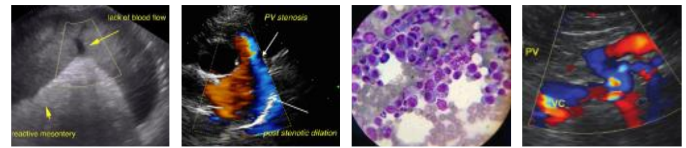
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT
Stella Johnson

SPECIES
Feline

BREED
DSH

SEX
Female

AGE
9 years

WEIGHT
8.1lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Potomac Mobile Veterinary Ultrasound

HOSPITAL NAME
NOVA Pets Health Cener

REFERRING VET
Dr. Jarrett

INVOICE
27009

DATE
10/20/22

PRESENTING CLINICAL SIGNS

History: Grade 2-3/6 heart murmur. Weight loss. Hyperthyroid. Sedated with Butorphanol.
-Abnormal PE/Chem/CBC/UA Results (10/15/2022): U/A: USG 1.024. CBC: NSF. T4: 13.1. CHEM: SDMA 17, ALP 65, ALT 240, GLOB 2.9, NA/K RATIO 49, Potassium 3.1, Chloride 113. (10/14/2022) Blood Pressure: 170. (10/02/2022) ProBNP: 782.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mildly hypertrophied. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Mild papillary muscle hypertrophy with regions of remodeling. The right ventricle is subjectively normal in size and morphology. There is mild left atrial enlargement present. No right atrial enlargement present. Normal RVOT velocity. Mild systolic anterior motion (SAM) of the mitral valve is present, with turbulent flow of color flow imaging (not captured on Spectral doppler). There is moderate eccentric mitral regurgitation present secondary to SAM. Trace AI. Trace TR. There is no pericardial effusion noted. No pleural effusion appreciated. No obvious cardiac tumors.

CARDIAC CHART

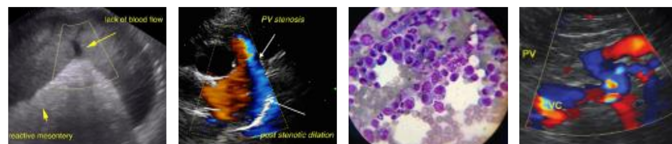
FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	3.7	250	0.68	1.44	0.60	60	92
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE (Swe)** (Abbott)	**LA** 2D short axis Base view (cm) (Abbott)		**LVOT VEL** (m/s)	**RVOT VEL** (m/s)	**E max** (m/s)
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	1.3	1.5	1.4		1.1	0.8	NM

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*
Adapted from June Boon, Veterinary Echocardiography,1998
Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The diagnosis is hypertrophic obstructive cardiomyopathy (HOCM). This indicates LV thickening (mild in this case) with a dynamic LVOT obstruction (SAM) and secondary mitral regurgitation as the cause of the heart murmur. The hypertrophy and obstruction are both mild. There is mild left atrial enlargement present, indicating the risk of spontaneous CHF and/or a thrombotic event is currently low. An aortic insufficiency is appreciated, and the blood pressure is mildly elevated. Consider reassess once the T4 is controlled. If persistently >160mmHg despite a relatively calm demeanor consider vasodilator therapy with Amlodipine. No additional issues are identified.

Uncontrolled hyperthyroidism is noted in the history, which may certainly be the cause of these cardiac changes. No specific treatment is typically warranted other than methimazole or similar therapy. That being said, the patient is highly tachycardic and Atenolol can often be beneficial to



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bridge the gap until the thyroid is controlled. No obvious indication for lifelong Atenolol at this time.

Prognosis is guarded long term, given the highly variable rates of progression with subclinical feline cardiomyopathy.

Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.). 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 (ketamine, glycopyrrolate, atropine). Risk for complication with steroid use typically follows LA dilation, which in this case is low. Regardless, if needed, monitoring of RR/RE is advised particularly in the initiation phase.

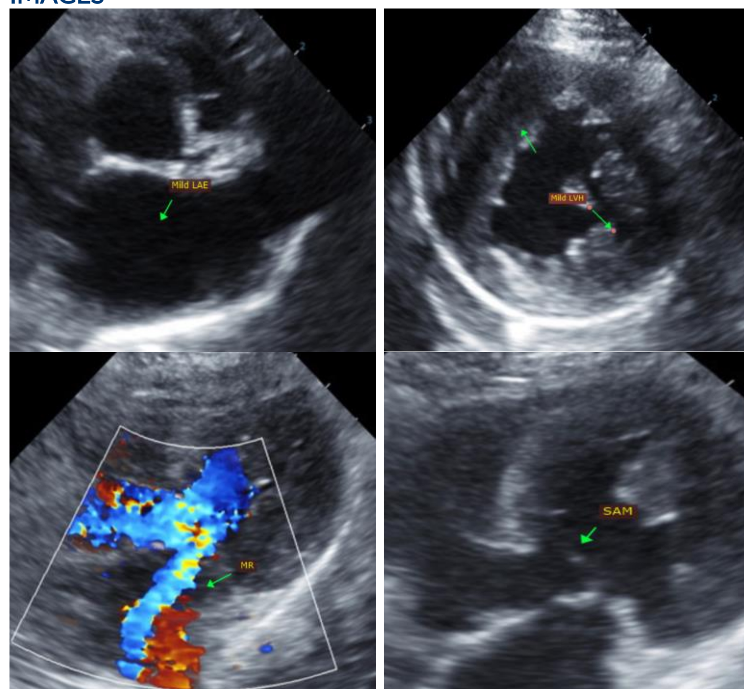
PLAN

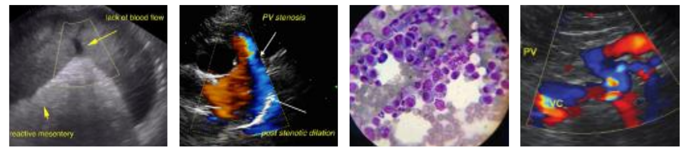
If elected, administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached.

Reassess BP once T4 is controlled; if persistently >160mmHg consider vasodilator therapy. Monitor BP/T4 every 6 months.

Recommend recheck echocardiogram 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