



**PATIENT**

Reginald Rosenblatt

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

9 Years

**WEIGHT**

6.9 kg

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Callihan

**HOSPITAL NAME**

Animal Emergency Care

**REFERRING VET**

Dr. Callihan

**INVOICE**

36490

**DATE**

3/27/22

**PRESENTING CLINICAL SIGNS**

Presented Sat afternoon on ER following collapse. Reginald has been hospitalized couple times in past few weeks for symptoms related to urinary obstruction. On Friday was seen by primary care vet and had subcutaneous fluids. Since yesterday afternoon pt has had approx 12 mg/kg furosemide IV, has been started on doxycycline. Temp is now normal.

Abnormal PE/Chem/CBC/UA Results: Hypothermic on presentation 93F Radiograph interpretation (IDEXX): CONCLUSIONS: The diffuse bronchial and interstitial patterns could be associated with chronic lower airway disease / asthma. However, these findings also overlap with incidental technical and individual variations (including variations in exposure and image algorithm, variation in the degree of pulmonary inflation, or incidental age-related changes). The increased opacity in the left cranial lung lobe may just be due to atelectasis, which is a common consequence of asthma. The possibility of an emerging pneumonia cannot be totally excluded however. Several cardiovascular lesions are possible but not totally definitive: - cardiomegaly associated with pulmonary hypertension, or even a cardiomyopathy - along with pulmonary arterial enlargement potentially due to pulmonary hypertension or even heartworm disease - and also some mild pulmonary venous congestion associated with early left-sided heart failure

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		NM	0.9	1.1	0.9	40	
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)		LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.6	1.45			1.0	0.8	NM
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

**Cardiac Presentation**

Left atrial size was upper limits of normal. Based on various studies, this is normal to slightly abnormal for cats. The left ventricle presented concentric hypertrophy with mildechogenic remodeling. The cranial and caudal mitral valve leaflets presented normal linear structure and kinetics. Contractility of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions and angles of the myocardium. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural integrity. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Tricuspid valvular assessment demonstrated adequate linear morphology and kinetics. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonic tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). Trace pericardial and pleural effusion noted. The extracardiac space revealed B-lines, consistent with multifocal slight consolidations.



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This is not typical for pulmonary edema, and bronchoalveolar disease is more likely, given the sporadic multifocal pattern. Pulmonary edema typically is more diffuse regarding B-line distribution.

**ULTRASONOGRAPHIC FINDINGS**

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- Hypertrophic cardiomyopathy with borderline left atrial size

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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Given the Lasix therapy, it is possible that this patient has emerging left-sided failure owing to hypertrophic cardiomyopathy. However, left atrial wedge pressure is debatable in this case to be the sole cause of the slight pleural and slight pericardial effusion. I feel that the B-line distribution is more consistent with bronchoalveolar disease. Therefore, two separate issues are likely playing a role in this patient.

**SEX**

Neutered Male

I recommend continual treatment with the Lasix therapy at 6.25 mg BID. ACE inhibitor could be considered at 0.5 mg/kg SID and allowing the presentation to stabilize. Plavix therapy could also be considered as a preventative. Primary respiratory protocol with broad-spectrum antibiotic such as Zithromax would be appropriate. I do strongly recommend abdominal sonogram to assess for comorbidities such as triad disease or neoplasia, which may be causing a systemic inflammatory or neoplastic event, both of which can cause the pulmonary lung lesions and slight pleural and slight pericardial effusion aside from the cardiac presentation. Recheck echocardiogram in one week to assess potential stabilization or worsening of this present.

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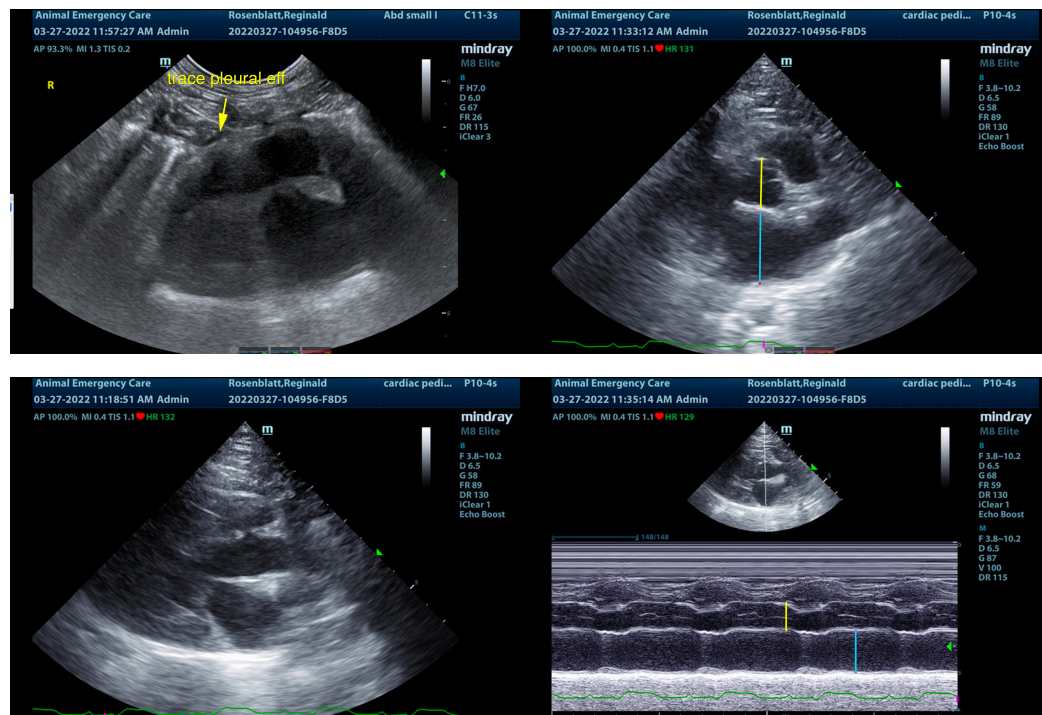
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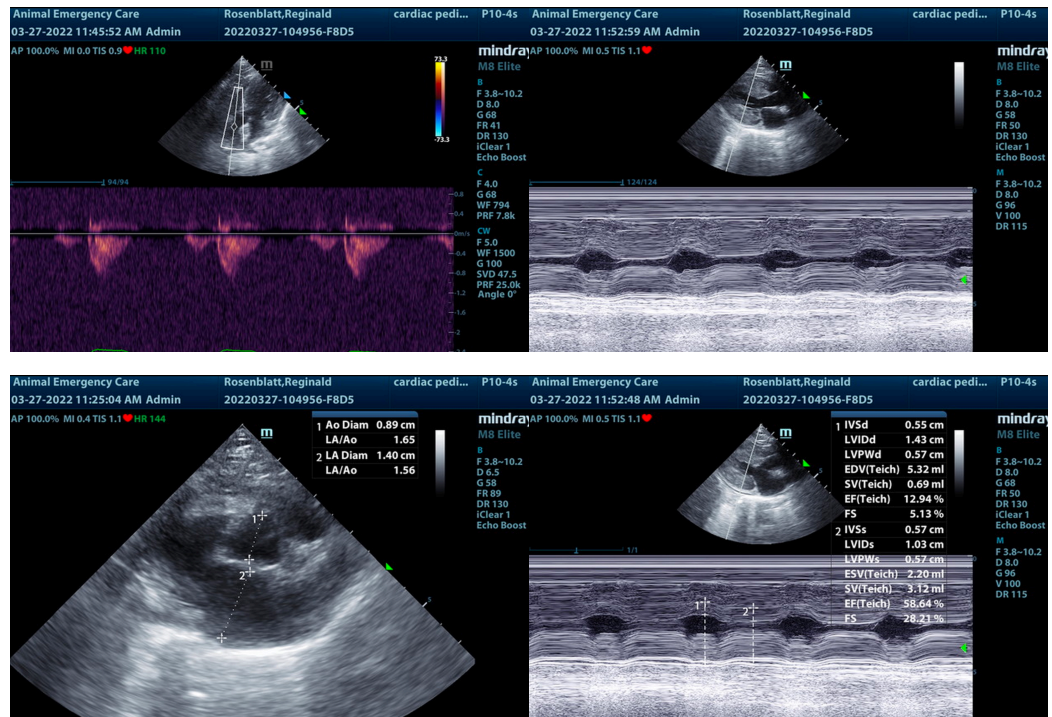
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com**

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