



PATIENT

Waffles Hughes

SPECIES

Canine

BREED

Bichon Frise Mix

SEX

Spayed Female

AGE

12 years

WEIGHT

23.5 lbs

PRESENTING CLINICAL SIGNS

Grade 5/6 murmur, increased cough and throaty gag. Radiographs showed increased bronchial pattern. Cough did improve on Clavamox and Theophylline. Recurred last week. Owner thought breathing was labored last night - appetite normal, dental disease. Current meds: Dasuquin, Wellactin.
Abnormal PE/Chem/CBC/UA Results: Alk. Phos. 149, BUN 45, creat. 1.5, glob. 3.7, SDMA 14.7.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The **left atrial** dilation was moderate to severe. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. Prolapse of the anterior mitral valve leaflet was noted. 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** 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. Comet tail lung pattern was noted.

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS,
CEO of SonoPath.com

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Westwood Regional
VH

REFERRING VET

Dr. Hartwick

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	<1.3	28-40	40-100	<0.6
PATIENT	5.5		2.0	2.3	39	71	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		1.44	1.14	23.5 lbs	4.4	3.66	

INVOICE

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ULTRASONOGRAPHIC FINDINGS

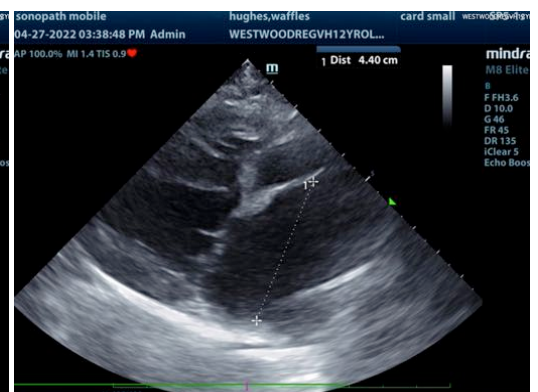
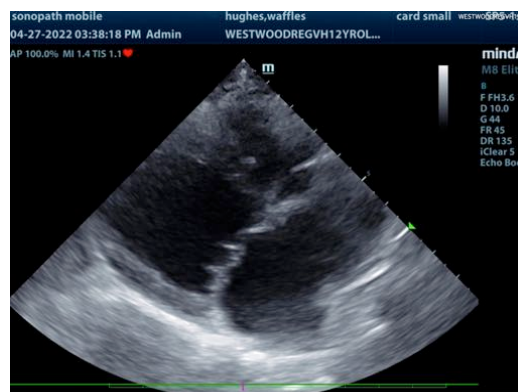
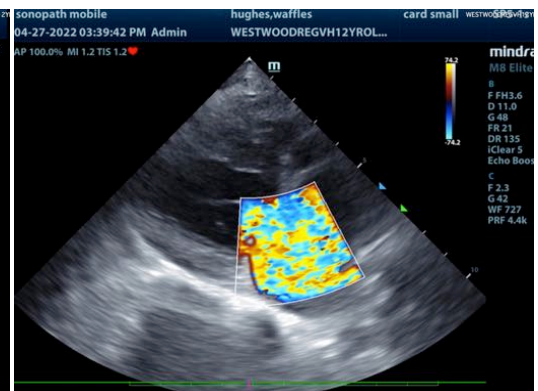
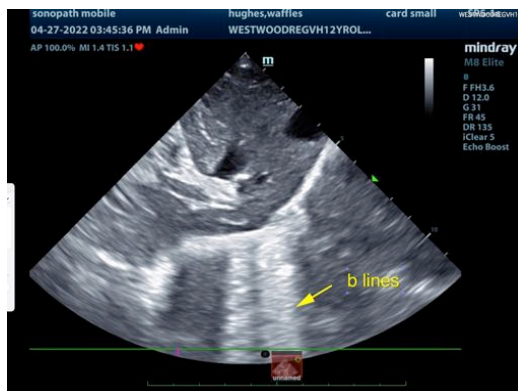
Advanced stage B2+/C1 valvular disease.

Comet tail lung pattern.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I recommend triple therapy in this patient as emerging C1 valvular disease is a strong concern given the degree of volume overload of the left atrium. I recommend chest radiographs to assess for lung disease/pulmonary edema. Quadro therapy with Pimobendan at 0.3 mg/kg b.i.d., ace inhibitor s.i.d. to b.i.d. at 0.5 mg/kg, Lasix at 1-2 mg/kg b.i.d. and Spironolactone at 1-2 mg/kg b.i.d. Recheck echocardiogram in 10 days.

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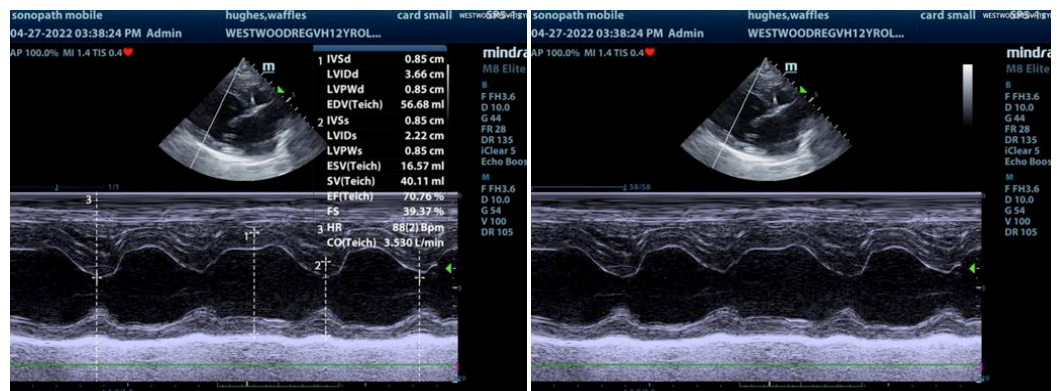
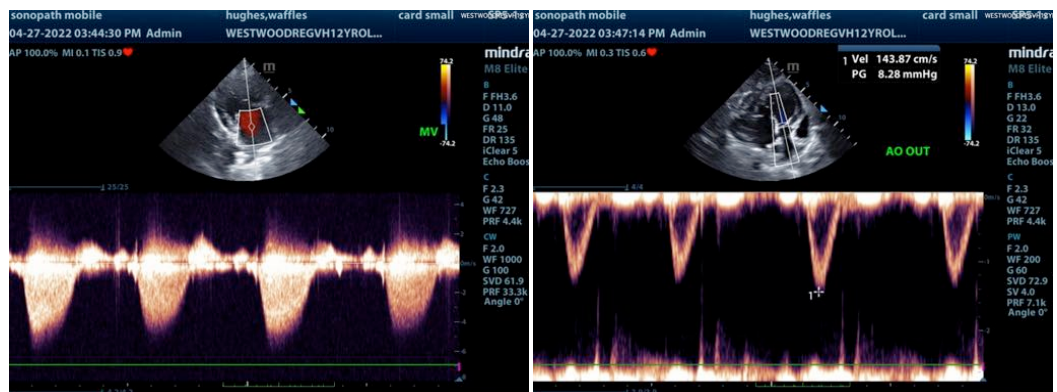
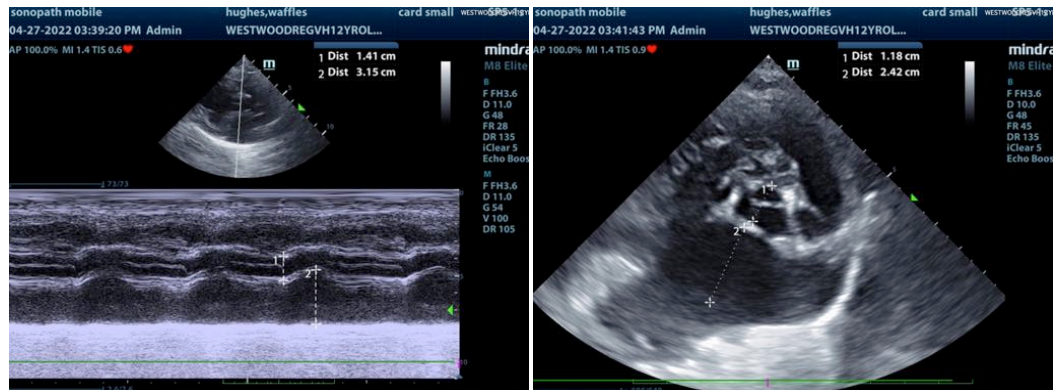
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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, CEO of SonoPath.com

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