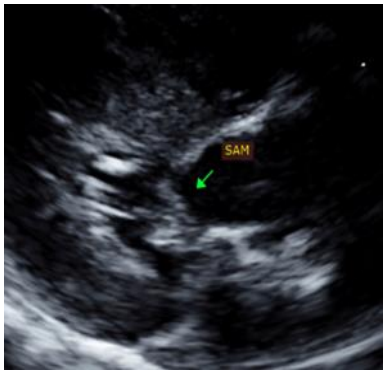
PLAN

- Recommend recheck echocardiogram in 6-12 months to assess for progression/regression, sooner if clinical signs 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)