



PATIENT

Valentina Grishina

SPECIES

Feline

BREED

DSh

SEX

FS

AGE

7 years

WEIGHT

7.3 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING

PERFORMED BY

Amanda Crook -
SDEP Certified
Clinical Sonographer

HOSPITAL NAME

Rivers Edge PMC

REFERRING VET

Dr. David Gray

INVOICE

12878

DATE

12/21/21

PRESENTING CLINICAL SIGNS

P presented for acute respiratory distress BP Doppler: 112, 110, 114

Abnormal PE/Chem/CBC/UA Results: Labwork WNL - see attached See attached radiographs - pulmonary changes with poss cardiac silhouette enlargement

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	0.55	1.2	0.59	41.7	76.0
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	2.2	2.1	1.9	1.2	1.1	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

The echocardiogram in this patient demonstrated excessive **left atrial** size and structure without overt evidence of "smoke" or thrombi. The cranial and caudal **mitral** valve leaflets appeared mildly thickened with some insufficiency noted on Doppler. The **left ventricle** presented normal to borderline thickened free wall and septal appearance compared to normal for this species. The **myocardium** exhibited increased echogenicity with evidence of myocardial remodeling and potential evidence of fibrosis. Subtle evidence of papillary muscle hypertrophy was present within the left ventricle lumen. **Contractility** of the ventricular walls was adequate yet subjectively decreased exhibited by the fractional shortening measurement above and compared to expected normal left ventricle systolic function. The **left ventricular outflow** tract demonstrated turbulent laminar flow. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated linear morphology. The **right ventricle** was of normal size with normal chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter. Mild **pericardial** free fluid was noted without overt evidence of concurrent free pleura fluid. Diffuse comet tail artifact was noted in the lung, which may indicate pulmonary microconsolidation, edema, or other pulmonary pathology. No echographically detectable evidence of infiltrative disease was visible and considered unlikely. The mediastinum and pericardial regions were free of overt masses in the visible window.



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ULTRASONOGRAPHIC FINDINGS

Primary Findings

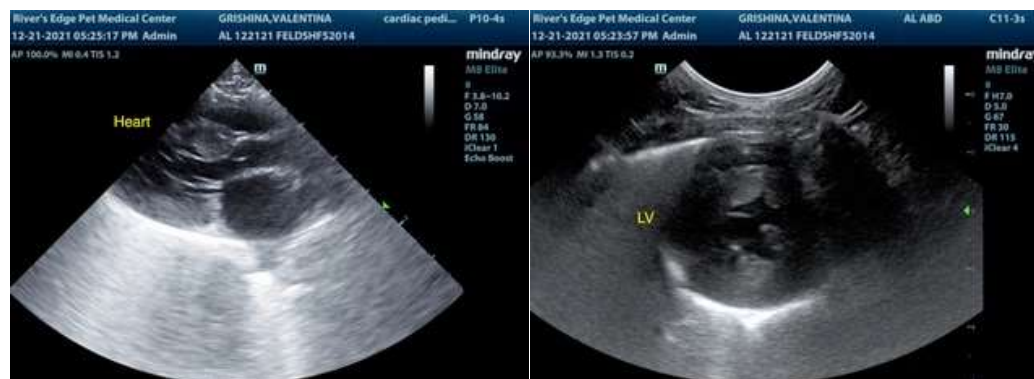
- Moderate to severe left atrium enlargement - no evidence of smoke or thrombi
- Left ventricle myocardial remodeling with normal to borderline increased IVS and LV free wall thickness
- Adequate yet mildly decreased LV systolic function, suspect diastolic dysfunction

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Considerations for the heart may include restrictive / unclassified cardiomyopathy or burn-out to end-stage hypertrophic cardiomyopathy, which may present in a similar sonographic manner. Evidence of significant LV remodeling and fibrosis consistent with diastolic dysfunction was present.

The moderate to severe left atrium enlargement was consistent with likely mild cardiogenic pericardial effusion with potential for pulmonary edema, given the presence of the pulmonary comet-tail artifact. This also indicates current and increased risk going forward for recurrent episodes of congestive heart failure, arrhythmogenic disease, and potential sudden death.

Additionally, risk of thrombus formation is elevated. Consider hospitalization for stabilization with injectable Lasix until patient is stabilized. Lasix 1.0-2.0 mg/kg PO BID, Clopidogrel 75.0 mg tablet (1/4 tab) PO SID +/- off-label Pimobendan 1.25 mg PO BID are warranted. Monitoring of renal parameters, blood pressure, and ideally ECG is advised. Recheck echocardiogram is suggested in 6 months, sooner if continued or persistent clinical signs of congestive heart failure are noted.





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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.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com