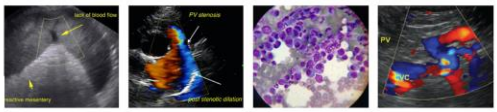
Mass Veterinary Specialty Services
1-413-734-1292



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

PATIENT
Moxie Williams

SPECIES
Feline

BREED
Maine Coon Cat Mix

SEX
Female Spayed

AGE
2 years

WEIGHT
9.1lbs

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
21626

DATE
10/20/21

PRESENTING CLINICAL SIGNS

History: Moxie was seen in mid-July for increased respirations, panting and a racing heart rate. She was noted to be dragging her hind limbs at that time with rapid breathing and dilated pupils. She was noted to be tachycardic on exam with a heart murmur noted. She has had a few additional episodes when she escapes from the house (she is typically exclusively indoors--total 4 episodes but first most severe). She has been eating well with normal activity, otherwise, with no noted C/S/V/D/PU/PD. CV/RESP: NSR, grade III/VI murmur with PMI on sternum, PSS, lung fields clear. BP: 130mmHg x 5. 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 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 mild to moderately dilated. No smoke seen.
Mitral valve: The anterior leaflet of the mitral valve is mildly elongated, however normal thickness. Systolic anterior motion is seen on 2D imaging. Moderate eccentric MR secondary to SAM.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. 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 no 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 170bpm.

2-Dimensional Measurements

Ao diam (cm)	0.8
LA diam (cm)	1.4
LA:Ao (Swe)	0.7
IVS thickness (cm)	0.65
LVID diastole (cm)	1.4
PW thickness (cm)	0.68
LVID systole (cm)	0.57
FS (%)	57

Doppler Measurements

PV Vmax (m/s)	0.8
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 hypertrophy (mild in this case) with an LVOTO and secondary MR. The MV appears largely normal, however a dysplastic component may be contributing. Mild to moderate LA dilation is present, indicating the risk for imminent complication is relatively low however risk for progression is high. My suspicion in this case is the LVOTO is more significant than is seen here given that the patient is heavily

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sedated. Going forward the patient will always be at risk for development of spontaneous CHF and/or a thrombotic event as the disease progresses. 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. In cases of solely primary MV dysplasia this can lead to improvement in the degree of obstruction and hypertrophy. Given the relatively young age of the cat, today's findings and history of episodes, it is definitely recommended at this time as below. An anticoagulant can also be argued in this case due to LA dilation and previous presentation of limb paralysis.

My suspicion is the prior episode was due to a severe LVOTO and elevated heart rates with potentially a concurrent thrombotic event. This is difficult to prove in hindsight and follow up is advised should further episodes be identified.

Long term prognosis is guarded due to LA dilation and episodes at a young age; however, stage B feline heart disease is highly variable in outcome. Close monitoring for progressive LA dilation in the future will help determine long term prognosis and dictate need for additional medications.

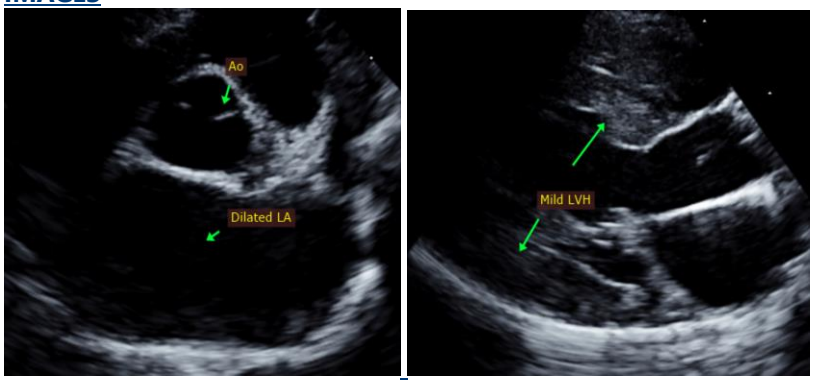
RECOMMENDATIONS

- 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.
- If elected/possible, administer Clopidogrel (Plavix) 75mg tabs, Give ¼ tab PO q24 h (NOTE: This medication is very bitter along the cut edge and may cause oral foaming).
- Elective anesthesia is not advised until response to atenolol is evaluated.
- 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 for progression, sooner if clinical signs arise in the interim.

IMAGES



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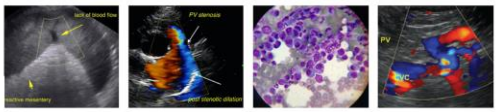

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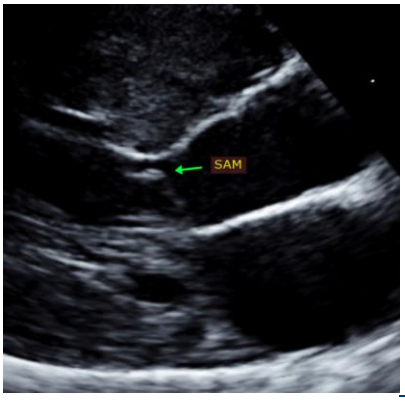

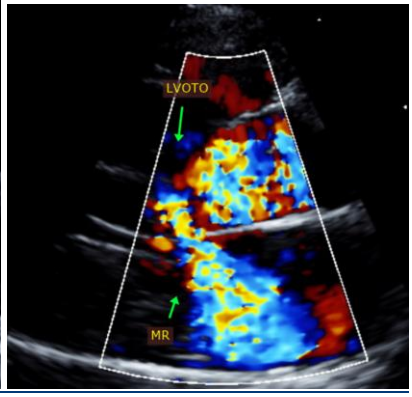

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)