



PATIENT

Tilly Hesketh

SPECIES

Canine

BREED

Shih Tzu

SEX

F/S

AGE

11 y

WEIGHT

12.5

INTERPRETED BY

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

IMAGING PERFORMED BY

Hope Brossman

HOSPITAL NAME

Animal Mansion
Veterinary Hospital

REFERRING VET

Jon Bertoldo DVM

INVOICE

16765

DATE

5/4/23

PRESENTING CLINICAL SIGNS

Pet presented for possible syncopal episode. PE revealed a grade IV/VI murmur that was not previously noted.

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				1.8	50	85	0.40
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	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	NM	NM			3.6	

Cardiac Presentation

The echocardiogram in this patient demonstrated moderately enlarged **left atrial** size based on LA/AO heart base measurement. The cranial and caudal **mitral** valve leaflets presented mild to moderate thickening consistent with endocardiosis. Doppler indicated subjective moderate eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with increased left ventricle volume. 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. No overt arrhythmia was noted.



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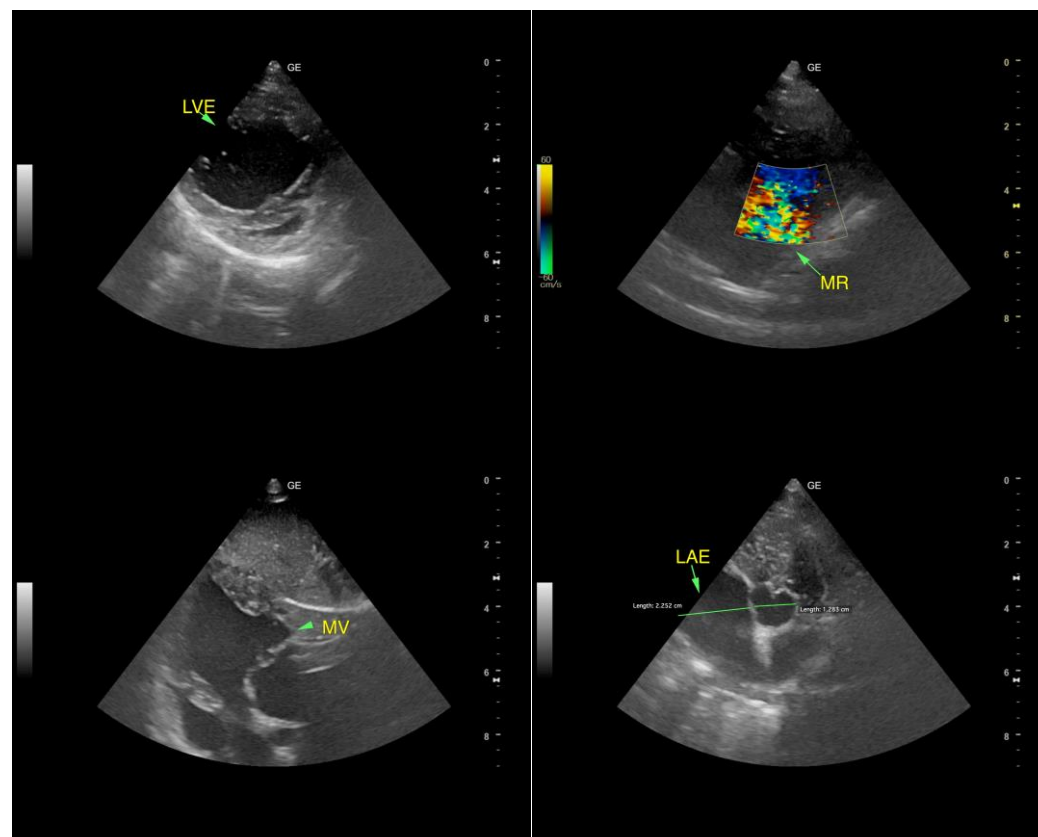
ULTRASONOGRAPHIC FINDINGS

- MR with moderate increased LA/LV size
- Adequate LV function
- Overtly normal RA / RV

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This study is most consistent with chronic degenerative valvular changes with secondary moderate eccentric MR. The lack of right atrium / right ventricle enlargement was not overtly consistent with cor pulmonale or overt increased right heart pressure suggestive of clinical pulmonary hypertension. The degree of LA / LV enlargement indicates that the current and future risk of complications secondary to MR is at least moderately elevated.

Pimobendan 0.3 mg/kg PO BID +/- spironolactone 1.0-2.0 mg/kg PO BID (assuming no current evidence of cardiogenic pulmonary edema on radiographs), is warranted. If radiographic evidence of cardiogenic pulmonary edema, Lasix/Spironolactone combination both 1.0-2.0 mg/kg PO BID would be recommended. Systemic BP and ECG are recommended to assess for contributing factors, i.e., systemic BP or paroxysmal arrhythmia. Serial sonographic monitoring is required for further prognosis. Recheck echocardiogram is suggested in 4-6 months, sooner if clinically indicated. Exercise restriction may be considered if syncopal episodes occur during periods of exercise, excitement, etc.





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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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