



PATIENT PRESENTING CLINICAL SIGNS

Shakespeare Stark Coughing, murmur, collapsing events, Heart Rate and Respiratory Rates 126 HR, 30 RR

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

13 years

WEIGHT

7.25 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING
PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Countryside AC

REFERRING VET

Dr. Cox

DATE

1/31/22

Invoice
95673

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 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** insufficiency was noted at approximately 4.0 m/sec. 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.

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	5.5		1.9	> 2.0	57	88	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				
PATIENT	182	1.1	0.67	7.25 lbs	3.1	2.81	

ULTRASONOGRAPHIC FINDINGS

Advanced stage B2 to early C1 valvular disease.

Tricuspid insufficiency.



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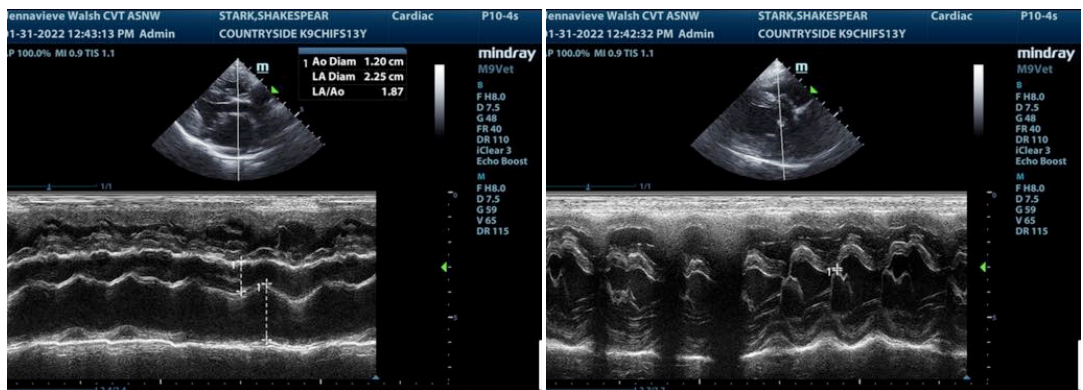
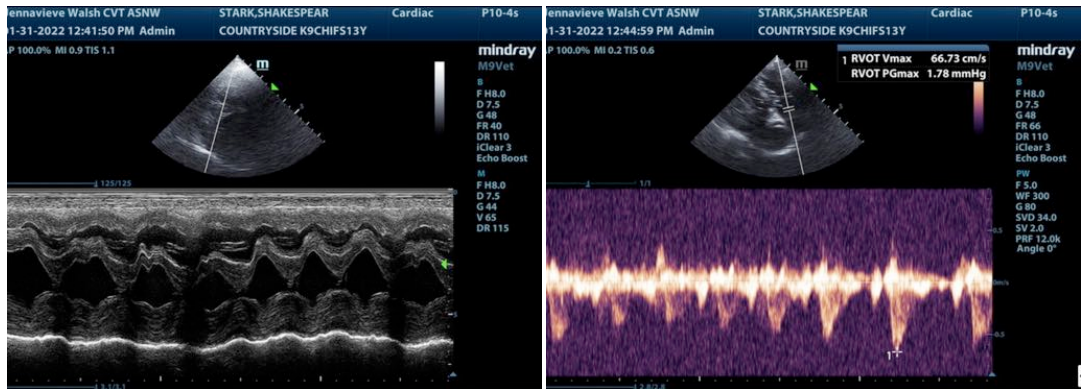
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I recommend quadrotherapy in this patient. Lasix 2-3 mg/kg b.i.d., Spironolactone at 1-2 mg/kg b.i.d., Pimobendan 0.3 mg/kg b.i.d., ACE inhibitor 0.5 mg/kg s.i.d. progressing to b.i.d. over 5-7 days. Given the mitral valve prolapse and patient history along with the echocardiogram recent ruptured chordae tendineae is likely the issue. Assessment to response to initial therapy is recommended over the next 7-10 days. Hycodan may be utilized for cough suppressant. Adding Sildenafil may be an issue depending upon follow-up echocardiogram parameters.

B2/C1: The heart is in a somewhat precarious state with volume overload and a heart that 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 pre-anesthetic echo is ideal if anesthesia is eventually necessary.





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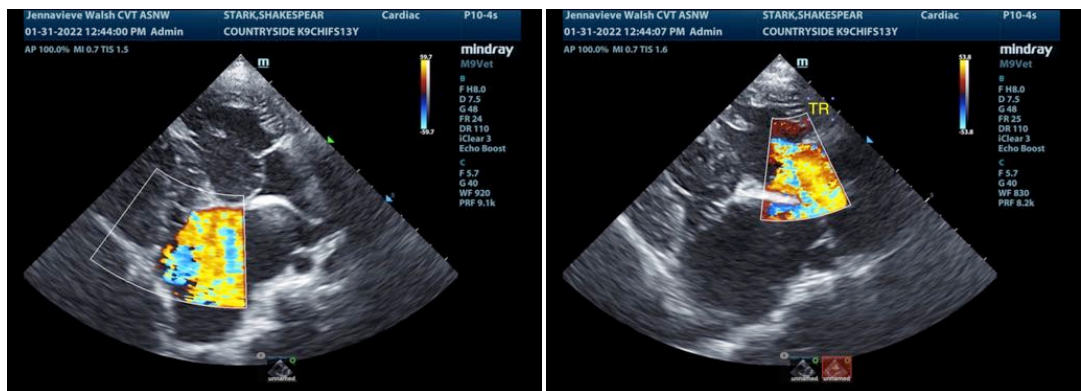
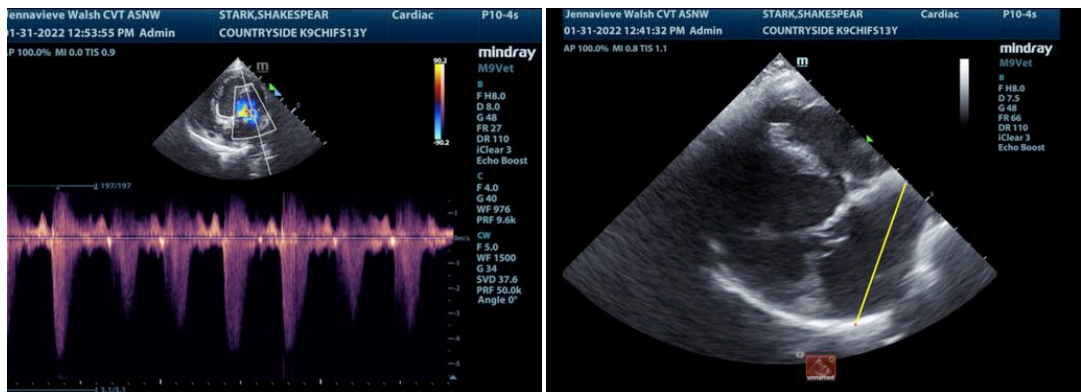
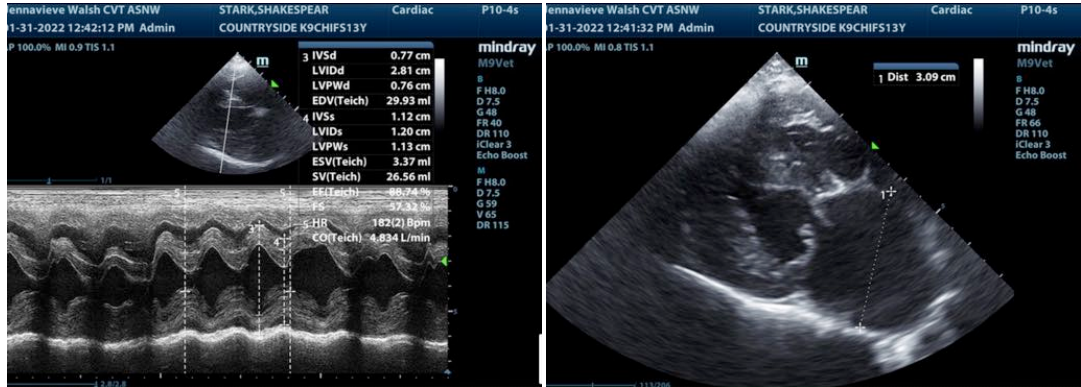
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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