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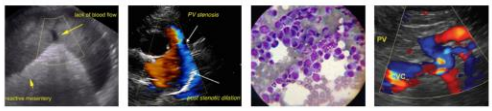


SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Gremlin Standish HS

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
1 year

WEIGHT
8lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Standish Humane Society

REFERRING VET
Dr. Thompson

INVOICE
23767

DATE
4/19/22

PRESENTING CLINICAL SIGNS

History: Grade II-III/VI systolic murmur. No clinical signs.

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 symmetrically increased. There is a diffusely hyperechoic endocardium consistent with mild fibrosis. The papillary muscles are mildly hypertrophied and hyperechoic. 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 eccentric mitral regurgitation secondary to SAM.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Significantly elevated LVOT outflow velocities 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 250bpm.

2-Dimensional Measurements

Ao diam (cm)	1.0
LA diam (cm)	1.0
LA:Ao (Swe)	1.0
IVS thickness (cm)	0.65
LVID diastole (cm)	1.1
PW thickness (cm)	0.64
LVID systole (cm)	0.64
FS (%)	58

Doppler Measurements

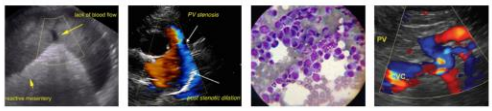
PV Vmax (m/s)	1.3
AoV Vmax (m/s)	4.5
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

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 mild MR. A primary hypertrophic component cannot be ruled out as a concurrent issue. No left atrial dilation is present, indicating the risk for imminent complication is low; however, high risk for progression to spontaneous CHF and/or a thrombotic event going forward. 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.

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



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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.

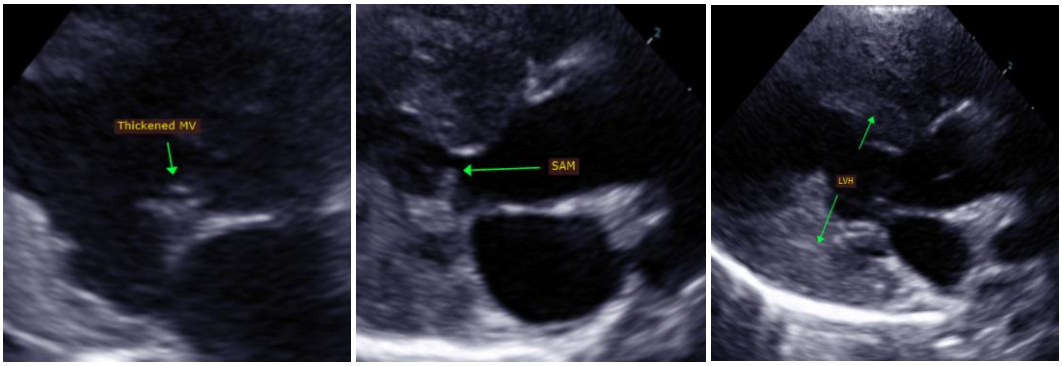
RECOMMENDATIONS

- 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. 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

- 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
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