



PATIENT PRESENTING CLINICAL SIGNS

Cubby Maldonado

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered male

AGE

15 ½ years

WEIGHT

14.8 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Kitz

HOSPITAL NAME

Woodlands AH

REFERRING VET

Dr. Kitz

INVOICE

43889

DATE

4/19/23

History: Patient has had a significant left and mild right parasternal heart murmur for a few years. Back in 2022 he ended up at the urgent care in the evening due to acute onset labored breathing, and was diagnosed with CHF. He was placed on vetmedin, cough tabs, and furosemide and did very well. The owners ran out of the furosemide after a few weeks and he was doing well so they only continued the vetmedin once the acute crisis was resolved. He was stable with no evidence of ongoing CHF on radiographs at the 2-3 week post-CHF recheck, so we did not refill the furosemide. He has needed dental extractions for years, but we keep putting it off due to requiring an echo before we would feel comfortable moving forward.... then he went into CHF so we tabled the idea. Now the dog has ongoing horrible dental infection, some teeth that just need to be plucked out and general cleaning. He has been on vetmedin for over a year and enalapril.

Abnormal PE/Chem/CBC/UA Results: BUN and creatinine are slightly over normal range Blood pressure 150

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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. The anterior mitral valve leaflet was clubbed. 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. The hepatic veins were not dilated.


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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	<1.6	28-40	40-100	<0.6
PATIENT	>5.0	2.0	1.8	2.0	40	72	0.1
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			1.2	14.8 lbs	4.08	3.33	

ULTRASONOGRAPHIC FINDINGS

Partially compensated stage C1 valvular disease with persistent left-sided volume overload and mitral valve prolapse. This patient likely underwent ruptured chordae tendineae at the original clinical presentation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given that this patient is already treated with Vetmedin and Furosemide this is likely an improved presentation compared to the initial clinical presentation. I recommend adding ace inhibitor at 0.5 mg/kg s.i.d. progressing to b.i.d. and diminishing Lasix and adding Spironolactone at 1-2 mg/kg b.i.d. The idea behind this protocol is to minimize the necessary Lasix for maintenance so eventual reacutization or decompensation occurs then Lasix is available for effective use.

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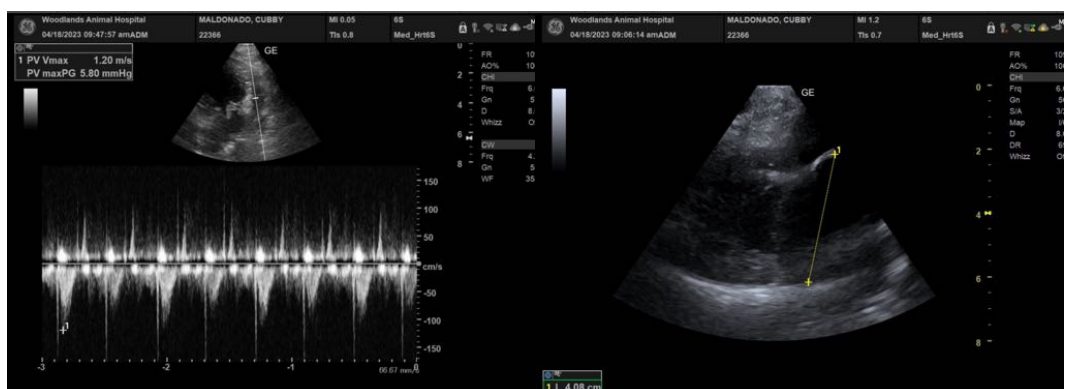
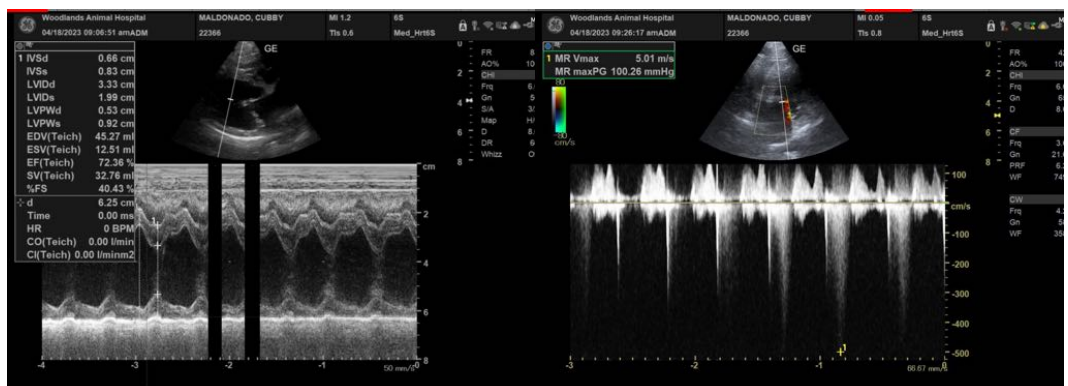
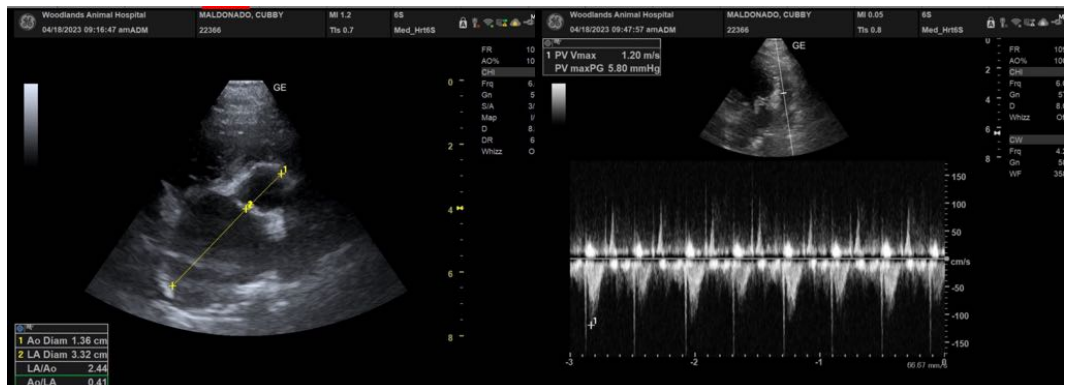
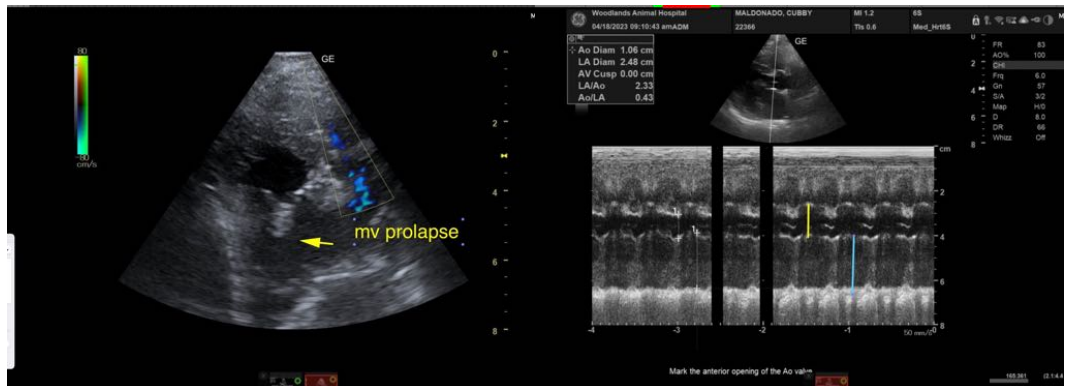
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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info@SonoPath.com

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