



**PATIENT PRESENTING CLINICAL SIGNS**

Chloe Cherewka Sudden grade 5/6 left sided holosystolic murmur radiating to the right side. No symptoms  
Abnormal PE/Chem/CBC/UA Results: 4DX negative

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

**BREED**

Border Collie

**SEX**

Spayed Female

**AGE**

8 Years

**WEIGHT**

32

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			1.2	NM	32.4	64.3	0.49
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				
PATIENT	100	NM	NM		3.5	3.7	

**Cardiac Presentation**

**INTERPRETED BY**

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

**IMAGING PERFORMED BY**

Tasha

**HOSPITAL NAME**

Dillsburg VC

**REFERRING VET**

Dr. Jacobs

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented mild subjective vegetative thickening, suggestive of mild endocardiosis. No evidence of mitral valve leaflet prolapse or chordae tendineae rupture. 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.

**ULTRASONOGRAPHIC FINDINGS**

**INVOICE**

24783

**DATE**

8/18/21

- Overtly normal cardiac structure and function
- Mild subjective mitral valve endocardiosis, no evidence of mitral valve leaflet prolapse or chordae tendineae rupture



**PATIENT**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur was not definitively evident in this study. Given the description of the murmur with subjective mild mitral valve endocardiosis, mitral valve insufficiency may be considered a primary differential diagnosis in this case. Potential for another cause of the murmur cannot be definitively excluded, yet no evidence of systolic dysfunction or overt stenotic disease were noted. Non-obvious shunt is considered less likely given the age of the patient.

Without evidence of left atrial enlargement or increased left ventricular volume, cardiac medications are not overtly indicated at this time. However, prognosis at this stage may be considered highly variable, and serial echocardiographic monitoring is recommended for further assessment. Monitoring for clinical signs associated with heart disease (i.e., coughing, exercise intolerance, etc.) would be reasonable. Recheck echocardiogram recommended in 6 months, sooner if clinical signs consistent with heart disease develop.



The information and recommendations provided are based on the images presented by the referring veterinarian. 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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