



PATIENT

Peanut Higgins

SPECIES

Feline

BREED

DSH

SEX

Female Spayed

AGE

5 years

WEIGHT

8.1lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Newton Veterinary
Hospital

REFERRING VET

Dr. Kim

INVOICE

26874

DATE

10/13/22

PRESENTING CLINICAL SIGNS

History: Spayed/vaccines on 10/6/22. 5-6 days after became lethargic, dyspneic, ventral. Minimal response to Amp, metro, cereni. Improvement with DexSP but not 100%. Still on O2 cage, last SPO2 72%.

- Current medications: Cerenia, ampicillin, metro, DexSP.
- Abnormal PE/Chem/CBC/UA Results: FELV/FIV neg x2.
- Radiographs: Bronchopneumonia pattern.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mildly hypertrophied (IVS > LVPW), with mild remodeling of the endocardium. There is a diffusely hyperechoic endocardium consistent with fibrosis. There is mild papillary muscle hypertrophy and remodeling. Adequate systolic function. The left atrium is severely enlarged with a horizontal component and auricular involvement. No obvious smoke. The right atrium is normal. The right ventricle appears normal. The mitral valve is normal, with normal mobility. No evidence of systolic anterior motion. There is no obvious mitral regurgitation present. There is no obvious tricuspid regurgitation. Blood flow through both the LVOT and RVOT is decreased in velocity. Scant pericardial effusion. Pockets of pleural effusion seen. No obvious cardiac masses.

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	3.7	228	0.67	1.0	0.57	50	92
FELINE CARDIAC PARAMETERS	LA/AO <small>(Boon)</small>	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	2.3	2.2	1.8	1.1	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

Hypertrophic cardiomyopathy (HCM) is a rule out diagnosis for LV hypertrophy once a patient is confirmed euthyroid and normotensive and both should be considered in this case. Regardless, the left atrium is significantly enlarged, indicating high risk for spontaneous CHF and/or blood clot events. Finally, there is pericardial and pleural effusion identified, which suggest congestive heart failure. No additional issues are identified.

It is worth noting that these findings may also reflect an unusual pathology called transient myocardial thickening (TMT), given the young age of the patient and a recent anesthetic event. TMT is poorly understood; however, if present the degree of disease will typically improve over the next 6-12 months. Assessing for regression in the future will help dictate underlying diagnosis.



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Immediate full lifelong cardiac supportive medications are recommended as below. If the patient is significantly tachypneic in hospital, a dose of injectable Lasix may be helpful (2mg/kg) +/- recommend referral for overnight supportive care/oxygen therapy. Finally baseline chest radiographs and blood pressure are highly recommended if not recently performed.

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With the exception of TMT which can actually have a good long-term outcome, the mean survival time for cats with CHF is 8-12 months; however, most cats are able to maintain a good quality of life on medications. Patient will always be at high risk for recurrent episodes of CHF and development of blood clots in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.

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Avoid anesthesia, steroids and fluid therapy unless absolutely necessary in the future.

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PLAN

Screening BP/T4. Baseline CXR is recommended. Consider injectable Lasix dose/hospitalization if indicated. Consider thoracocentesis if unstable. Administer Lasix 1-2mg/kg PO q12h. Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges and should be coated in entirety or administer in a gel cap). Institute Pimobendan 1.25mg PO q12h. If any decline, immediate reevaluation of PCE is recommended to determine if a tap is necessary.

WEIGHT

8.1lbs

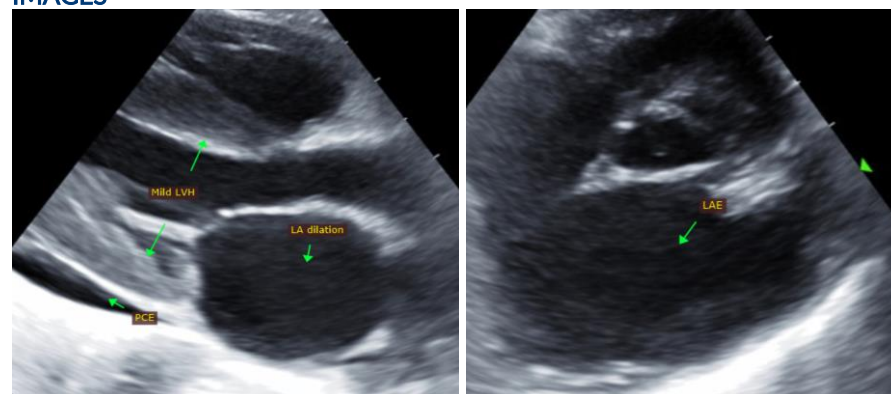
Monitor renal values, BP and effusion status in 1-2 weeks. If normotensive and doing well at that time, reinstitute vasodilator ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h. Monitor BP and renal values every 3-4 months lifelong.

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A recheck echocardiogram is recommended in 4-6 months to screen for progression.

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.

DATE

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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.



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Peanut Higgins

Maggie Machen Lamy, DVM

Diplomate of the American College of Veterinary Internal Medicine (Cardiology)

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