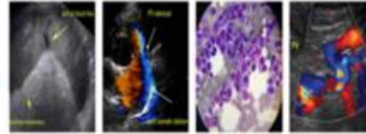
Mass Veterinary Services



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

PATIENT
Frankie Leavitt

SPECIES
Feline

BREED
DLH

SEX
Male Neutered

AGE
6 months

WEIGHT
10.38lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
32458

DATE
8/21/23

PRESENTING CLINICAL SIGNS

History: Frankie was noted to have a heart murmur in May. He is presently doing well at home with a good appetite and normal activity level. He is very playful with his feline siblings. On exam: NSR, grade IV/VI parasternal murmur, PSS, lung fields clear, compressible thorax, mm pink, moist, CRT<2. BP: N/A *Sedated with propofol for study.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV chamber is normal with adequate myocardial function. The LV wall thicknesses are asymmetric and mildly increased. There is a mildly hyperechoic endocardium consistent with fibrosis. The papillary muscles appear normal. The endocardium appears mildly remodeled. A small perimembranous VSD is visualized that appears to have complete aneurysm closure.
Left atrium: The left atrium is normal.
Mitral valve: The anterior leaflet of the mitral valve appears mildly thickened and elongated. Systolic anterior motion is seen on 2D imaging. Mild to moderate eccentric MR.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Mildly 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 trace tricuspid regurgitation.
Pulmonary valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. The RVOT velocity is normal.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 190bpm.

2-Dimensional Measurements

Ao diam (cm)	0.8
LA diam (cm)	1.9
LA:Ao (Swe)	1.1
IVS thickness (cm)	0.66
LVID diastole (cm)	1.37
PW thickness (cm)	0.52
LVID systole (cm)	0.6
FS (%)	58

Doppler Measurements

PV Vmax (m/s)	0.6
AoV Vmax (m/s)	2.9
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 causing an LVOT obstruction, secondary MR and mild LV hypertrophy. A primary hypertrophic component is also possible. Regardless, there is no left atrial dilation, indicating the risk for progression to spontaneous CHF and/or a thrombotic event is currently low. As an incidental finding, a small VSD is also noted; however, no flow is seen across the defect. Making is hemodynamically insignificant. No additional issues are identified.

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. This is recommended in this case given these findings and a 6-month-old cat. Prognosis is

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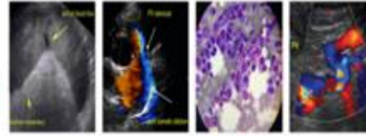

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guarded, although highly variable at this stage of disease. Patient may be risk for progression to CHF, development of blood clots and/or sudden death in the future.

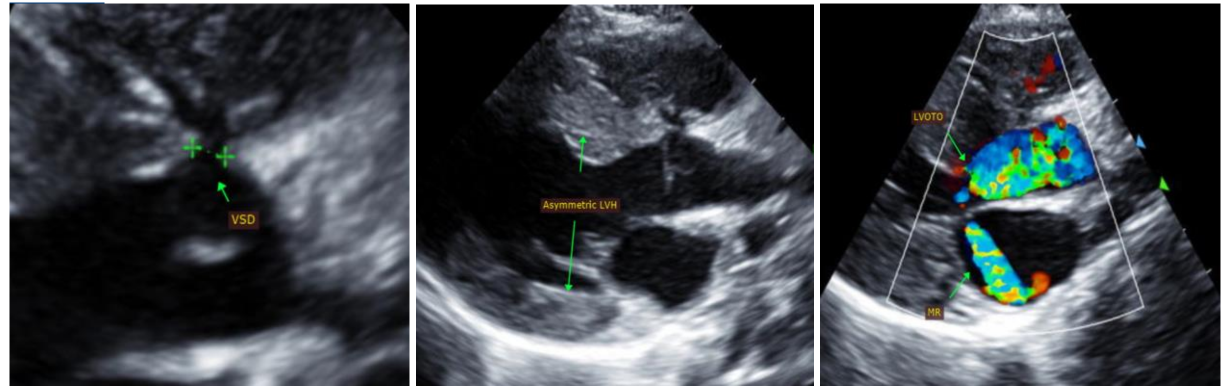
RECOMMENDATIONS

- If able, 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.
- Screening BP/T4 if not recently performed.
- Anesthetic risk is considered mildly elevated, with high risk for fluid overload, spontaneous CHF, hypotension, etc. Judicious IV fluid rates are advised to avoid fluid overload. Drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid ketamine, telazol, acepromazine and Dexdomitor.
- 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 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)