



PATIENT PRESENTING CLINICAL SIGNS

Elli Levine heart murmur 3/5

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Jack Russell Mix

SEX

FS

AGE

6 yrs

WEIGHT

13.6 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Willowbrook AC

REFERRING VET

Dr. Palescandolo

INVOICE

16498

DATE

4/5/23

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	5.5	3.0	1.6	1.76	45	78.3	0.21
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	130	1.2	1.1		3.1	2.6	

Cardiac Presentation

The echocardiogram in this patient demonstrated mild enlarged **left atrial** size based on 3 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented mild to moderate thickening, (Anterior > Posterior) consistent with early onset endocardiosis. Minor prolapse of the septal leaflet was present. No evidence of chordae tendinea rupture was noted. Doppler indicated measurable moderate eccentric 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** valvular assessment demonstrated mild thickening with 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 infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.



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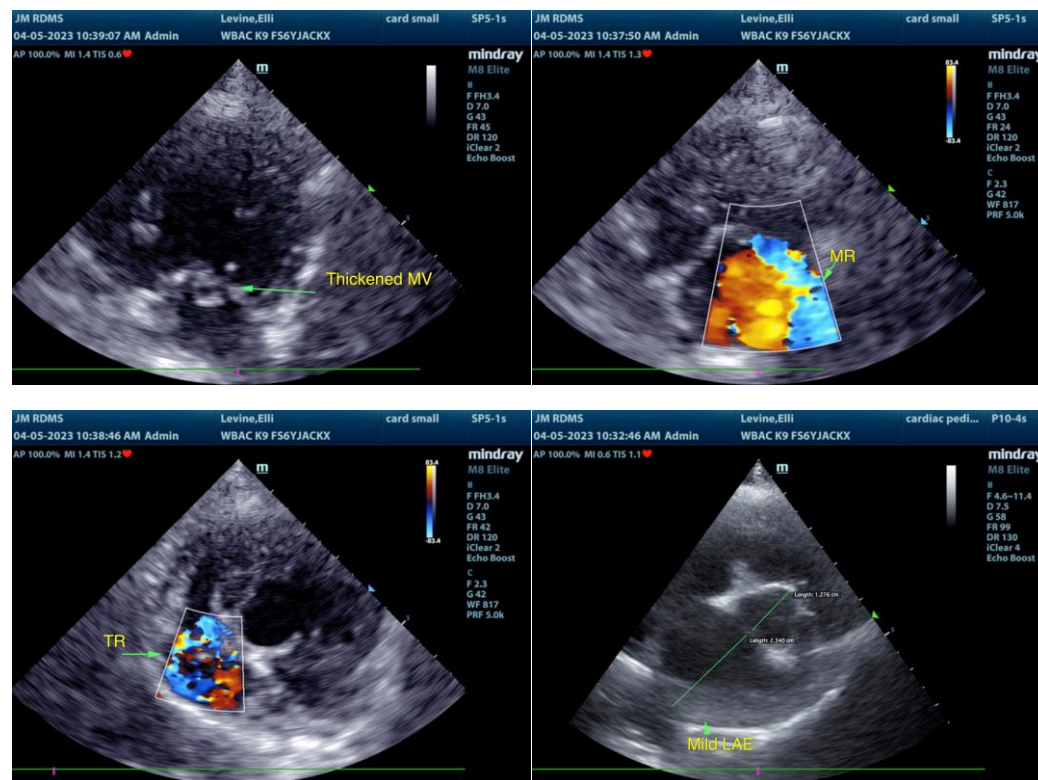
ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B2) with mild mitral valve prolapse
- Tricuspid valve insufficiency - estimated pulmonary pressure gradient (≈ 36 mmHg MAX) suggestive of mild increased pulmonary pressure, no evidence of clinical pulmonary hypertension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is most consistent with early onset chronic degenerative valvular changes with secondary MR/TR. The mild increased LA size indicates that the current and future risk secondary to MR is mildly elevated, yet overall the heart appears to be compensated. Given the evidence of mild increased LA size, Pimobendan 0.3 mg/kg PO BID is warranted at this stage. No indication for additional medications. Prognosis may be considered highly variable and sonographic monitoring is advised. Recheck echocardiogram is suggested in 6 months, sooner if clinically indicated. If anesthesia is required, the following protocol is suggested.

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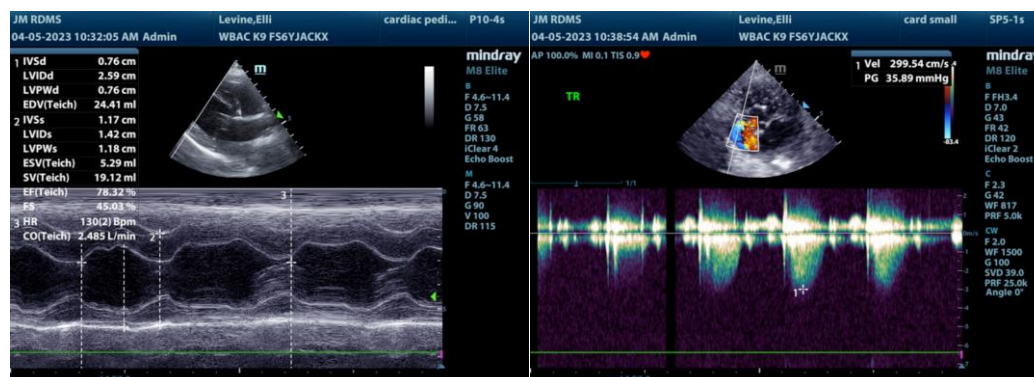
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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