



**PATIENT PRESENTING CLINICAL SIGNS**

Tuggs Sharer

History: This is recheck cardiac ultrasound study. Tuggs had his first echocardiogram in 12/2020, at which time he was diagnosed with stage B2 MMVD with decreased contractility. He was started on taurine and triple therapy as a result. He has apparently been stable, but seems more tired and has less stamina recently, according to the owner. On presentation on Thursday, 8/19/21, he had a 4/6 intensity cardiac murmur and normal respiratory rate or panting. His blood pressure was normal, ranging from 133/76 (89) to 143/57 (75) mmHg systolic/ diastolic (MAP). He was given 7.3mg Butorphanol IV to lightly sedate for the ultrasound today.

**SPECIES**

Canine

**BREED**

Pitbull

**SEX**

Neutered male

**AGE**

11 years

**WEIGHT**

80.4 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. McFeely

**HOSPITAL NAME**

Straley VA

**REFERRING VET**

Dr. McFeely

**INVOICE**

91404

**DATE**

8/20/21

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. **Mitral** valve insufficiency was noted on spectral Doppler. The **left ventricle** presented 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** 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. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window. Periodic arrhythmia was noted in this patient. However, this may be a sinus arrhythmia. The hepatic veins were not dilated.

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			1.1	1.3	40		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				
PATIENT			0.5	80.4 lbs	3.0	4.0	



**PATIENT**

Tuggs Sharer

**ULTRASONOGRAPHIC FINDINGS**

Persistent mitral insufficiency.

**SPECIES**

Sinus arrhythmia.

Canine

All four chambers have normalized.

**BREED**

Pitbull

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cardiac presentation has significantly improved compared to the prior sonogram regarding contractility and volume. EKG is warranted to assess for arrhythmogenic disease +/- Holter monitor given the patient's history. Abdominal sonogram is recommended to assess for concurrent disease. However, the heart appears to be of normal volume and contractility on the current protocol. If taurine deficiency was playing a role originally in the presentation then continual supplementation with taurine and gradually weaning off the cardiac medications could be considered. However, a recheck echocardiogram is warranted 2-3 weeks after stopping medications as nutritional cardiomyopathy may be the primary issue or past episode of myocarditis that is currently resolved.

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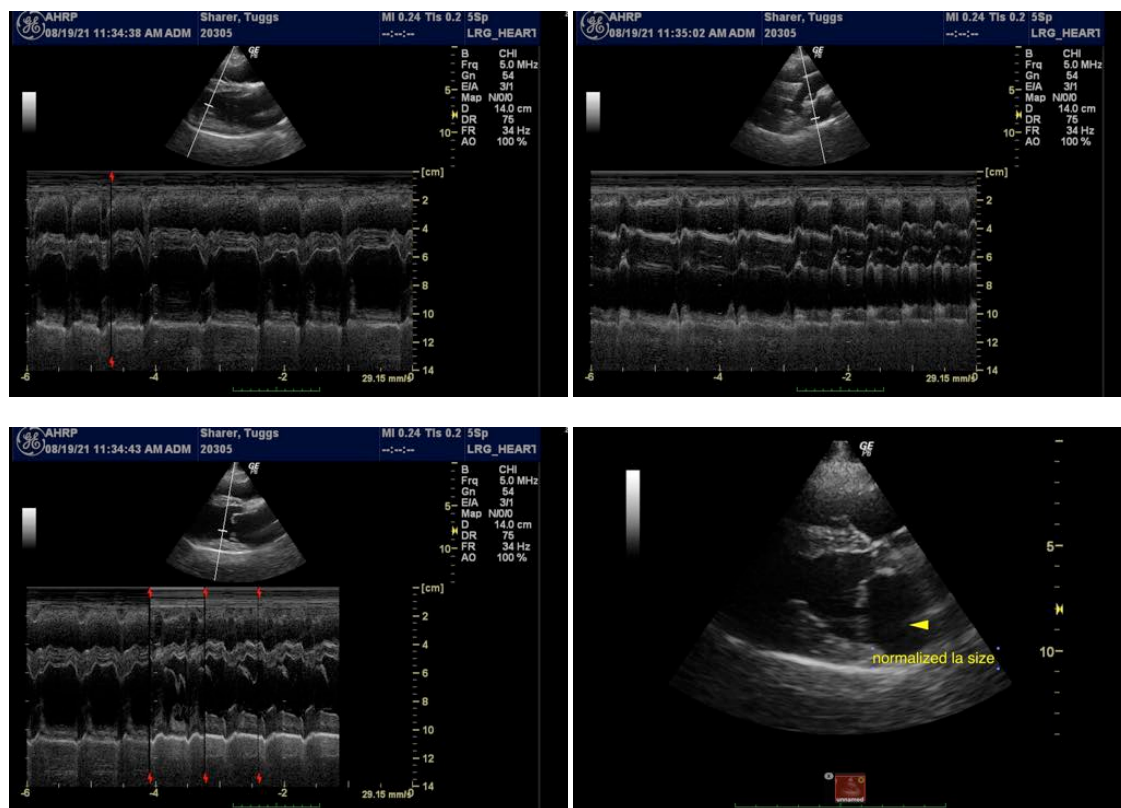
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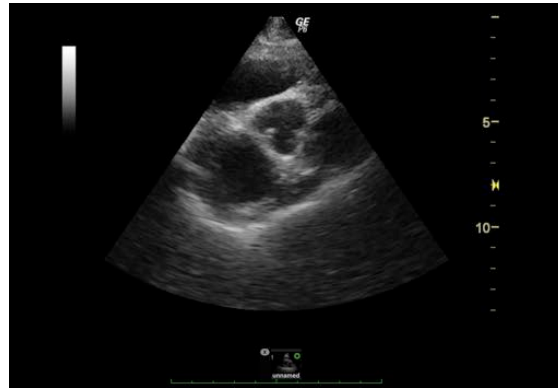
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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