

PATIENT PRESENTING CLINICAL SIGNS

Bolt Bolt enlarged heart

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Terrier X

SEX

Neutered Male

AGE

10 Years

WEIGHT

30 Pounds

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	5.4		1.8	2.3	57	88	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	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	138	2.03			4.92	3.57	

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

The Pet Clinic

REFERRING VET

The Pet Clinic

INVOICE

42476

DATE

10/28/22

Cardiac Presentation

The echocardiogram for this patient presented moderate to severe **left atrial enlargement** expressed both in the LA/AO and LA max measurements. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. 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 noted at 3.0 m/sec, velocity consistent with early pulmonary hypertension. 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. Arrhythmia noted during the exam.

ULTRASONOGRAPHIC FINDINGS

- Advanced Stage B2+ valvular disease with early pulmonary hypertension
- Moderate left atrial enlargement and periodic arrhythmia



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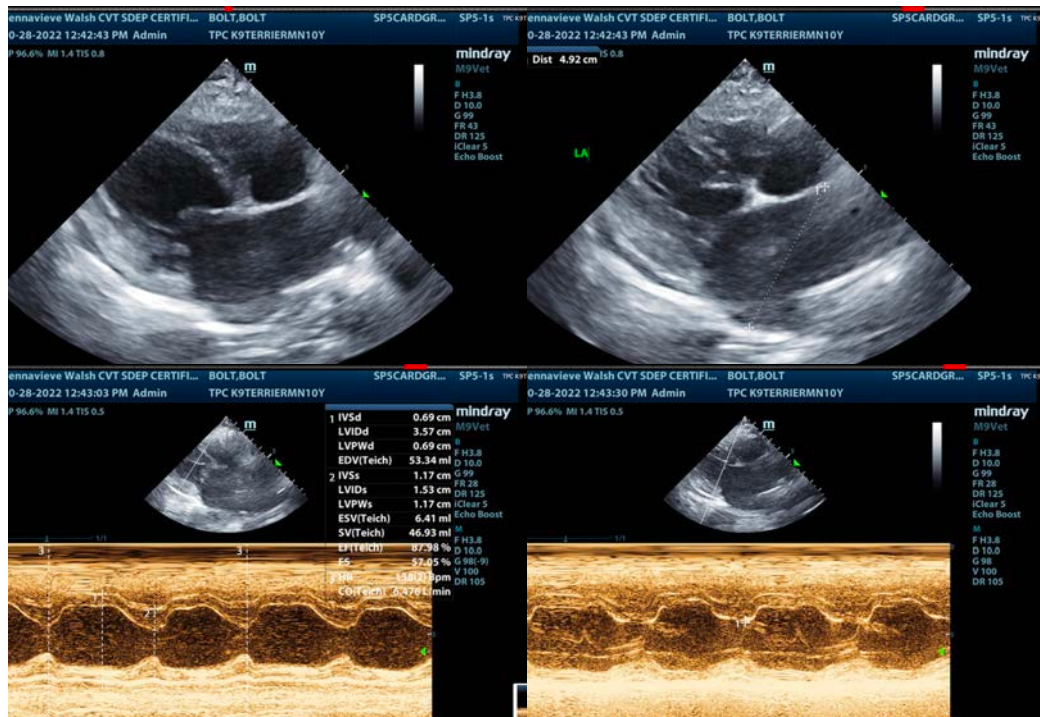
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommend EKG and blood pressures in this patient. Pimobendan 0.3 mg/kg BID, ACE inhibitor 0.5 mg/kg SID progressing to BID, and Spironolactone at 1-2 mg/kg BID. I'm concerned for this patient entering into C1 valvular disease based on the clinical history and depending upon radiographic findings. Recheck echo in 1-3 months depending upon how the patient progresses, earlier if clinical signs are persistent and the patient does not stabilize.

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. There is moderate anesthetic risk for this patient. I recommend cardiac treatment prior to sedation unless only light opioids are utilized which would have minimal effect on heart function.





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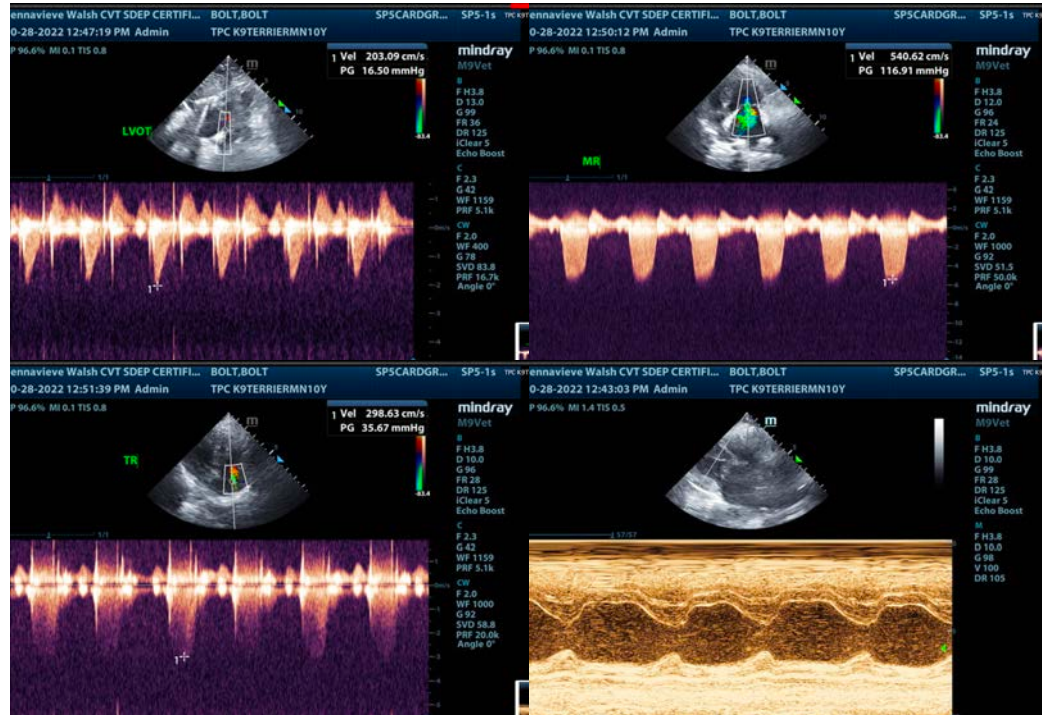
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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