



**PATIENT**

Roxy Falardeau

**SPECIES**

Canine

**BREED**

Maltese X

**SEX**

Spayed Female

**AGE**

11.5 Years

**WEIGHT**

9.2 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Kaitlyn Varga

**HOSPITAL NAME**

Shuswap VC

**REFERRING VET**

Dr. Kaitlyn Varga

**INVOICE**

26778

**DATE**

10/29/21

**PRESENTING CLINICAL SIGNS**

Presented for chronic cough of 1 year duration. Will have apparent syncopal type episodes during coughing. Coughing at least 4x a day. Minimal improvement with prednisone, hydrocodone, torbutrol. Abnormal PE/Chem/CBC/UA Results: Physical exam - Obese - chronic dermatitis - no murmur or arrhythmia noted on auscultation - no cough elicited on tracheal palpation Radiographs: unremarkable Referring vet wondering about pulmonary hypertension

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

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			NM	1.15	34	66	0.26
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	--	2.0	1.10		2.6	2.4	

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** 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. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

**ULTRASONOGRAPHIC FINDINGS**

- Normal echocardiogram



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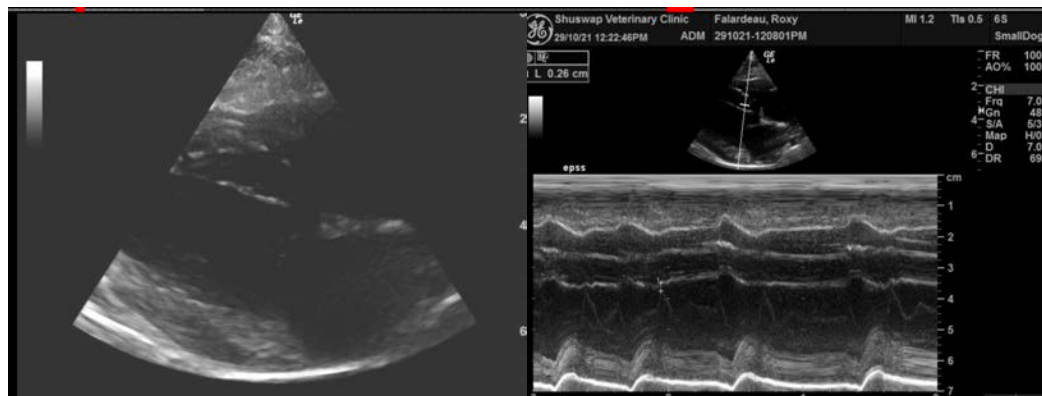
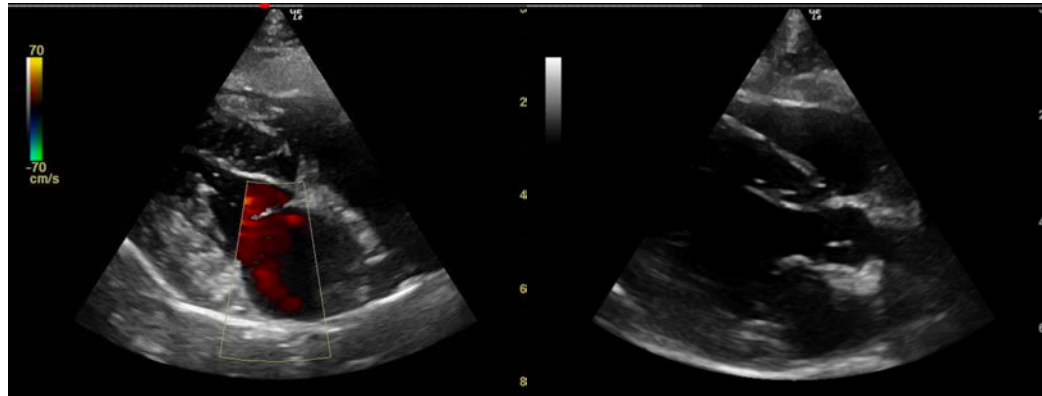
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No evidence of clinical pathology to be responsible for the history. Normal volume, contractility and structure. Holter monitor would be appropriate to assess for paroxysmal arrhythmia. Otherwise, reassessment of the syncope recommended as to possible underlying seizure activity or primary CNS disease. The cough is non-cardiogenic. With the syncope after coughing, "cough drop syndrome" may be in play in this patient and would necessitate either an event monitor or holter monitor depending upon the frequency.





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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.

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