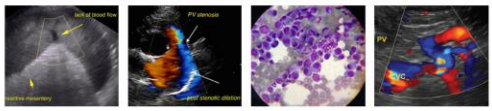
PAUS
Pet Animal Ultrasound Service
4paus.com 781-635-5677



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

PATIENT
Sammy Sterite

SPECIES
Feline

BREED
DLH

SEX
Male Neutered

AGE
2.36 years

WEIGHT
9.72lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
VCA Hanson Animal Hospital

REFERRING VET
Dr. Whalen

INVOICE
27187

DATE
10/31/22

PRESENTING CLINICAL SIGNS

History: New Grade II-III/VI murmur noted on routine PE. No clinical signs, no murmur noted on PE last year. 0.75lb weight loss since last year. Bloodwork to be done on day of echo.

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 with regions of asymmetry. There is a diffusely hyperechoic endocardium consistent with mild fibrosis. The papillary muscles are mildly hypertrophied. The endocardium appears mildly remodeled.
Left atrium: The left atrium is normal. No spontaneous contrast or thrombi seen.
Mitral valve: The anterior leaflet of the mitral valve is mildly thickened and elongated. Abnormal anterior motion is seen during systole. Mild to moderate eccentric mitral regurgitation.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. The aortic root is dilated. Elevated LVOT 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; 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 160bpm.

2-Dimensional Measurements

Ao diam (cm)	1.3
LA diam (cm)	1.0
LA:Ao (Swe)	0.9
IVS thickness (cm)	0.63
LVID diastole (cm)	1.2
PW thickness (cm)	0.62
LVID systole (cm)	0.3
FS (%)	76

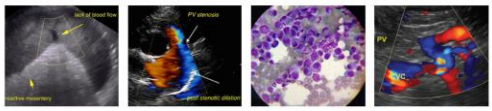
Doppler Measurements

PV Vmax (m/s)	1.2
AoV Vmax (m/s)	0.5
MR Vmax (m/s)	6.0
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 mild/moderate MR. A primary hypertrophic component cannot be ruled out as a concurrent issue, however in a 2yo patient this is unlikely. There is no left atrial dilation, indicating the risk for imminent complication is low however high risk for progression to spontaneous CHF and/or a thrombotic event going forward. The aortic root is significantly dilated, and a baseline blood pressure is strongly recommended. No additional issues are identified.

Long term prognosis is guarded given the age of the patient and highly variable nature of asymptomatic 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.



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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. In cases of solely primary MV dysplasia this can lead to improvement in the degree of obstruction and hypertrophy. Given the young age of the cat and today's findings, highly recommend institution at this time if possible. No additional medications are indicated prior to significant LA dilation.

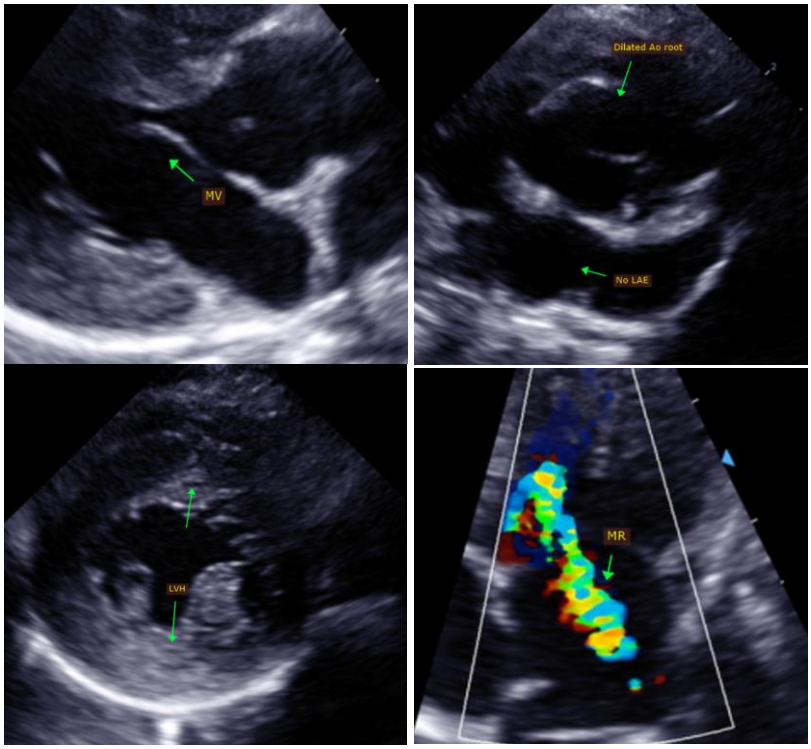
RECOMMENDATIONS

- Baseline BP recommended.
- 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.
- 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 six months to assess for progression/regression, sooner if clinical signs arise in the interim.

IMAGES



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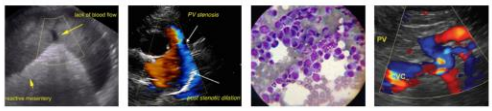

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
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