



PATIENT

Beetlejuice Ramirez

SPECIES

Canine

BREED

Chihuahua

SEX

MN

AGE

15 years

WEIGHT

8.5

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

All Creatures Great
and Small

REFERRING VET

Dr. Mitrovic

INVOICE

16122

DATE

2/10/23

PRESENTING CLINICAL SIGNS

Coughing, xrays enlarged heart (cardiomegaly), heart murmur probably 2-3 Current meds: Enalapril 2.5mg SID, Furosemide 12mg 1/2 SID

Abnormal PE/Chem/CBC/UA Results: normal

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT	5.6	<2.0	1.5	1.6	52	85.6	0.2
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
CARDIAC PARAMETERS	(BPM)	VMAX (m/s)	MAX (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)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	120	1.2	0.95		2.5	2.1	

Cardiac Presentation

The echocardiogram in this patient demonstrated mildly enlarged **left atrial** size based on 3 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented mild thickening consistent with mild endocardiosis more prominent in the anterior leaflet with mild anterior leaflet prolapse. Doppler indicated measurable mild to moderate eccentric insufficiency. The **left ventricle** presented normal 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 adequate linear morphology. Minor TR was present 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. No evidence of clinical pulmonary hypertension was noted.



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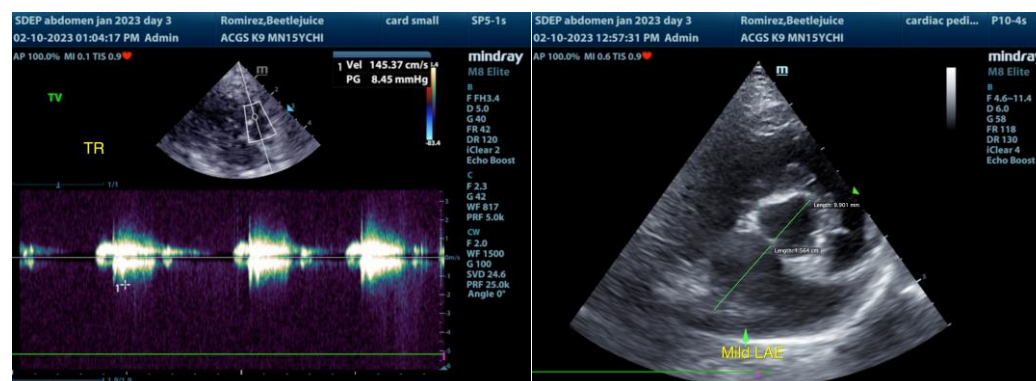
ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM early to mild B2) with mild anterior leaflet prolapse
- Minor TR - no evidence of clinical pulmonary hypertension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur secondary to chronic degenerative valvular changes and minor valvular prolapse with secondary mild to moderate eccentric MR.

The lack of significant left atrium enlargement or evidence of left heart volume overload indicates that the current and future risk of complications secondary to the murmur at this stage is mildly increased. However, the lack of significant left heart enlargement or evidence of clinical pulmonary hypertension suggests that the coughing in this patient is likely multifactorial in origin with possible contribution owing to concurrent lower airway disease. Overall, the heart appears to be compensated without overt indication for cardiogenic pulmonary edema. Pimobendan 0.25-0.3 mg/kg PO BID could be considered at this stage, as this medication may help prolong cardiac changes associated with MR. The lowest effective dose of Lasix is suggested if strong clinical concern for radiographic evidence of cardiogenic pulmonary edema. Baseline monitoring of resting respiration rate is suggested. Concurrent lower airway therapy is likely indicated. Prognosis is highly variable and sonographic monitoring is recommended. Recheck echocardiogram is suggested in 6 months, sooner if progressive clinical signs arise.





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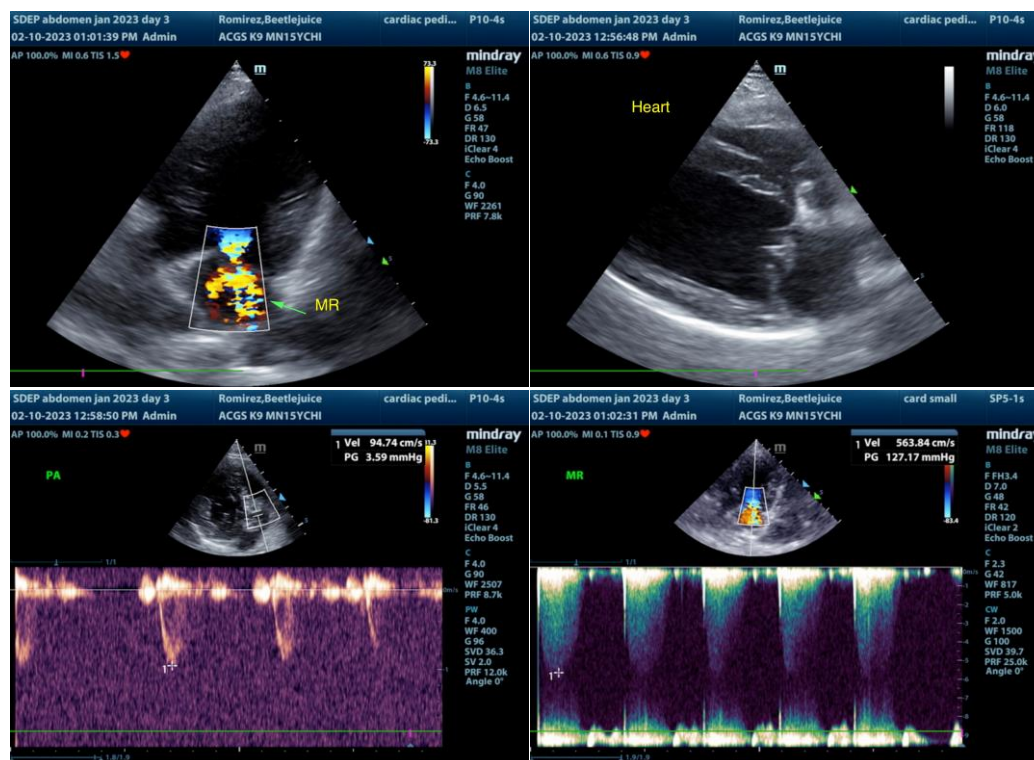
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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