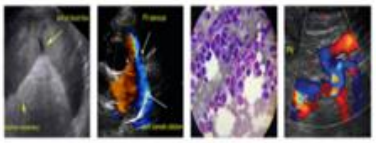
Mass Veterinary Services



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

PATIENT
Azraella Greaves

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
3 years

WEIGHT
12.25lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
29303

DATE
3/1/23

PRESENTING CLINICAL SIGNS

History: Azraella is referred to evaluate a heart murmur and elevated ProBNP. She is presently doing well with a normal appetite and activity level. On exam: NSR, grade III/VI parasternal murmur, PSS, lung fields clear, compressible thorax, mm pink, moist, CRT<2. BP: 160mmHg x 5 (nervous).

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 markedly increased with regions of irregularity. There is a diffusely hyperechoic endocardium consistent with mild fibrosis. The papillary muscles are moderately hypertrophied and hyperechoic with regions of remodeling. The endocardium appears remodeled.
Left atrium: The left atrium is minimally increased in dimension. No smoke or thrombi visualized.
Mitral valve: The anterior leaflet of the mitral valve is elongated, consistent with dysplasia. No obvious stenosis. The tip of the mitral valve is visible in the LVOT during systole. Mild to moderate eccentric mitral regurgitation is noted.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Aortic outflow velocities are severely elevated 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. Mildly elevated RVOT velocity with a dynamic component.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 180bpm.

2-Dimensional Measurements

Ao diam (cm)	1.0
LA diam (cm)	1.3
LA:Ao (Swe)	1.3
IVS thickness (cm)	0.91
LVID diastole (cm)	0.87
PW thickness (cm)	0.90
LVID systole (cm)	0.40
FS (%)	56

Doppler Measurements

PV Vmax (m/s)	1.9
AoV Vmax (m/s)	5.5
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 LV hypertrophy, an obstructive LVOT flow pattern and moderate MR. A primary hypertrophic component cannot be ruled out as a concurrent issue, particularly given the severity of the wall thickening. Regardless, there is minimal left atrial dilation, indicating the risk for progression to spontaneous CHF and/or a thrombotic event is currently low.

Long term prognosis is guarded given the severity of the findings in a young patient. That being said there is great variability, 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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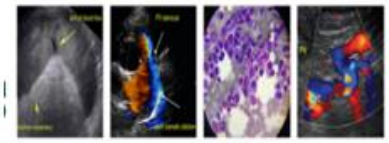

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While no medications have been shown to definitively alter long term outcome at this stage of disease, atenolol is often initiated to decrease the outflow obstruction. In cases of solely primary MV dysplasia this can lead to improvement in the degree of obstruction and hypertrophy. Given the young age of the cat and today's findings, highly recommend institution at this time if possible. Additionally, an anticoagulant could be argued with this degree of atrial dilation, however this medication can be very difficult to administer.

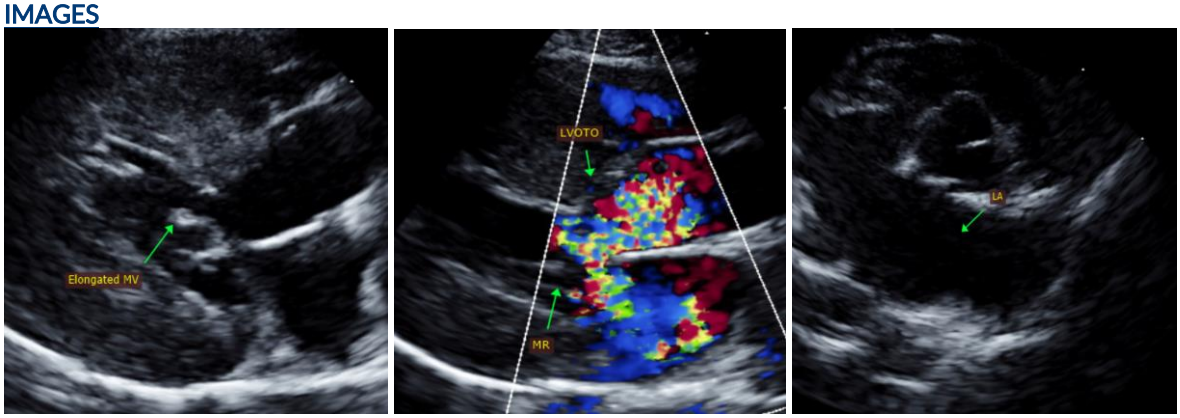
RECOMMENDATIONS

- 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.
- If elected/possible, administer Clopidogrel (Plavix) 75mg tabs, give ¼ tab PO q24 h (NOTE: This medication is very bitter along the cut edge and may cause oral foaming).
- Elective anesthesia is not advised until response to atenolol is evaluated.
- 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, 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)