

**PATIENT**

Sweet Pea Klinefelter

SPECIES

Feline

BREED

Cornish Rex

SEX

Female Spayed

AGE

3 years

WEIGHT

8lbs

INTERPRETED BYMaggie Machen Lamy,
DVM, DACVIM
(Cardiology)**IMAGING PERFORMED BY**

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Neumeister

INVOICE

26679

DATE

10/3/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. Grade 4/6 heart murmur.

-Pertinent previous echo findings (4/2022 MML): Borderline LVH, mild LAE, mild RVOTO, mild LVOTO, mild MR. IVSd: 0.59, LVWd: 0.52, LA: 1.4.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is highly irregular with apical thinning contrasting a focal septal thickening. The mid-LV has a tethered appearance with an obstruction through the region (see below). There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Mild papillary muscle remodeling. The right ventricle is subjectively normal in size and morphology. There is moderate to severe left atrial enlargement present with evidence of spontaneous contrast. No right atrial enlargement present. Mild RVOT velocity elevation with a dynamic profile. No significant systolic anterior motion (SAM) is appreciated in this study. There is trace eccentric mitral regurgitation. No other significant valvular regurgitation is present. 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	3.6	188	0.74	1.2	0.64	55	88
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	2.0	2.0	1.7			1.8	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

Significant cardiomyopathy persists with evidence of progression. The LV wall dimensions are highly irregular with regions of thinning, likely suggesting an infarct. A mid-LV obstruction is noted (which was not previously documented) likely contributing to murmur origin and is secondary to significant fibrosis. Finally, and most importantly, the LA is severely dilated with evidence of smoke, indicating high risk for complication. No additional issues are identified

Even without clinical signs, utilization of medications is recommended as below. It is important to note this medications are of unknown benefit in subclinical feline cardiomyopathy; however, there is great risk for complication in this case. Consider use of Benazepril (for both vasodilatory and anti-fibrotic benefits), spironolactone (for anti-aldosterone benefits) and Plavix as an anti-coagulant. Atenolol is also indicated to help decrease the obstruction portion of disease. Lasix is

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not clearly indicated prior to clinical signs; however, close monitoring of sleeping breathing rates is recommended going forward.

Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.).

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Anesthetic risk is significantly elevated, with high risk for fluid overload, spontaneous CHF, hypotension, etc. Medications should be initiated for at least 2-3 days prior. Referral to a specialty hospital with an Anesthesiologist may be beneficial. Judicious IV fluid rates are advised to avoid fluid overload. Drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid ketamine, telazol, acepromazine and Dexdomitor.

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PLAN

Screening BP is recommended. Administer titrating dose of **atenolol**: 25mg tablets; Give ¼ tab once daily at night. 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.

SEX

Female Spayed

Institute spironolactone 6.25mg PO q12h. Pending BP >130mmHg, institute ACEI 0.5mg/kg PO q12h. Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges).

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*Note: 4 medications can be overwhelming in cats. If difficult to medicate, Plavix and Atenolol are most important.

WEIGHT

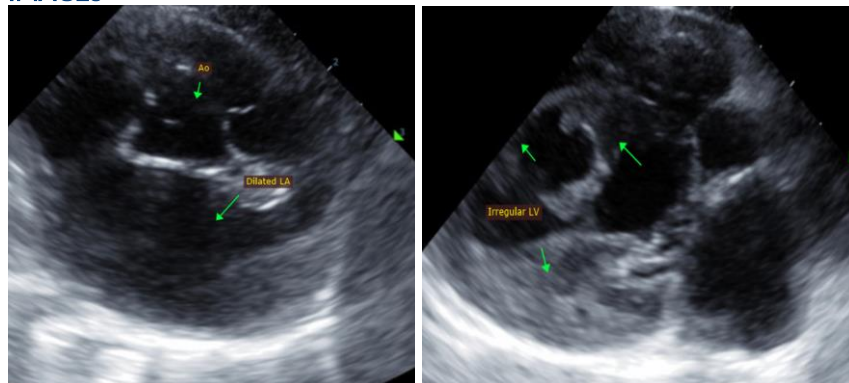
8lbs

Screening blood pressure and T4 are recommended every 6 months.

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

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IMAGES**IMAGING PERFORMED BY**

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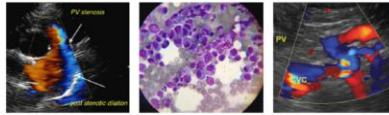
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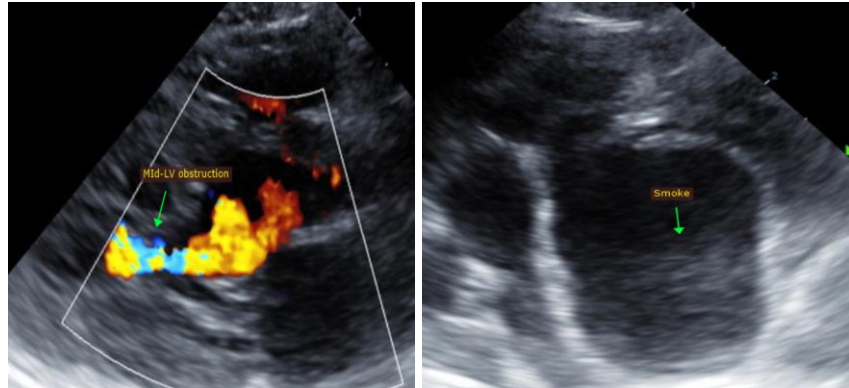
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. 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
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