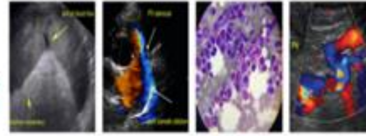
Mass Veterinary Services



SonoPath
Clinical Sonography & Telecytology
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1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Little Bear Gelineau

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
11 years

WEIGHT
9.94lbs

INTERPRETED BY
Maggie Machen Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
25673

DATE
8/9/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. HCM diagnosed on previous echocardiogram 8/31/21. Currently, Little Bear is doing well. He has a grade III/VI murmur and normal lung fields on exam. BP: 140mmHg x 5. No cardiac medications *No sedation for study.
-Pertinent previous echo findings (8/31/21 Maggie Machen Lamy, DVM, DACVIM-Cardiology): LA 1.1 cm; LA:Ao 1.4; IVS 0.70 cm; PW 0.77 cm; normal LA size; LVH, particularly at the base; endocardial fibrosis. No LVOT obstruction. Isolated VPCs on ECG.

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, 20mm/mV. The average heart rate is 160bpm. There are two competing rhythms seen throughout with P waves difficult to identify due to device insensitivity. It is assumed that the underlying rhythm is sinus in origin with an average hear rate of 150bpm and an upright QRS morphology. When the competing inverted rhythm takes, over the heart rate is slightly faster (160bpm) with an inverted morphology, suggestive of an idioventricular origin. Occasion VPCs are seen throughout, singles only.
ECG diagnosis: Suspect underlying normal sinus rhythm with isolated VPCs. Paroxysmal aaccelerated idioventricular rhythm.

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 asymmetrically 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. Trace 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 no obvious tricuspid regurgitation.
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

Measurement	Value
Ao diam (cm)	1.0
LA diam (cm)	1.1
LA:Ao (Swe)	1.1
IVS thickness (cm)	0.65
LVID diastole (cm)	1.3
PW thickness (cm)	0.60
LVID systole (cm)	0.65
FS (%)	50

Doppler Measurements

Measurement	Value
PV Vmax (m/s)	2.0
AoV Vmax (m/s)	2.4
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

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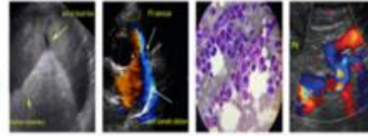

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INTERPRETATION OF THE FINDINGS

Compared to the prior study, the structural changes are similar without obvious progression. The LV remains irregular with regional thickening and diastolic dysfunction; however, the LA is persistently normal. This would suggest low risk for complication, Previously noted TR and pulmonary hypertension are not appreciated in this study. No additional issues are identified.

The ECG shows persistent isolated VPCs as were noted previously. Additionally, there is an idioventricular rhythm present at a slightly faster rate than the sinus rate. This is a relatively benign finding and would not be ausculted on exam. It is worth noting that complex arrythmias in cats are difficult to definitively diagnosis on a single-lead tracing, and a six-lead is recommended if possible. That being said what is seen here is of low concern with minimal hemodynamic consequence.

Given these findings and an asymptomatic cat, no medications are clearly warranted at this time.

Prognosis remains guarded, due to the complexity of the findings with risk for complication going forward.

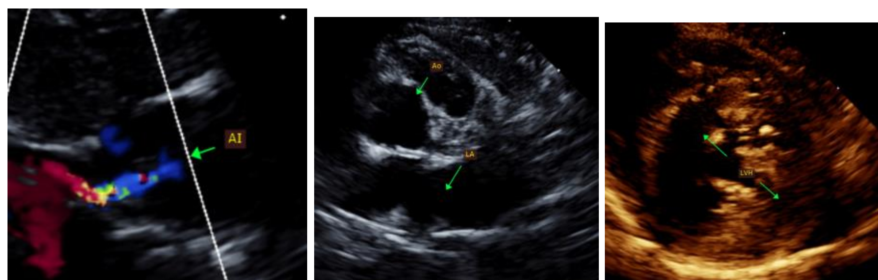
RECOMMENDATIONS

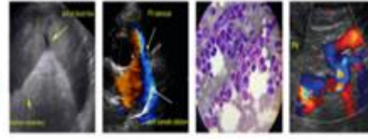
- No medications are indicated.
- Monitor BP/T4 every 6 months.
- Six-lead ECG should be considered.
- Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (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.

PLAN

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

IMAGES





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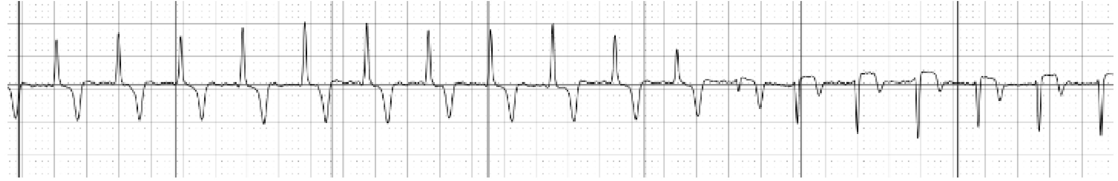

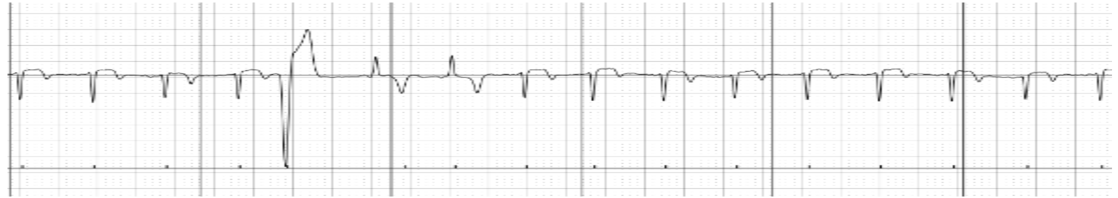

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)