



PATIENT

Bill M. Crouchelli

SPECIES

Feline

BREED

Persian

SEX

Male Neutered

AGE

6 years

WEIGHT

7.9lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Animal General on
Hudson

REFERRING VET

Dr. Zelinski

INVOICE

24153

DATE

5/11/22

PRESENTING CLINICAL SIGNS

History: Patient presents for heart murmur and possible arrhythmia. Blood pressure 150mmHg

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip.

Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 160bpm (range 125-188bpm) with significant HR variability. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. No obvious premature beats are visualized; however, this is not entirely ruled out without a 6 lead tracing. No ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Sinus rhythm with significant HR variability.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is irregular, with mild overall hypertrophy and a discrete upper septal bulge. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly remodeled and hyperechoic. The endocardium also appears remodeled. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility. No TR. Mild LVOTO with secondary trace MR. Blood flow through the RVOT is normal in velocity. No pleural or pericardial effusion seen. No obvious cardiac tumors.

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	3.6	150	0.70	1.76	0.61	48	90y
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	1.3	1.0		1.8	0.8	NM
<p><i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i> 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.</p>							

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The diagnosis is hypertrophic obstructive cardiomyopathy (HOCM). This indicates LV thickening (mild and irregular 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 no left atrial enlargement present, indicating the risk of spontaneous CHF and/or a thrombotic event is currently low. No additional issues are identified.

The ECG shows a normal sinus rhythm with significant HR variability. This is most consistent with a sinus arrhythmia, which is uncommon in cats (common in dogs). If this is a consistent finding and the patient as not sedated, consider further systemic evaluation as a possible cause of this (ie



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high vagal tone). NO treatment is warranted based upon what is seen here. It is worth noting that single lead tracings are often insensitive in cats and a 6-lead should be considered.

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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 low resting heart rate, this NOT indicated in this patient.

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

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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).

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Plan: Consider a 6 lead tracing as discussed. Consider screen for causes of high vagal tone. Screening blood pressure and T4 are recommended every 6 months. Recommend recheck echocardiogram and ECG in 6 months to assess for progression, sooner if clinical issues arise.

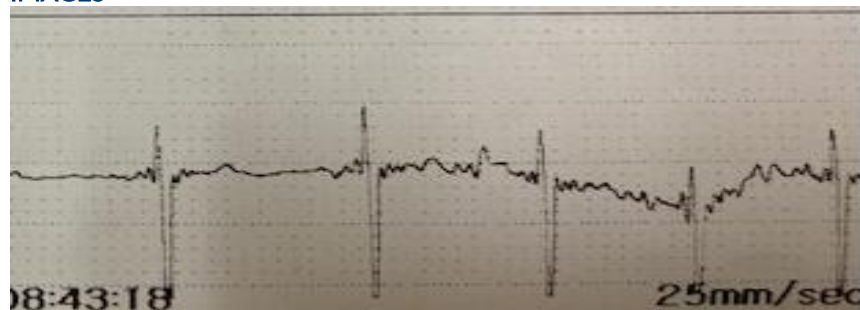
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IMAGES

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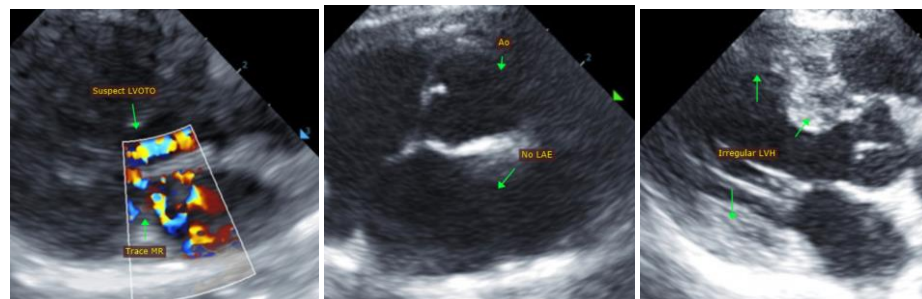


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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the

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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.

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info@sonopath.com

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