



**PATIENT**

Coffee Martin

**SPECIES**

Canine

**BREED**

Sheltie

**SEX**

Spayed Female

**AGE**

11 Years

**WEIGHT**

7.3 kg

**INTERPRETED BY**

R. McKenzie Daniel,  
 DVM, DABVP (Canine  
 / Feline Practice)

**IMAGING PERFORMED BY**

Amanda Stewart

**HOSPITAL NAME**

Waterloo West Animal  
 Hospital

**REFERRING VET**

Dr. Makkapati

**INVOICE**

16773

**DATE**

06/18/26

**PRESENTING CLINICAL SIGNS**

Coughing getting worse, Grade 4/6 heart murmur; X rays thorax could see narrowing of the trachea; enlarged cardiac silhouette with bronchial pattern; VHS 11.13;VLAS 2.4 Current Medications: Hycodan syrup

Total protein 48; Alb 23 Primary Question to Be Answered in This Exam cough - cardiogenic vs tracheitis See rads attached

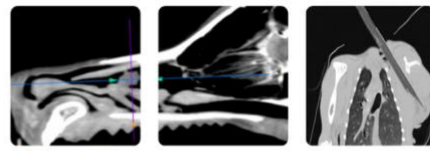
**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	5.4	~2.0	NM	1.33	39	72	0.2
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	LAD LA MAX 4 Chamber	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	NM	1.8	1.3	7.3 kg	2.7	2.7	--

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 LA measurement methods. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis. Mild valvular prolapse. Doppler indicated measurable moderate to significant eccentric MR. 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 mild thickening with mild TR on doppler. 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 cardiac / pericardial tumors was visible. No evidence of arrhythmia or hepatic congestion.

**ULTRASONOGRAPHIC FINDINGS**



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- Chronic mitral valve disease with mild valve prolapse (ACVIM stage B1).
- Tricuspid insufficiency- estimated pulmonary pressure gradient not consistent with pulmonary hypertension.

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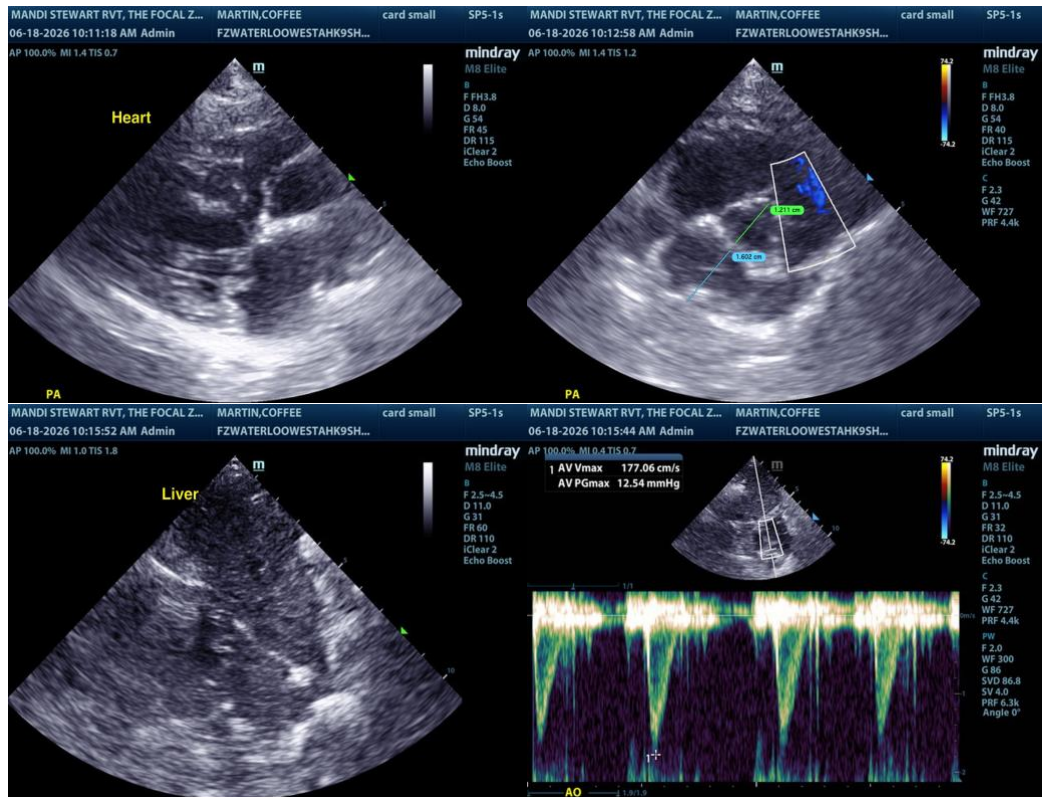
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The lack of LA enlargement indicates the current and future risk of complications, secondary to mitral insufficiency, at this stage is low. Without evidence of chamber enlargement or clinical pulmonary hypertension, the coughing in this patient appears non-cardiogenic in origin. No other indication for cardiac medications at this stage with respiratory support and correlation with three view chest radiographs to assess for primary pulmonary disease is recommended.

Cardiac prognosis is variable and sonographic monitoring is advised. Recheck echo is recommended in six months, sooner if clinically indicated. No cardiac anesthetic contraindications with risk considered mild. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.





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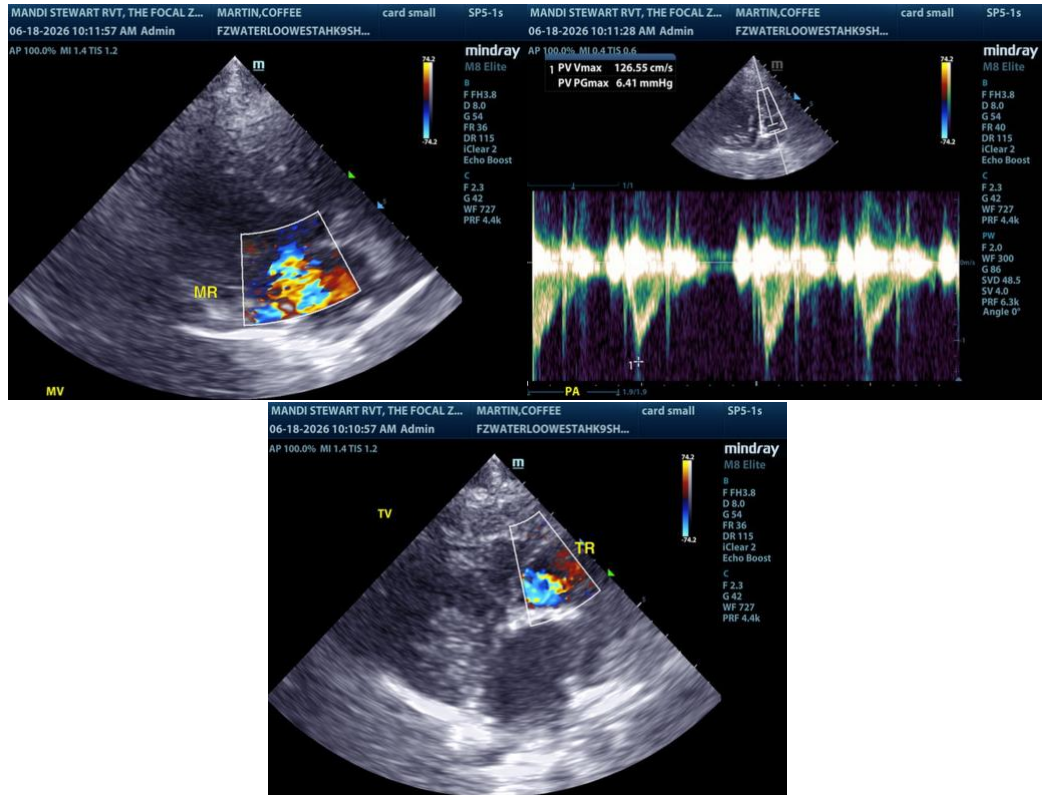
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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