



PATIENT

Leo Burkhalter

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

8 years

WEIGHT

12.9lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Dr. Calhoun

INVOICE

24804

DATE

6/15/22

PRESENTING CLINICAL SIGNS

History: Leo presented to MVS on 6/14/22 for evaluation of possible CHF. Leo has had a history of upper respiratory infections for several years. When these instances occur, he is usually treated with injectable antibiotics and resolves well. On Saturday, Leo was completely fine. Then on Sunday, owner noticed Leo was lethargic and seemed to be breathing weird. Yesterday, Leo was breathing really heavy, sounded congested, and was coughing (sounded like he was trying to produce something). Owner brought Leo to pcDVM yesterday where he received treatment but did not improve. Leo has had decreased appetite and thirst since Sunday but has been voiding normally through yesterday. No murmur. Intermittent gallop arrhythmia; mild increase in BV sounds bilaterally
-Radiographs: Revealed generalized cardiomegaly with a bronchointerstitial pattern- slightly patchy interstitial pattern caudally.
-Abnormal bloodwork: Revealed an abnormal ProBNP, neutrophilic leukocytosis Elevated SDMA, Elevated ALT.
-Current medications (current in-house therapy): Maropitant 6 mg IV q24h, Doxycycline 25 mg PO q12h, Furosemide 11 mg IV q12h -ASK Dr. Oxygen @ 3Lmin Albuterol 1 puff q12h.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall thickness is borderline with a small LV chamber. There is a mildly hyperechoic endocardium consistent with mild fibrosis. The endocardium also appears mildly remodeled. The papillary muscles are normal in size and hyperechoic. 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 obvious valve regurgitation. Blood flow through both the LVOT and 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)	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	5.8	220	0.55	1.2	0.54	63	93
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	1.1		0.6	0.7	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

Overtly normal cardiac structure and function. The LV wall thickness is borderline with a small chamber, which is likely secondary to Lasix therapy (ie pseudohypertrophy). There is no evidence of elevated left atrial pressure or underlying pathology at this time. There is mild remodeling and fibrosis of the left ventricular wall, which is considered likely a normal age-related finding. Given these findings, no medications are indicated.

**PATIENT**

Leo Burkhalter

These findings would suggest the respiratory signs are noncardiac in origin and Lasix can be safely discontinued. If there is any question, consider a Radiologist review of the films for further evaluation. A baseline BP and ECG are recommended.

SPECIES

Feline

No obvious structural cause for BNP elevation is seen here. A flaw of the BNP test is false positives, which may be the case; however, alternative causes for elevation should be considered, including decreased renal clearance, hypertension, etc. If no obvious cause is identified, reassessing this patient in 6-12 months is recommended to ensure early disease was not missed.

BREED

DSH

Anesthetic risk is considered mild. With remodeling and diastolic stiffening, there is an elevated risk for fluid overload in this patient and judicious IV fluid use is recommended. Heart rate stimulating drugs such as atropine, glycopyrrolate or ketamine should be avoided unless medically necessary. Risk for complication with steroid use typically follows LA dilation, which in this case is low. That being said, any cat can experience unexpected signs of intolerance and monitoring of RR/RE is advised particularly in the initiation phase.

SEX

Male Neutered

PLAN**AGE**

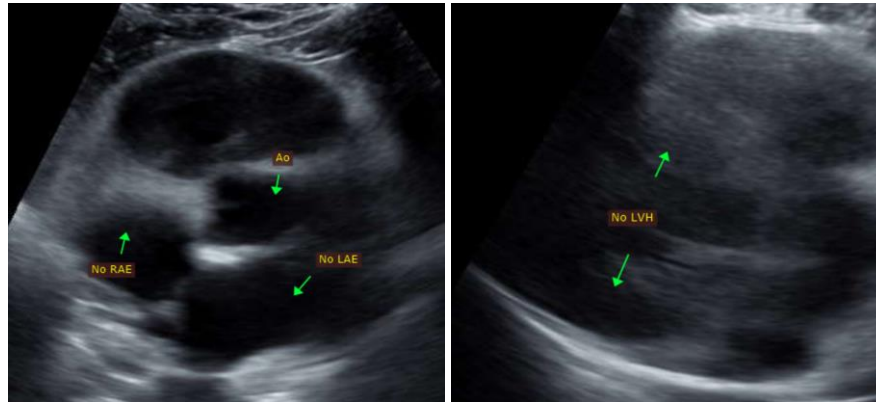
8 years

Discontinue Lasix as discussed. Consider Radiologist review of the films and further respiratory therapy. Baseline BP, T4 and ECG are recommended.

Recommend recheck echocardiogram in 1 year to assess for any progressive issues.

WEIGHT

12.9lbs

IMAGES**INTERPRETED BY**

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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.

REFERRING VET

Dr. Calhoun

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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