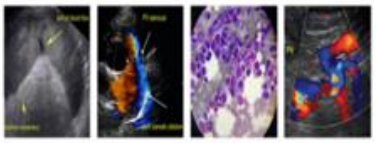
Mass Veterinary Services



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

PATIENT
Smokey Couture

SPECIES
Feline

BREED
DLH

SEX
Male Neutered

AGE
7 years

WEIGHT
11lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
25687

DATE
8/10/22

PRESENTING CLINICAL SIGNS

History: Smokey was noted to have a heart murmur in November 2018. He has had upper airway congestion for most of his life along with nasal discharge. Good appetite and with normal activity level. Needs dental procedure. On exam: NSR, grade III/VI parasternal murmur, PSS, lung fields clear, compressible thorax. BP: 120mmHg x 4. No cardiac medications. *No sedation 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 mildly 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 mildly elongated and thickened. Systolic anterior motion is seen on 2D and color flow imaging. Moderate eccentric MR.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Moderately elevated 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 180bpm.

2-Dimensional Measurements

Ao diam (cm)	1.2
LA diam (cm)	1.3
LA:Ao (Swe)	1.1
IVS thickness (cm)	0.65
LVID diastole (cm)	1.6
PW thickness (cm)	0.69
LVID systole (cm)	0.7
FS (%)	56

Doppler Measurements

PV Vmax (m/s)	1.9
AoV Vmax (m/s)	3.7
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 mitral valve is mildly thickened, which may reflect a primary valvular issue as well. The degree of disease appears mild with mild LVH and no left atrial enlargement, 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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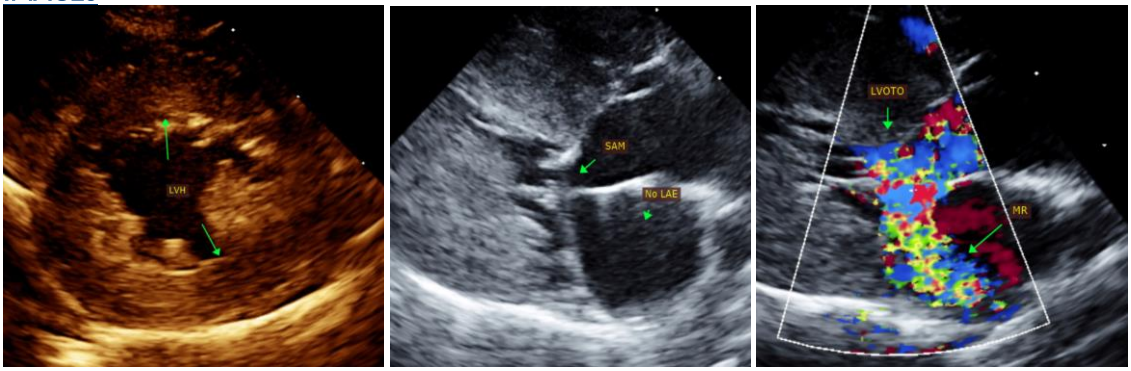
RECOMMENDATIONS

- If elected, institute 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 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)