

**PATIENT**

Chester Wilhelm

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

5 years

WEIGHT

12.6lbs

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

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Dr. Gortowski

INVOICE

26985

DATE

10/18/22

PRESENTING CLINICAL SIGNS

History: New grade 3/6 heart murmur. Elevated ProBNP. Sedated with Butorphanol and Alfaxalone.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is severely thickened. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Papillary muscle hypertrophy. 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. There is systolic anterior motion (SAM) of the mitral valve present on 2D imaging; however, the outflow velocity is normal (likely due to heavy sedation). Trivial mitral regurgitation is present secondary to SAM. No other obvious valvular regurgitation is present. There is no pericardial effusion noted. No pleural effusion appreciated.

CARDIAC CHART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LWVd (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	5.7	146	0.85	1.1	0.92	50	86
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	NM	1.4	1.45		0.6	0.7	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. This indicates LV hypertrophy (severe in this case) with a dynamic LVOT obstruction (SAM) and secondary MR. The degree of obstruction is difficult to quantify, due to heavy sedation; however, the valve motion is highly abnormal. There is mild left atrial dilation, indicating the risk of spontaneous CHF and/or a thrombotic event, while currently low, may be elevated in the future. A screening BP and T4 are recommended every 6 months, as both can exacerbate disease.

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 degree of hypertrophy, recommend initiate at this time as below. If there is difficulty medicating at home, an alternative approach would be closely monitoring for progression in the next 6 months.

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,

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isoflurane maintenance. Risk for complication with steroid use typically follows LA dilation, which in this case is mildly elevated. If needed, monitoring of RR/RE is advised particularly in the initiation phase.

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

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PLAN

Screening BP/T4. 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.

SEX

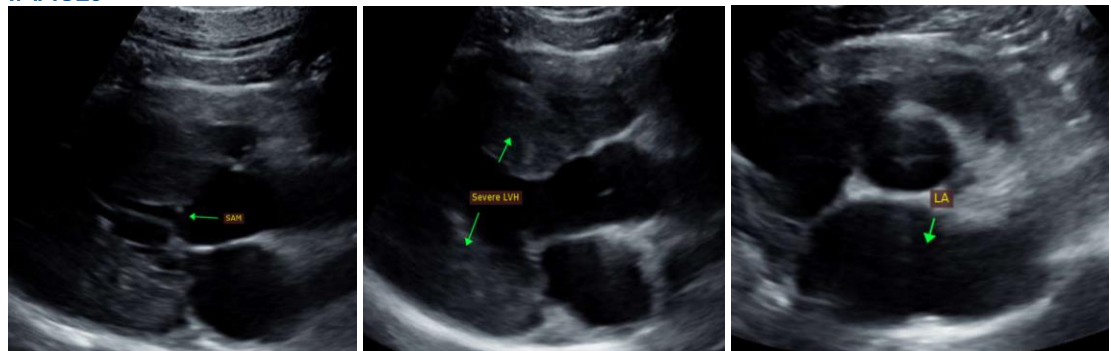
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Recommend recheck echocardiogram in 6 months to assess for progression, sooner if clinical issues arise.

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IMAGES



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Maggie Machen Lamy, DVM, DACVIM (Cardiology)

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.

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Tom McNeill

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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info@sonopath.com

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