


**PATIENT PRESENTING CLINICAL SIGNS**

Molly Miello History: Grade II/VI murmur with a snapping noise auscultated. Weight loss. No current meds.  
 Abnormal PE/Chem/CBC/UA Results: Pending

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**
**BREED**

Hound Mix

**SEX**

Spayed female

**AGE**

8 years

**WEIGHT**

38.2 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	<1.3	28-40	40-100	<0.6
PATIENT	5.4	3.0	NM	2.1	28.9	59.4	0.65
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	189	1.8	0.93		5.2	4.5	NM

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**  
 Shari Reffi CVT

**HOSPITAL NAME**

Shohola Veterinary Hospital

**REFERRING VET**

Dr. Gramazio

**INVOICE**

10461ag

**DATE**

04/27/2022

**Cardiac Presentation**

The echocardiogram in this patient demonstrated moderately increased left atrial size based on 2 different LA measurement methods. Deviation of the intra atrial septum toward the right atrium consistent with increased LA pressure was present. The cranial and caudal mitral valve leaflets presented minor vegetative thickening suggestive of endocardiosis. Doppler indicated measurable moderate primarily eccentric to mildly centralized insufficiency. The left ventricle presented thicknesses with linear contour and increased left ventricular volume. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. Contractility of the ventricular walls was mildly subnormal yet likely adequate as 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. Mild TR was present 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 infiltrative disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window.

**ULTRASONOGRAPHIC FINDINGS**



**PATIENT**

Molly Miello

- Moderate LA/LV enlargement.
- Mild subnormal LV systolic dysfunction.
- Moderate eccentric to mildly centralized MR.
- Mild TR-estimated pulmonary pressure gradient (approximately 36 mmHg) suggestive of mild elevated pulmonary pressure yet not overtly consistent with clinical pulmonary hypertension.

**SPECIES**

Canine

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**BREED**

Hound Mix

The cardiac presentation may suggest mild chronic degenerative valvular changes with secondary eccentric to mildly centralized MR and TR. The heart was not overtly consistent with DCM criteria yet potential for DCM like cardiomyopathy given the mild decreased LV systolic dysfunction may be possible. Some contribution of decreased LV systolic dysfunction owing to potential systemic disease given the patients weight loss cannot be excluded. Diet history may be considered if potential history of grain free or boutique diet. Regardless of classification the moderate LA enlargement and subnormal LV systolic dysfunction indicate that the current and future risk of complication is moderate to significantly elevated. Pimobendan 0.3 mg/kg PO BID +/- diuretic therapy i.e. Lasix 1-2 mg/kg PO BID at lowest effective dose to control clinical signs if evidence of elevated resting respiration rate or radiographic pulmonary edema are present. Assessment of systemic BP is suggested. If >130, ACE inhibitor medication could be considered (not advised if BP is <130). Baseline monitoring of resting respiration rate is recommended. Serial sonographic monitoring is required for further prognosis. Recheck echocardiogram is suggested in 6 months, sooner if persistent/progressive clinical signs of heart disease are noted.

**SEX**

Spayed female

**AGE**

8 years

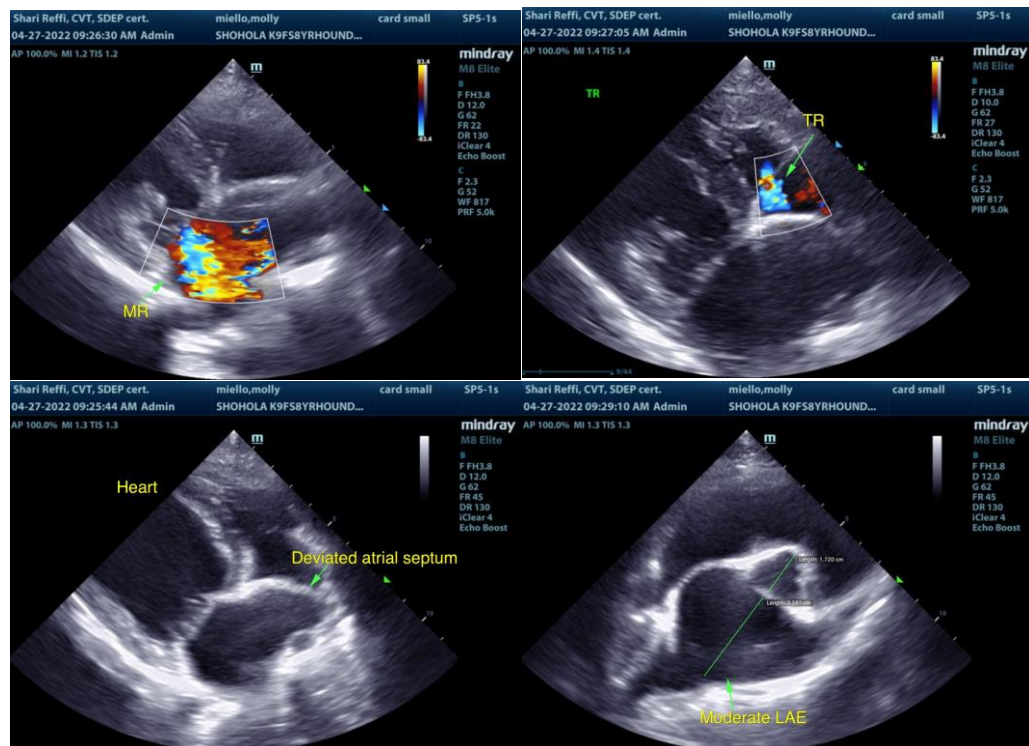
**WEIGHT**

38.2 pounds

A guarded long term prognosis is indicated for this patient.

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**PATIENT**

Molly Miello

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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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