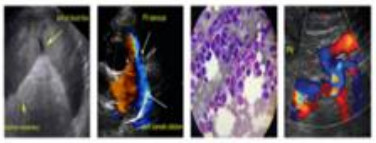
Mass Veterinary Services



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

**PATIENT**
Galaleia Levitin

**SPECIES**
Feline

**BREED**
DSH

**SEX**
Female Spayed

**AGE**
6 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**
25286

**DATE**
7/13/22

## PRESENTING CLINICAL SIGNS

History: Galaleia is referred to evaluate a heart murmur. Doing well clinically - good appetite and activity level. On exam: NSR , grade IV/VI parasternal murmur, PSS, lung fields clear, compressible thorax. BP: 130mmHg x 4. Currently, no medications. *Sedated with propofol for study.

## 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 irregularity. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly hypertrophied and hyperechoic. The endocardium appears mildly remodeled.
**Left atrium:** The left atrium is normal. No smoke or thrombi seen.
**Mitral valve:** The MV leaflets appear normal. Concern for systolic anterior motion is seen on 2D and color flow imaging. Trace eccentric MR.
**Aortic valve/Aorta:** The aortic valve is normal in morphology and mobility. Borderline 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. 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) | 1.0 |
| LA diam (cm) | 1.3 |
| LA:Ao (Swe) | 1.3 |
| IVS thickness (cm) | 0.61 |
| LVID diastole (cm) | 1.0 |
| PW thickness (cm) | 0.66 |
| LVID systole (cm) | 0.4 |
| FS (%) | 60 |

**Doppler Measurements**

| | |
|---|---|
| PV Vmax (m/s) | 0.53 |
| AoV Vmax (m/s) | 1.6 |
| 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 hypertrophic obstructive cardiomyopathy. This indicates some degree of LV thickening (mild in this case) with a dynamic LVOT obstruction (SAM). The obstruction appears mild and intermittent, likely reflecting a heart rate or stress related phenomenon (potentially masked by sedation). Regardless, The LA is normal, indicating the risk for spontaneous CHF and/or a thrombotic event is currently low. 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. Given the mild nature of the findings and lack of a severe obstruction, this is not yet indicated. Prognosis is guarded given the highly variable nature of feline cardiomyopathy.

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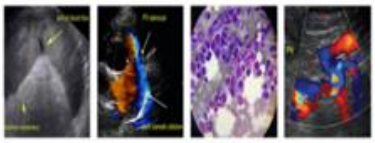

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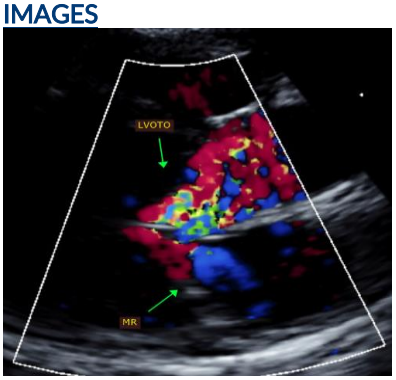
## RECOMMENDATIONS

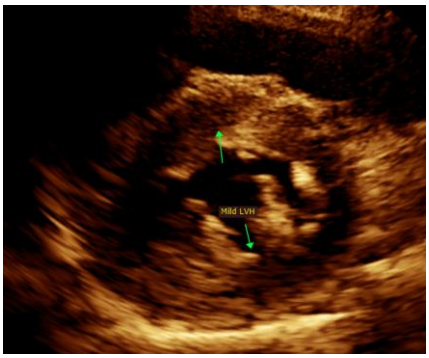
- No medications are indicated at this time.
- Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may 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 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)