



**PATIENT PRESENTING CLINICAL SIGNS**

Maddie Cook

History: 6 MONTH FOLLOW-UP: We have been tracking Maddie's heart for a few years.  
 Abnormal PE/Chem/CBC/UA Results: PE: 3/6 SYSTOLIC HEART BASE MURMUR. STAGE III DENTAL DISEASE. REMAINDER NORMAL. NO RECENT LABS.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

**BREED**

Whippet

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. Ruptured chordae tendineae was noted with mitral valve prolapse. 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.

**SEX**

Spayed female

**AGE**

11 years

**WEIGHT**

25.6 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

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	6.14	3.55	NM	2.24	37	67	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				25.6 lbs	5.0	5.35	

**IMAGING PERFORMED BY**

Dr. Anderson

**HOSPITAL NAME**

Elizabeth AH

**REFERRING VET**

Dr. Anderson

**INVOICE**

39677

**DATE**

9/28/22



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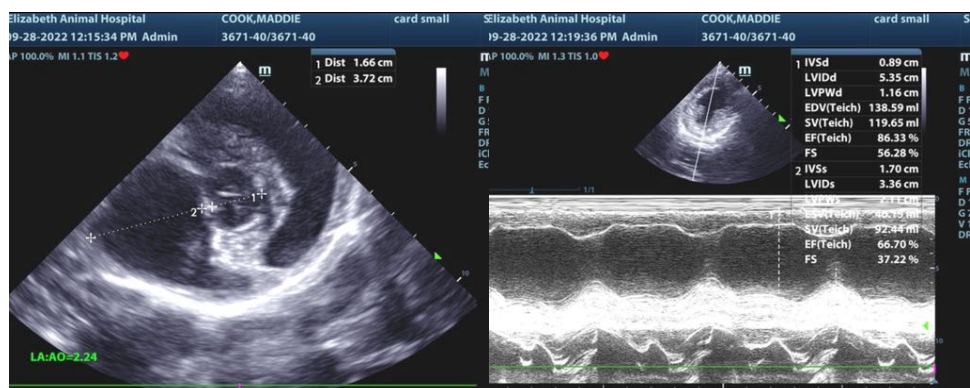
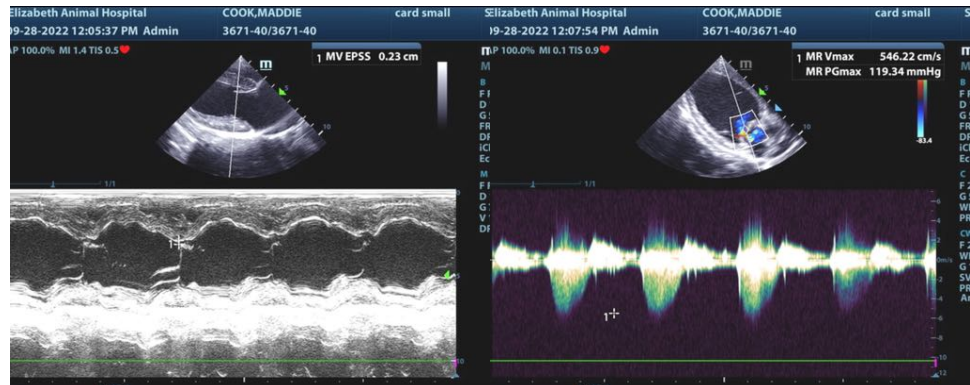
**ULTRASONOGRAPHIC FINDINGS**

Stage B2 mitral valve prolapse.

Ruptured chordae tendineae.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

If the patient is not on any current medication then Pimobendan would be indicated at 0.3 mg/kg b.i.d. Consideration to Spironolactone at 1-2 mg/kg b.i.d. and ace inhibitor at 0.5 mg/kg s.i.d. progressing to b.i.d. can also be considered. I am concerned that this patient is entering into C1 valvular disease. However, there is no consensus regarding ace inhibitor and Spironolactone in this type of presentation. Sleeping respiratory rate target should be less than 25/minute. I believe there is some anesthetic risk. I recommend treatment first with a recheck echocardiogram in 2 weeks prior to anesthesia especially given the mitral valve prolapse.





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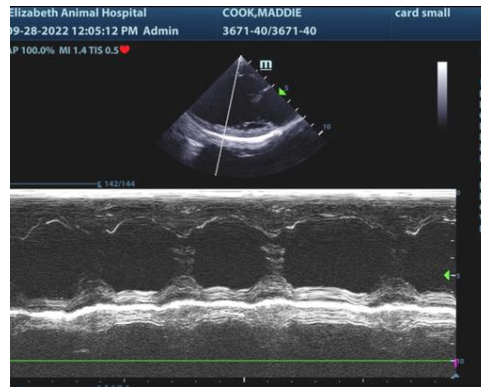
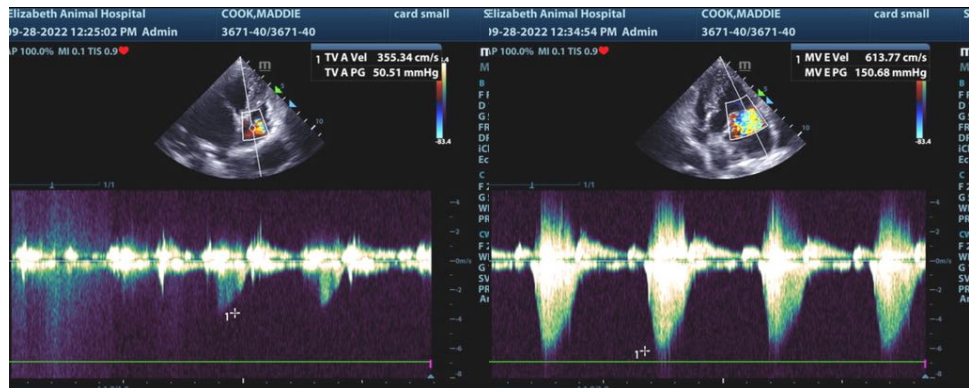
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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