



## PATIENT

Zoey Wahad

## SPECIES

Canine

## BREED

Maltese

## SEX

FS

## AGE

16 years

## WEIGHT

6.36 lbs

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Shari Reffi, CVT

## HOSPITAL NAME

Andover AH

## REFERRING VET

Dr. Bihlear

## INVOICE

15324

## DATE

11/2/22

## PRESENTING CLINICAL SIGNS

Patient presented for tooth root abscess. Grade III/VI L apical holosystolic and grade III/VI R holosystolic heart murmur, arrhythmia heard on auscultation.

Current meds: Clindamycin, Carprovet

Abnormal PE/Chem/CBC/UA Results: BUN 68, CREAT 2, U/A-USG 1.012, PH 5

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>	5.6	2.8		1.8	50	83	0.25
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
<b>CARDIAC PARAMETERS</b>	(BPM)	<b>VMAX</b> (m/s)	<b>MAX</b> (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	132	1.0	0.7		3.7	2.9	

## Cardiac Presentation

The echocardiogram in this patient demonstrated moderately enlarged **left atrial** size based on 3 different LA measurement methods. Mild deviation of the interatrial septum towards the right atrium, suggestive of increased left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented mild to moderate thickening consistent with endocardiosis with minor prolapse of the septal leaflet. Doppler indicated measurable moderate eccentric insufficiency. The **left ventricle** presented thicknesses with maintained linear contour with mild 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 to mildly increased 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 concurrent mild thickening with mild 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



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disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. No overt arrhythmia was noted.

## ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B2) with mild septal leaflet prolapse
- Mild TR - estimated pulmonary pressure gradient (~30 mmHg) suggestive of borderline increased pulmonary pressure yet not consistent with clinical pulmonary hypertension

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

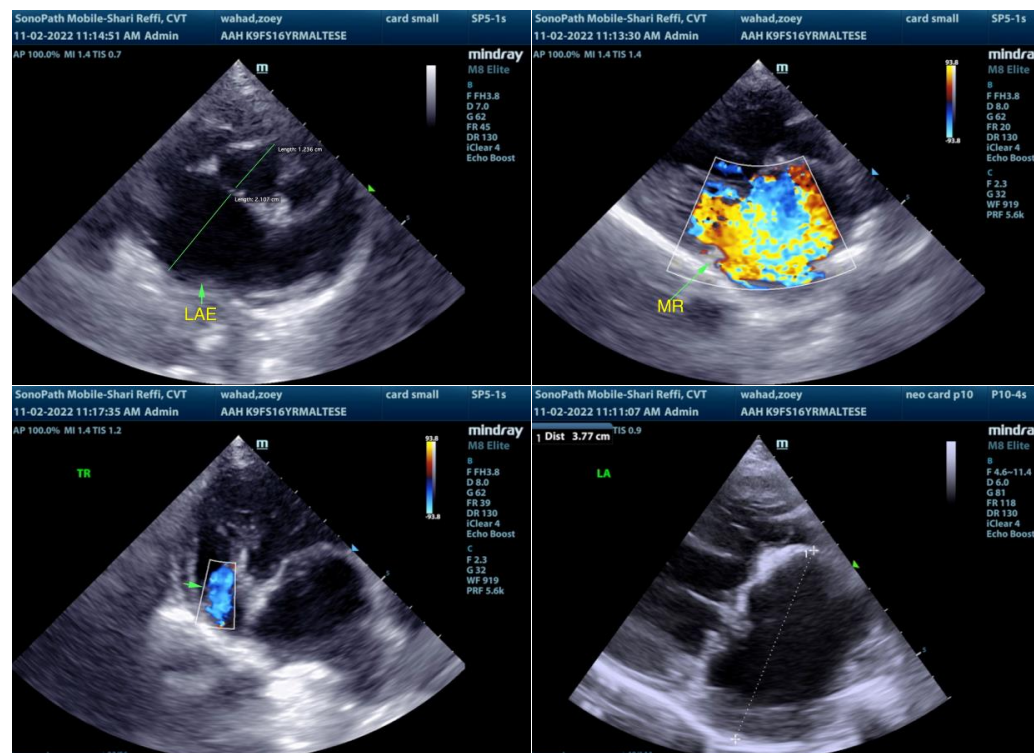
The moderate LA enlargement indicates that the current and future risk going forward secondary to mitral valve insufficiency is moderately elevated.

Pimobendan 0.3 mg/kg PO BID is warranted at this stage. Baseline monitoring of resting respiration rate at home is advised. Anesthetic risk is considered moderately elevated, yet would be reduced once on Pimobendan for 3-5 days prior to anesthesia.

If anesthesia is elected, judicious IV fluid use is recommended. Prior to anesthesia, ECG assessment of potential arrhythmia for further clarification is suggested. Prognosis at this stage is highly variable and serial sonographic monitoring is recommended. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs i.e., increased resting respiration rate, exercise intolerance, evidence of pulmonary edema, etc., arise.

The following anesthetic protocol is recommended with suggested limited anesthetic time if possible.

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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**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)**  
info@SonoPath.com