

**PATIENT**

Skitch Maasdam

**SPECIES**

Feline

**BREED**

DMH

**SEX**

Male Neutered

**AGE**

14 years

**WEIGHT**

15.44lbs

**INTERPRETED BY**

Maggie Machen  
 Lamy, DVM, DACVIM  
 (Cardiology)

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

West Hills Animal  
 Hospital

**REFERRING VET**

Dr. Remcho

**INVOICE**

25580

**DATE**

7/27/22

**PRESENTING CLINICAL SIGNS**

History: Presented for wellness and fractured canine tooth (204). Preanesthetic blood work showed elevated ProBNP. P is fractious for exams therefore complete physical is difficult.

P had anesthetic complications in 2016. Record obtained: Sedation (dexdorm 0.2ml + butorphanol 0.2ml IM) - Wound care clip and clean. Upon admin of Dexdorm 0.2ml IM the patient had gran mal seizure. Patient immediately given reversal of antisedan 0.2ml IM and naloxone 0.1mg/kg IV, oxygen support, IVC and LRS bolus of 100ml with 10cc hetastarch. Bradycardic and hypotensive - ADMIN Epinephrine 0.15ml IV Enlarged heart noted on rads at the time, O did not pursue echo.

-Abnormal PE/Chem/CBC/UA Results: ProBNP 509, all other senior labs - wnl

-Sedation: Did receive oral 200 mg Gabapentin at 9 am today

**ELECTROCARDIOGRAPHIC FINDINGS** \*Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 188bpm with a regular rhythm. P for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. Isoelectric QRS morphology. MEA is shifted left, consistent with an LAFB. No ectopic beats, pauses or dysrhythmias observed.

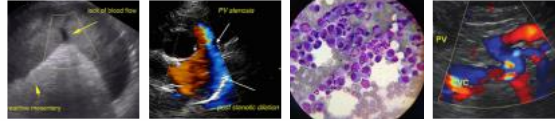
ECG diagnosis: Normal sinus tachycardia with a LAFB.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension with regions or irregularity. There is a mildly hyperechoic endocardium consistent with fibrosis. The endocardium also appears remodeled. Mild LV dilation. Remodeled, mildly hyperechoic papillary muscles. The left atrium is mildly dilated. The right atrium is borderline in dimension. The right ventricle appears normal. No TR. The mitral valve is normal in structure and mobility. No MR. Blood flow through the LVOT is normal in velocity. Blood flow through the RVOT is normal in velocity. No PI or AI. No effusions or obvious cardiac tumors identified.

**CARDIAC CHART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LWVd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	7.0	NM	0.46	2.0	0.47	42	76
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Swe) <small>(Abbott)</small>	LA 2D short axis Base view (cm) <small>(Abbott)</small>		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	1.5	1.45		0.9	0.97	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 &amp; 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>							



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Mild abnormalities are identified, including mild LA/LV dilation with normal LV wall dimensions. No evidence of significant hypertrophy ruling out typical hypertrophic disease. No other significant findings are identified. These abnormalities are most consistent with early restrictive disease (RCM) and monitoring for progression is advised. No cause for the murmur is identified in this study, making it likely physiologic in origin.

The ECG is largely normal with a sinus tachycardia. A left anterior fascicular block (LAFB) is noted, which is a benign bundle branch block often seen in cats. No dysrhythmias are observed.

Even with mild disease seen here, this is unlikely to explain prior anesthetic event given the time frame. Mild cardiac changes are likely relatively new onset and do not pose significant contraindication for anesthesia. Consider an alternative protocol as below.

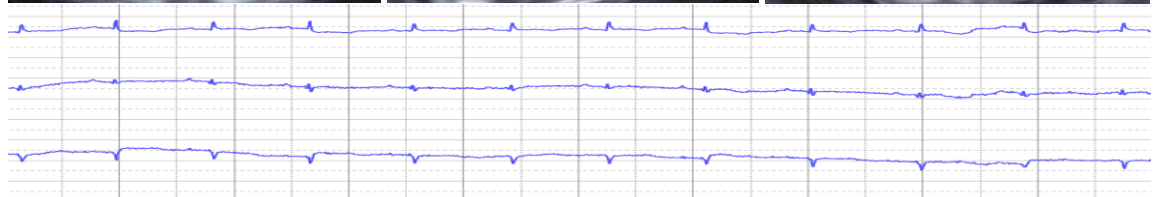
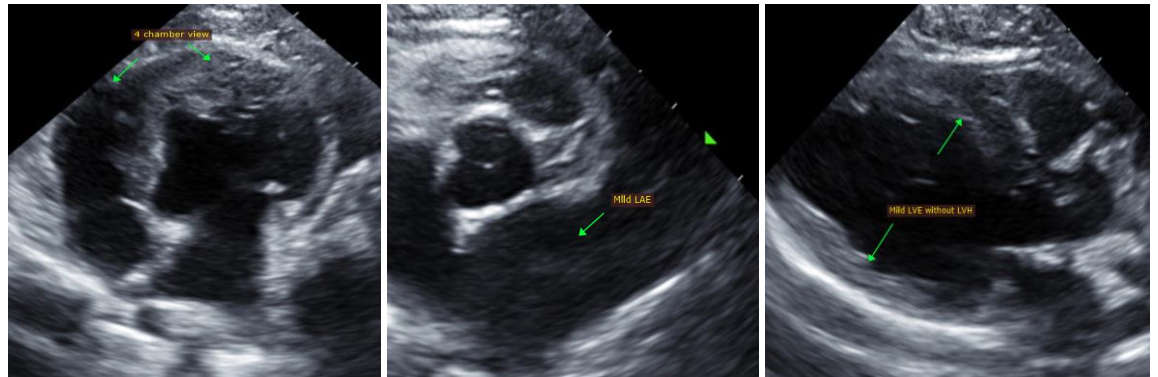
Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen an outflow obstruction (if present). A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Additionally, steroids should be used with caution on older cats, as even a 'normal' geriatric heart can develop evidence of intolerance and fluid retention.

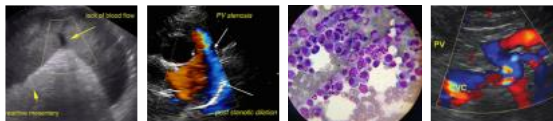
Monitor for any development of clinical signs at home, including labored breathing, cough or signs of a blood clot (paralysis, neurologic change).

No cardiac medications are clearly indicated.

A recheck echocardiogram is recommended in 6 months to screen for progressive LA dilation, sooner if any issues arise in the interim.

**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**  
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