



PATIENT PRESENTING CLINICAL SIGNS

Roxie Callahan History: Presented for increased coughing, cardiomegaly getting worse, abd us as met check

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Terrier Mix

SEX

Spayed female

AGE

11 years

WEIGHT

19 lbs

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Prolapse of the mitral valve was noted. Doppler indicated measurable insufficiency. The **left ventricle** presented normal thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **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 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. 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). No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. Arrhythmogenic activity appeared to be present in this patient. Bradyarrhythmia was noted.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jenn

HOSPITAL NAME

Rockaway AH

REFERRING VET

Dr. Maniar

INVOICE

46544

DATE

8/10/23

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base;)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	>5.0	NM	1.5	-	50	80	0.2
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	120	NM	0.5	19 lbs	4.3	2.8	



PATIENT

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ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilatation was present. Mineralization was noted in the kidneys. The right kidney measured 4.67 cm. The left kidney measured 4.44 cm.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having largely normal shape, size, position and acceptable echogenicity for this age group and breed. Some heterogeneity was noted within the adrenal parenchyma without concerning capsular distortion. These changes are likely age related but should be monitored by sonogram should the patient be suspected of having adrenal disease. The right adrenal gland measured 2.24 x 0.95 cm at the cranial pole and 0.69 cm at the caudal pole. The left adrenal gland measured 1.73 x 0.63 cm at the caudal pole and 0.53 cm at the cranial pole.

Spleen

The **spleen** revealed a focal, hypoechoic 1.3 cm cystic nodule at the cranial body. This may be benign.

Liver

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. Multi-focal, non-disruptive nodules were noted. There was no overt suspicion of neoplasia.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.



PATIENT

Pancreas

Roxie Callahan

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

SPECIES

Canine

ULTRASONOGRAPHIC FINDINGS

BREED

Terrier Mix

Non-obstructive nephrolithiasis. Mild, degenerative renal changes.

Mitral insufficiency, left atrial enlargement. Bradyarrhythmia.

Splenic cystic nodule, concerning.

SEX

Spayed female

Vacuolar hepatopathy pattern with a minor potential for metastatic disease.

AGE

11 years

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I recommend initialing Pimobendan at 0.3 mg/kg b.i.d. Blood pressure measurements are warranted. Ace inhibitor, Spironolactone can be considered, yet there is no consensus on its utilization at this level of B2 valvular disease. Lasix trial in addition can be considered if the initial triple therapy does not resolve the cough. Cough suppressants and assessment for primary respiratory disease is indicated.

WEIGHT

19 lbs

FNA of the splenic nodule or direct splenectomy is indicated. Direct treatment of the cardiac enlargement, valvular disease, B2-B2+ is recommended first. Recheck sonogram is recommended in 2 weeks of the splenic nodule to assess for any growth if direct splenectomy is not to be performed.

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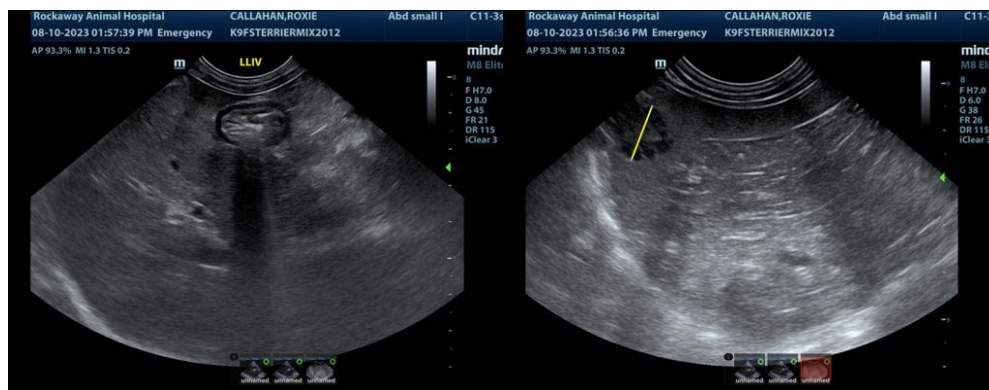
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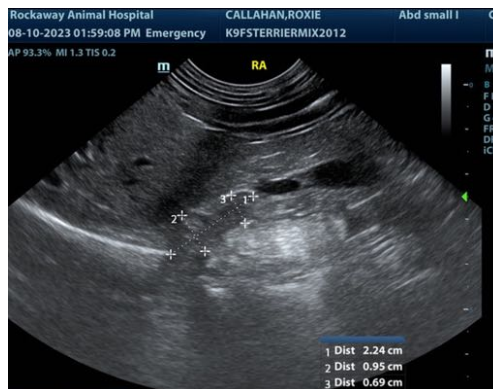
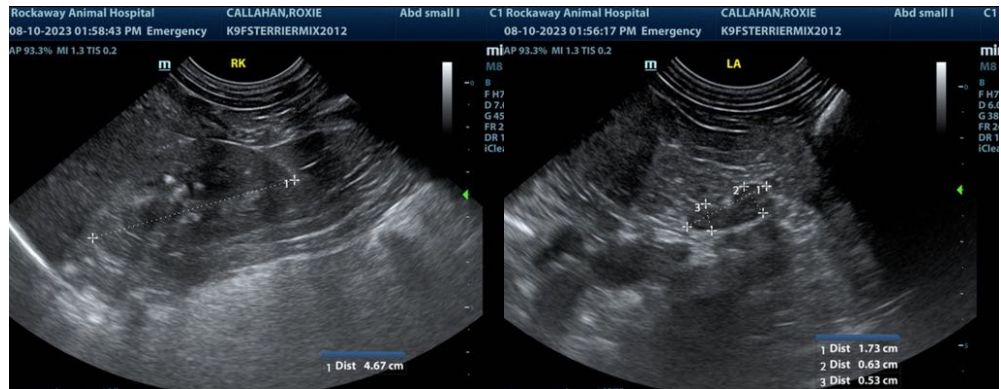
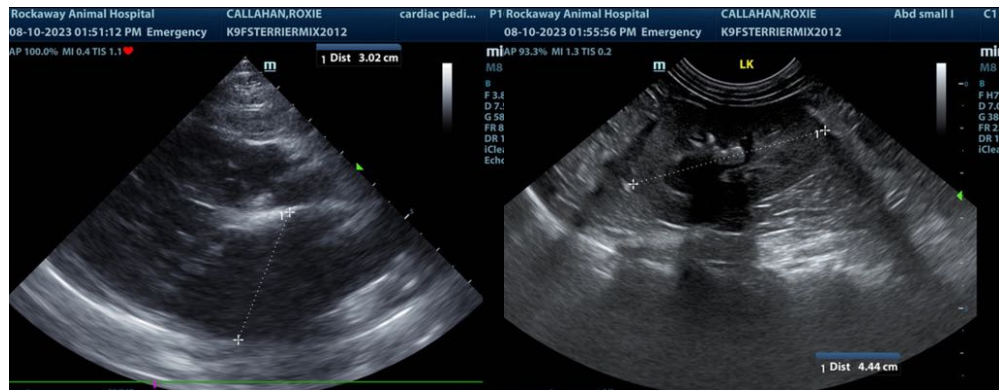
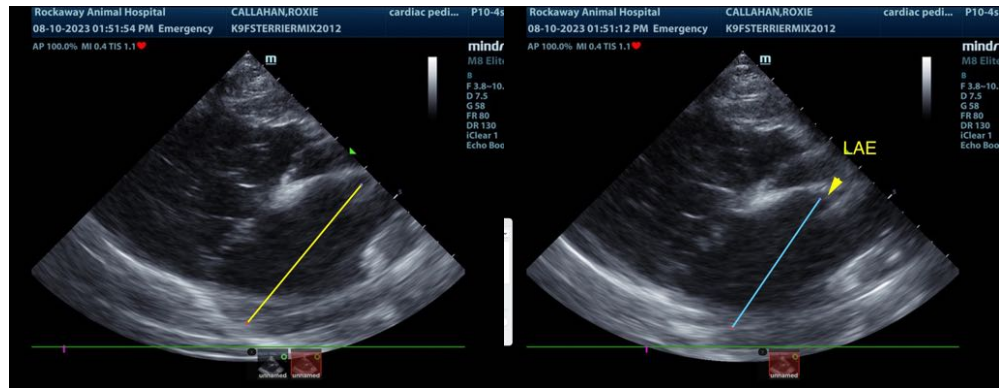
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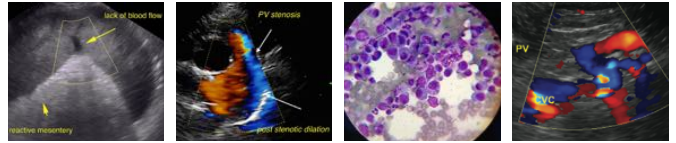
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PATIENT

Roxie Callahan

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.

SPECIES

Canine

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.

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Terrier Mix

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

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