


**PATIENT**

Minie Ventura

**PRESENTING CLINICAL SIGNS**

Grade 4/6 holosystolic heart murmur, left PMI, cough, cardiomegaly. Intermittent cough. No current meds.

**SPECIES**

Canine

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

Chihuahua

**SEX**

FS

**AGE**

13yr

**WEIGHT**

6.3lb

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	5.3		1.93	2.0	39.3	72.3	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	97	1.0	1.75		2.8	2.4	

**Cardiac Presentation**

The echocardiogram for this patient presented excessive left atrial size expressed both in the LA/AO and LA max measurements. Minor deviation of the interatrial septum towards the RA suggestive of increased LA pressure was present. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis more prominent in the septal leaflet with mild septal leaflet prolapse. Doppler indicated measurable moderate eccentric insufficiency. The left ventricle presented thicknesses with linear contour with mild 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 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.

**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral valve disease with mild septal mitral valve leaflet prolapse (ACVIM B2)

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

 Westwood Regional  
 Vet Hospital

**REFERRING VET**

Dr. Cattiny

**INVOICE**

11456ag

**DATE**

08/22/2022



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur is secondary to chronic valvular changes and mild mitral valve leaflet prolapse with secondary eccentric mitral valve insufficiency. The moderate LA enlargement indicate the risk of complication is moderately elevated. The coughing in this patient could be secondary to emerging congestion although multifactorial etiologies are possible including mainstem bronchi irritation secondary to LA enlargement. Pimobendan 0.3 mg/kg PO BID with diuretic therapy at lowest effective dose to control clinical signs with assessment of clinical response is recommended. Anti-tussive medication such as hydrocodone may prove beneficial. Baseline monitoring of resting RR is recommended. Recheck echocardiogram is recommended in 6 months, sooner if clinical signs suggestive of congestion arise.

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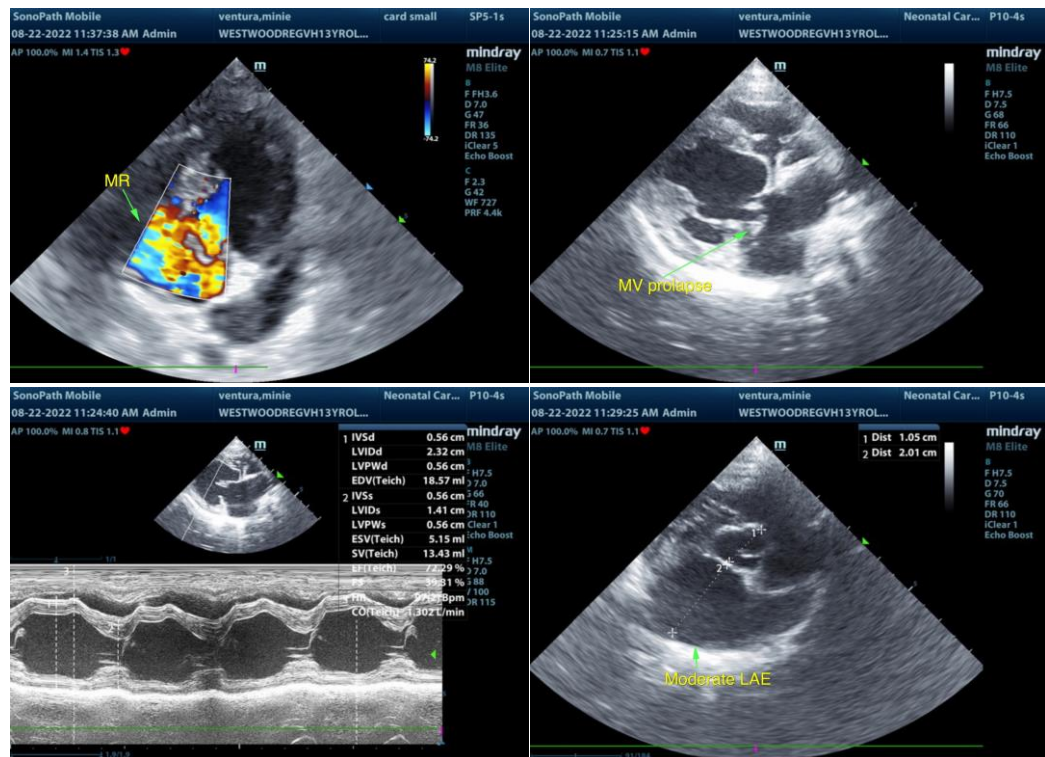
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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