



**PATIENT PRESENTING CLINICAL SIGNS**

Leto Elig History: Progressive cardiac murmur. Current Meds: Furosemide- started 7/10/2023  
 Abnormal PE/Chem/CBC/UA Results: BUN 43 (31 H); Cr 1.6; U/A-pending

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

**BREED**

Chihuahua

**SEX**

Neutered male

**AGE**

13 years

**WEIGHT**

4.125 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 anterior mitral valve leaflet 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. Some lung rockets/B lines were noted.

**INTERPRETED BY**

Eric Lindquist, DMV  
 DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Shari Reffi CVT

**HOSPITAL NAME**

Andover AH

**REFERRING VET**

Dr. Hummel

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	5.13	2.9	NM	1.4			NM
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		1.0	0.66	4.12 lbs	2.8		

**INVOICE ULTRASONOGRAPHIC FINDINGS**

76084 Mitral insufficiency.

**DATE**

7/11/23

Mild left atrial enlargement, primarily in the LA max position.  
 Early stage B2 valvular disease.



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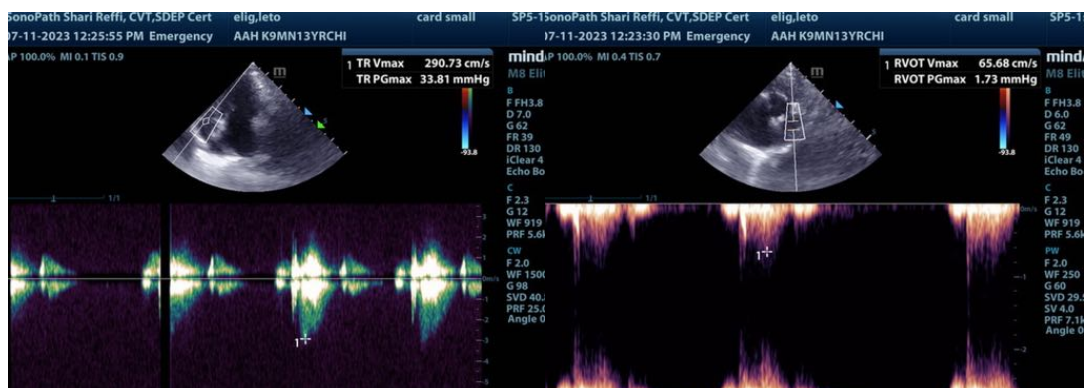
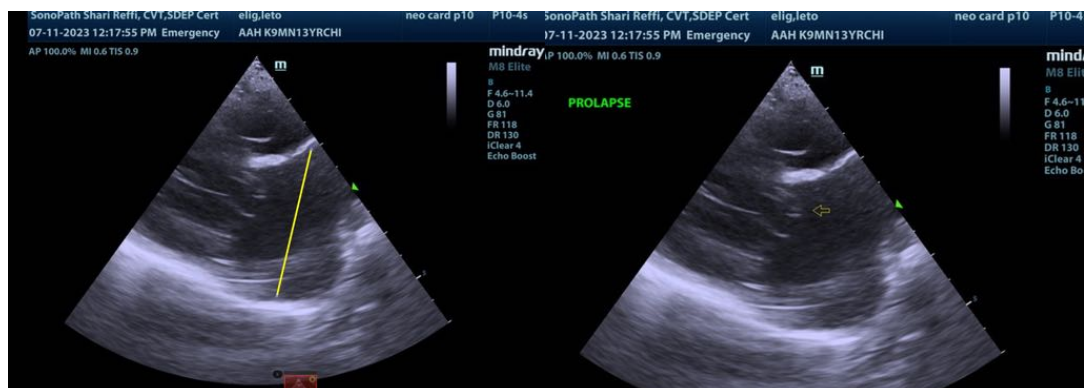
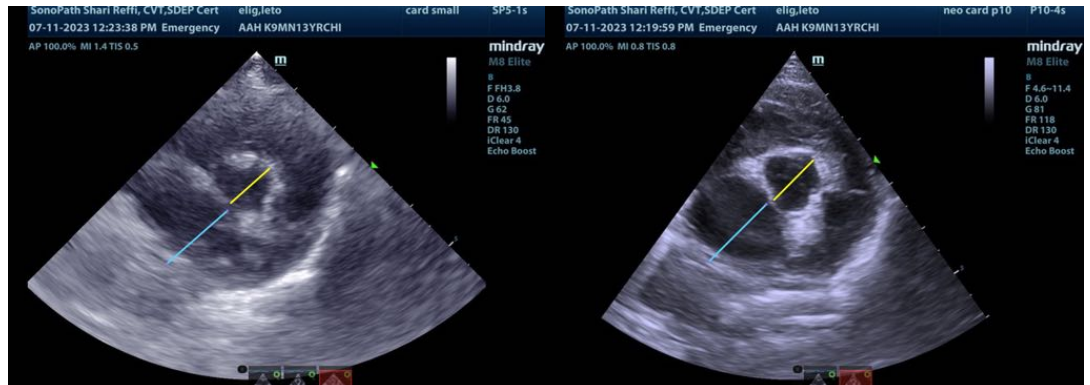
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The Furosemide may be reducing the left atrial size. I recommend adding Pimobendan at 0.3 mg/kg b.i.d. If hypertension is present with systolic blood pressure >160 then ace inhibitor is indicated. Recheck echocardiogram is recommended in 3-6 months. Lasix may be able to be diminished after Pimobendan has been initiated over a 3-5 day period. I recommend monitoring BUN, creatinine, blood pressure and urine specific gravity.

The heart has some volume overload and is working to compensate for the valvular insufficiency. Target respiratory rate is < 20 resp/minute after therapy. After initiating therapy, I recommend recheck on the clinical exam, BUN, Creatinine, USG, Chest radiographs & Blood pressure in 5-7 days. Recheck echo in 1 month. Earlier if clinical decompensation is occurring. I do not recommend anesthesia at this time until stabilization has occurred on the recommended medications. Repeat preanesthetic echo is ideal if anesthesia is eventually necessary





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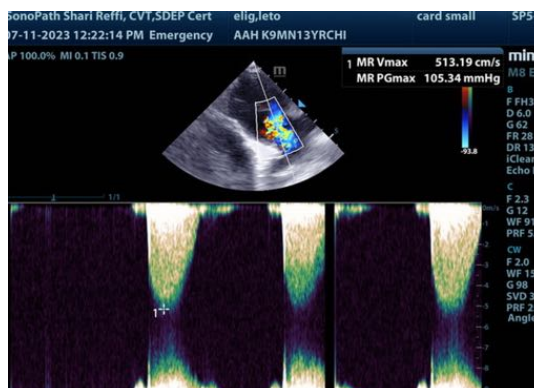
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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