



PATIENT

Vicki Piotrowski

SPECIES

Feline

BREED

DSH

SEX

Female Spayed

AGE

12 years

WEIGHT

9.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Jokers

INVOICE

25971

DATE

8/23/22

PRESENTING CLINICAL SIGNS

History: History of chronic respiratory issues. No heart murmur noted. Occasional coughing. Heart score normal, ECG normal. Chest radiographs show increased bronchial opacity.
-Current medications: Doxycycline 25mg/ml 1ml PO BID, Prednisolone liquid 3mg/ml 1ml PO once daily for 5 days. Vetmedin 10mg/tab 1/4 tab PO BID, Furosemide 12/5mg 1 tab PO SID, Sildenafil 5mg/ml 0.2ml BID. Albuterol inhaler PRN BID. Sedated with Gabapentin prior to scan.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall thickness is normal. There is a mildly hyperechoic endocardium consistent with fibrosis and ventricular remodeling. The left ventricular chamber is normal in dimension. The papillary muscles appear remodeled. The left atrium is normal. The right atrium is prominent. The right ventricle appears remodeled with minimal enlargement. No significant tricuspid regurgitation. The MPA appears mildly dilated. The mitral valve is normal in structure and mobility. There is no mitral regurgitation present. Blood flow through the RVOT and LVOT is normal in velocity. No AI/PI. No obvious cardiac tumors or effusions.

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	4.4	180	0.43	1.1	0.42	51	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	1.1	1.0		1.0	0.9	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 primary finding is evidence of pulmonary hypertension. The right heart is minimally enlarged, although the MPA is significantly dilated. While the exact gradient is unable to be quantified, suspicion is at least mild to moderate PAH is present. This has likely developed secondary to chronic airway disease, albeit a fairly uncommon finding in cats. A PTE cannot be ruled out as an exacerbating issue, although is considered unlikely. The left heart is unremarkable, with a normal left atrial size. No additional issues are identified.

Given the findings, recommend continue Sildenafil with further treatment of airway disease as needed (steroids, inhaled albuterol, Azithromycin, etc.). Further treatment of respiratory disease is recommended. It is important to note that the pulmonary hypertension does not typically cause the clinical signs; rather it develops secondary to chronic respiratory issues. Clinical signs of PAH include exertional dyspnea or collapse.

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These findings would suggest Lasix and Pimobendan are unnecessary and can be safely discontinued.

Monitor the patient closely for any progressive decline in breathing rate/effort, exertional syncope, etc.

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Prognosis is guarded long term given the complexity of issues. There will always remain risk for progression to right-sided CHF (difficult to discern in cats with concurrent respiratory disease), development of blood clots and/or malignant arrhythmias/sudden death in the future.

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Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.

SEX

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PLAN

Recommend baseline BP. Continue Sildenafil 1-2mg/kg PO q12h. Discontinue Lasix and Pimobendan as discussed. Consider further treatment for respiratory disease if clinically indicated (such as a course of Azithromycin). Consider inhaled steroid or albuterol therapy as a potential option as well.

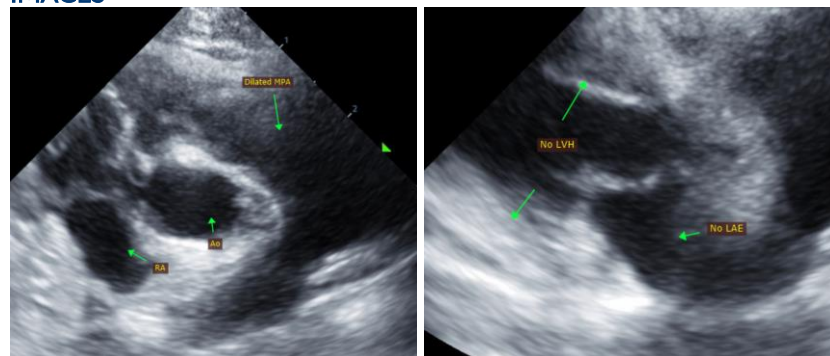
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A recheck echocardiogram is recommended in 6 months to assess progression, sooner if issues arise in the interim.

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IMAGES**INTERPRETED BY**

Maggie Machen Lamy,
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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.

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Kim Liedberg

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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.

REFERRING VET

Dr. Jokers

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