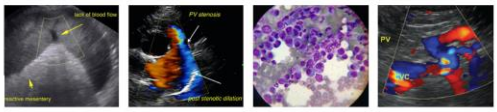
Mass Veterinary Specialty Services
1-413-734-1292



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

PATIENT
Little Bear Gelineau

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
10 years

WEIGHT
10.75lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Specialty Services

REFERRING VET
Dr. Masloski

INVOICE
20825

DATE
8/31/21

PRESENTING CLINICAL SIGNS

History: Referred for evaluation of a heart murmur. No coughing or respiratory issues. He did have an event in June where he was unable to walk and was crying. This lasted about 5 minutes and he seemed to recover. He was sitting and resting when it occurred. Good appetite. CV/RESP: NSR, grade III/VI murmur with PMI on sternum, PSS, lung fields clear. BP: 160mmHg x 3. No medications. *No sedation.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 160bpm with a largely regular rhythm. The underlying rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are inverted. Isolated VPCs throughout; 8 in a one-minute recording. The VPCs appear monomorphic and singles only. No supraventricular ectopic beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is decreased with adequate myocardial function. The LV wall thickness is increased, particularly the basilar portion. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly remodeled and hyperechoic.
Left atrium: The left atrium is normal. No obvious spontaneous contrast or thrombi seen.
Mitral valve: The mitral valve is normal in structure and mobility. No obvious systolic anterior motion is seen. No MR.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. Mild aortic insufficiency.
Right ventricle: Normal right ventricular diameter and morphology.
Right atrium: Mild right atrium enlargement.
Tricuspid valve: The tricuspid valve appears normal with mild to moderate tricuspid regurgitation. Velocity consistent with mild to moderate pulmonary hypertension.
Pulmonic 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.

2-Dimensional Measurements

Ao diam (cm)	0.8
LA diam (cm)	1.1
LA:Ao (Swe)	1.4
IVS thickness (cm)	0.7
LVID diastole (cm)	1.4
PW thickness (cm)	0.77
LVID systole (cm)	0.65
FS (%)	55

Doppler Measurements

PV Vmax (m/s)	1.3
AoV Vmax (m/s)	1.7
MR Vmax (m/s)	NA
TR Vmax (m/s)	3.4
TR PG (mmHg)	46

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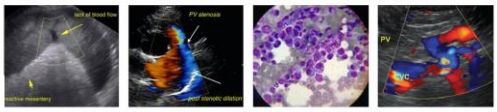

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INTERPRETATION OF THE FINDINGS

HCM is a rule out diagnosis for LV hypertrophy, once hypertension and hyperthyroid disease are ruled out as causative factors. In this normotensive patient, a thyroid status should be obtained if not recently assessed. Regardless, the degree of disease is mild, with mild to moderate LVH and no LA dilation. Additionally, the murmur is due to mild to moderate tricuspid regurgitation with evidence of mild to moderate pulmonary hypertension. Given a lack of respiratory signs, this is of unknown clinical significance; however, follow up is certainly advised. Particularly in light of mild RA enlargement. No additional issues are identified.

Prognosis is guarded, due to the highly variable rates of progression with subclinical feline cardiomyopathy.

The ECG does confirm ventricular premature contractions (VPCs) are present. VPCs can certainly be cardiac in origin with significant structural disease; however, only mild disease is identified here. Extra-cardiac causes should be considered in this senior cat, including systemic disease, neoplasia, etc. Full systemic work-up is advised if not recently performed. No obvious indication for anti-arrhythmic therapy at this time. Close monitoring for any associated clinical signs including collapse or significant lethargy is advised with immediate re-evaluation in these instances.

Even with these abnormalities identified, the cause of the previous episode is unclear. Intermittent arrythmias are possible, although syncope is more common than crying out. A recheck ECG is certainly advised should any recurrence be noted in the future. Pulmonary hypertension can lead to syncope as well; however, this is typically seen with significant exertion. Follow up is advised with recurrence going forward.

RECOMMENDATIONS

- No medications are indicated.
- Monitor BP/T4 every 6 months.
- Consider full systemic evaluation as discussed.
- Reassess ECG should any further episodes be noted at home.
- 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.
- Risk for complication with steroid use typically follows LA dilation, which in this case is mildly elevated. Monitoring of RR/RE is advised particularly in the initiation phase.
- Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.) in the future.

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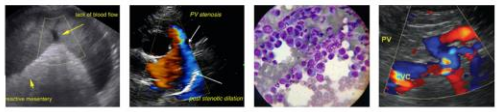

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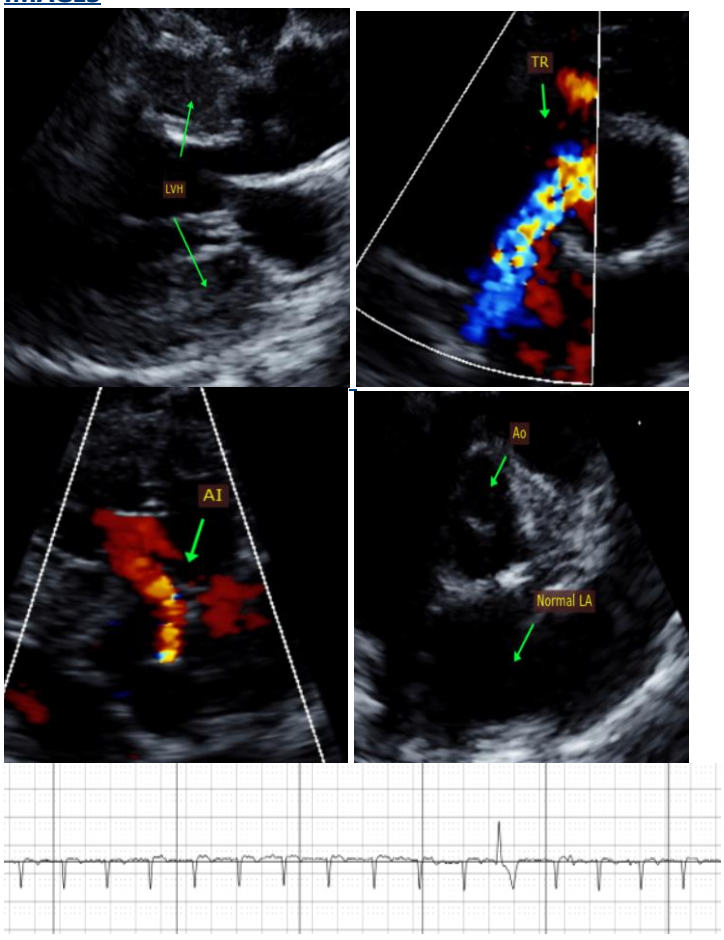
PLAN

- Recommend recheck echocardiogram/ECG in 6 months to assess for progression, sooner if clinical issues arise.

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