



PATIENT

Louie Clossey

SPECIES

Canine

BREED

Shih Tuz

SEX

Male Neutered

AGE

13 years

WEIGHT

15.2lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Callihan, DVM

HOSPITAL NAME

Animal Emergency
Care

REFERRING VET

Dr. Bailey

INVOICE

22699

DATE

2/20/22

PRESENTING CLINICAL SIGNS

History: Presented for coughing, dyspnea, weakness. Diabetic, not controlled. No prior history of CHF. Was seen this week w primary care and cough thought to be due to GERD. Murmur 3/6 left apical; femoral pulses ss; crackles not ausculted; mms pink, normal crt; tachypneic.

-Abnormal PE/Chem/CBC/UA Results: Lytes, glucose normal; BUN high normal.

-Thoracic radiographs: Left atrial enlargement; perihilar and otherwise patchy interstitial pattern

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Severe mitral regurgitation with severe left atrial dilation. Increased LV diameter with hyperdynamic myocardial function. The tricuspid valve appears mildly thickened with mild to moderate tricuspid regurgitation. Velocity consistent with moderate pulmonary hypertension. Mild right atrial and ventricular dilation; no significant RVH. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. Mild MPA prominence. No aortic or pulmonic insufficiency. No significant pericardial effusion. Scant pleural effusion noted. No obvious cardiac masses.

CARDIAC CHART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	4.6	3.6	1.9	2.8	48	80	0.2
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	1.4	0.8	6.9	3.2	4.2	2.2
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. Severe left atrial enlargement indicates there is risk for decompensation in this case. There is also moderate pulmonary hypertension with mild right heart changes, which likely indicate pulmonary pathology as well in a patient with respiratory signs. No additional issues are identified.



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Respiratory signs in this patient may reflect CHF, respiratory disease or some combination. It is worth mentioning that the patient's heart rate is low, which is often a sign of primary respiratory compromise. Additionally, pleural effusion is identified without significant right heart enlargement and may reflect an ancillary pathology. All that being said, there is enough mitral valve disease and significant left heart enlargement to support pulmonary edema as at least part of the clinical picture. Given the complexity of the findings, recommend medical management of this case with treatment for both CHF and potential respiratory etiology. This includes diuretic therapy, Sildenafil and potentially coverage with a broad-spectrum antibiotic. A Radiologist review of the films may be useful in this case, given the unclear clinical picture. A PTE should also be considered as a possible exacerbating issue. See recommendations below.

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

Going forward the risk will remain high for CHF, development of arrhythmias/syncope and/or sudden death, and close monitoring is advised.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a worsening cough, labored breathing, exercise intolerance or collapse episodes. Monitoring of sleeping breathing rates is the best way to assess for development of cardiogenic edema going forward.

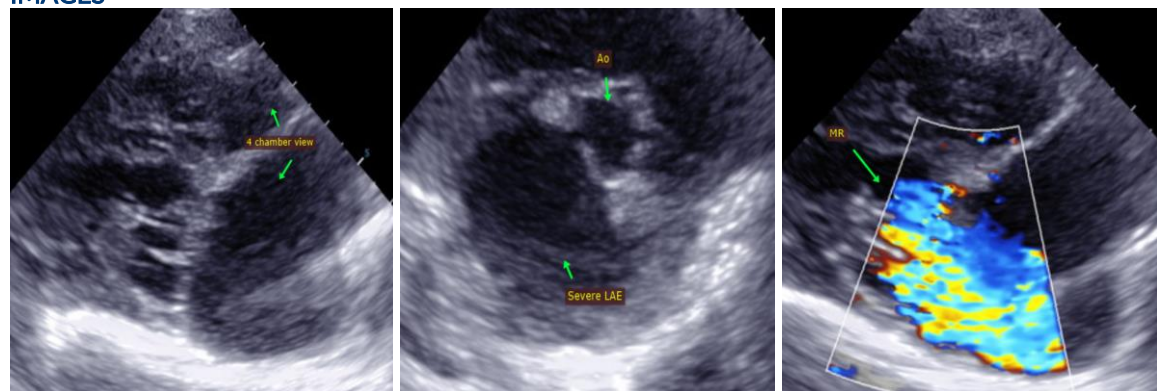
PLAN

Consider Radiologist review of the films. Institute Pimobendan 0.25-0.3mg/kg PO q12h. Institute Sildenafil 1-2mg/kg PO q8h. Institute Lasix 1-2mg/kg PO q12h. Consider Baytril or similar antibiotic to coverage any respiratory pathogens. Oxygen therapy until stabilized.

A recheck of renal values, blood pressure and clinical status is recommended in 10-14 days, then every 3-4 months lifelong. If residual respiratory signs, repeat chest films, Theophylline, Hydrocodone, etc. should all be considered.

If patient does well, a recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise/persist.

IMAGES





PATIENT

Louie Clossey

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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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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Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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