**PATIENT**

Odin Lyle

PRESENTING CLINICAL SIGNS

History: Breathing harder, especially after play. Not eating well, losing weight.
 -Abnormal PE/Chem/CBC/UA Results: BNP elevated.

SPECIES

Feline

BREED

Siamese

SEX

Male Neutered

AGE

10 years

WEIGHT

10.3lbs

INTERPRETED BY

Maggie Machen Lamy,
 DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Rachel Runnells, RVT

HOSPITAL NAME

SVS Imaging KC

REFERRING VET

Dr. Lyle

INVOICE

23044

DATE

3/10/22

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension with regions of remodeling and irregularity. There is a diffusely hyperechoic endocardium consistent with fibrosis. The systolic function is decreased with evidence of diastolic dysfunction as well. The papillary muscles are mildly remodeled. The left atrium is markedly dilated with evidence of smoke. Mild central MR due to annular stretch. The right ventricle is also affected, with diffuse fibrosis and remodeling. Marked RA dilation with evidence of smoke. Moderate central TR. Velocity consistent with mild pulmonary hypertension. Blood flow through the RVOT and LVOT is decreased velocity. Trace pericardial effusion. Small volume pleural effusion. 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	4.7	164	0.43	1.4	0.44	35	60
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	2.5	>3.0	2.2		0.5	0.5	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 finding of marked biatrial enlargement in the face of normal/decreased LV wall thickness and systolic dysfunction is most consistent with Restrictive Cardiomyopathy (RCM), however some historical infectious or inflammatory insult to the myocardium cannot be definitively ruled out. The right heart appears more affected than the left which may suggest a primary RV cardiomyopathy. Regardless of categorial classification, the degree of biatrial dilation is marked and is leading to insufficiency of both AV valves, and systolic dysfunction has developed.

The finding of this degree of biatrial dilation confirms the origin of the tachypnea and effusions is spontaneous congestive heart failure, and immediate lifelong medications are warranted as below. This patient is at high risk for thromboembolic events regardless of medications and this should be expressed to the owner (monitor for neurologic change, acute paralysis/lameness, etc.).

Consider hospitalization for continued stabilization, oxygen and Lasix therapy. A thoracocentesis should also be considered due to effusion and instability. The prognosis is **poor to grave**, with a mean survival time for cats with CHF <8-12 months, however most are able to

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PATIENT

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maintain a good quality of life on medications if able to be stabilized. There will always remain risk for recurrent episodes of CHF, development of blood clots, arrhythmias, and/or sudden death in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.

SPECIES

Feline

PLAN

Consider thoracocentesis, hospitalization, oxygen, IV diuretic in hospital until stabilized due to effusion. Oral medications: furosemide 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). Institute Pimobendan (off label use) 1.25mg PO q12h.

BREED

Siamese

Once stabilized, eating well at home and BP >130mmHg, consider addition of vasodilator ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.

SEX

Male Neutered

Recheck renal values in 10-14 days to ensure tolerance of medications, then every 3-4 months lifelong. A recheck echocardiogram is recommended in 4-6 months to assess for progression.

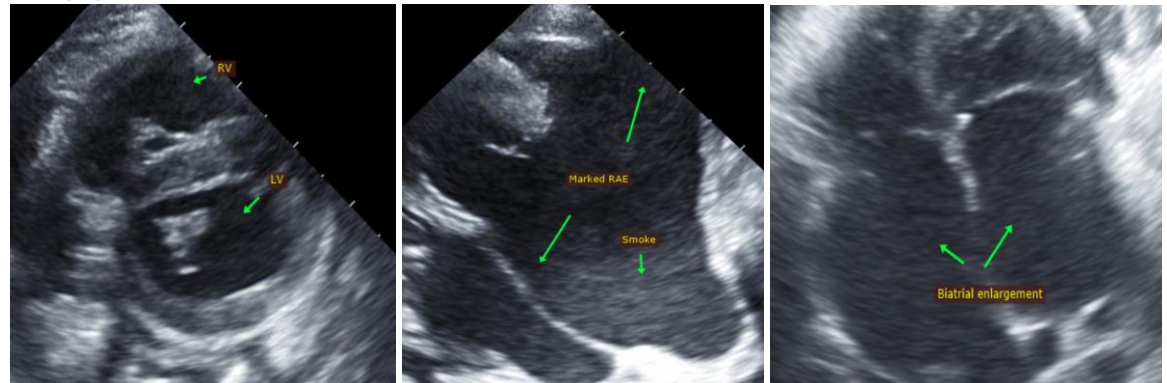
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IMAGES

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INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

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.

IMAGING PERFORMED BY

Rachel Runnels, RVT

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.

HOSPITAL NAME

SVS Imaging KC

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