



## PATIENT

Mac Chociai

## SPECIES

Canine

## BREED

Yorkie

## SEX

M

## AGE

9Y

## WEIGHT

9.1 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Val Shumskaya

## HOSPITAL NAME

All Creatures Great  
and Small Denville

## REFERRING VET

Dr. Mitrovic

## INVOICE

17078

## DATE

6/13/23

## PRESENTING CLINICAL SIGNS

Went to ER last week, they recommended echo, heart murmur 4

Current meds: Pimobendan 2.5 1/2 BID Furosemide 12mg BID

Abnormal PE/Chem/CBC/UA Results: normal

## 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	<1.3	28-40	40-100	<0.6
PATIENT	6.0	<2.0	2.1	2.1	50	82	0.25
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	102	1.6	1.0		3.4	2.8	

## Cardiac Presentation

The echocardiogram in this patient demonstrated moderately enlarged **left atrial** size based on 3 different LA measurement methods. Deviation of the interatrial septum towards the right atrium, consistent with increased left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented moderate thickening (anterior > posterior) consistent with endocardiosis. No overt valvular prolapse was noted. Doppler indicated measurable moderate eccentric insufficiency. The **left ventricle** presented normal thicknesses with linear contour with increased LV 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 mild thickening with minor TR on Doppler. No evidence of clinical pulmonary hypertension. 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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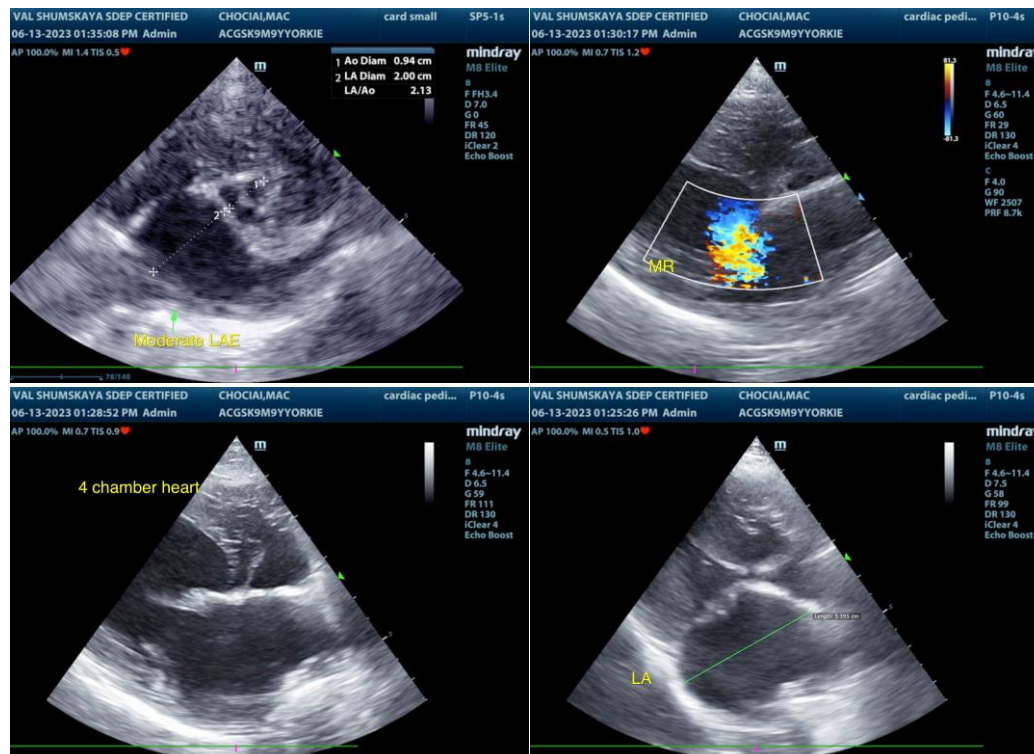
6/13/23

**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral valve disease (ACVIM B2)
- Mild TR

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur is consistent with chronic degenerative valvular changes with secondary eccentric MR. The moderately increased LA dimension with evidence of emerging left heart volume overload indicates that the current and future risk of complications secondary to MR is at least moderately elevated. Pimobendan 0.3 mg/kg PO BID along with the lowest effective dose of diuretic therapy, Lasix 1.0-2.0 mg/kg PO BID are warranted, especially if clinical signs consistent with left-sided congestion or radiographic evidence of pulmonary edema. ACE inhibitor medication may be considered if systemic BP >130, (not overtly indicated if BP <130). Omega Fatty Acids and mild salt restriction may be of some benefit. No additional issues such as LV systolic dysfunction or evidence of clinical pulmonary hypertension. Prognosis is highly variable and serial sonographic monitoring is advised. Recheck echocardiogram is recommended in 6 months, sooner if progressive clinical signs arise.



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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**info@SonoPath.com**

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