



PATIENT

Ren Pera

SPECIES

Canine

BREED

Chihuahua

SEX

MN

AGE

15 years

WEIGHT

9.6 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Diane McFadden

HOSPITAL NAME

Animal Hospital of
Roxbury

REFERRING VET

Dr. Elia

INVOICE

13161

DATE

1/26/22

PRESENTING CLINICAL SIGNS

heart murmur, worsening cough. On furosemide

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			1.42	1.44	49.6	83.6	0.2
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	91	1.0	0.7		2.6	2.0	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated moderate eccentric insufficiency. The **left ventricle** presented 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 mild thickening with Insufficiency on color doppler assessment. 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

Primary Findings

- Compensated chronic mitral valve disease (ACVIM B1)



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- TV insufficiency - estimated pulmonary pressure gradient based on measured TV insufficiency consistent with mild to potential emerging moderate pulmonary hypertension (estimated pulmonary pressure gradient approximately (50 mm Hg)

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is secondary to chronic degenerative valvular changes with mitral and tricuspid valve Insufficiency. The lack of left atrium enlargement indicates that the current risk owing to mitral valve insufficiency is relatively low. Given the coughing in this patient and estimated pulmonary pressure gradient, emerging clinical pulmonary hypertension is suspected. The underlying etiology of pulmonary hypertension is often unclear. Assessment for possible chronic history of lower airway disease could be considered.

Continued respiratory support with Sildenafil trial 1.0 mg/kg PO BID with target dose 1.0-3.0 mg/kg PO BID and assessment of clinical response is recommended. Recheck echocardiogram is suggested in 2-3 months, sooner if continued or progressive clinical signs suggestive of persistent pulmonary hypertension are noted. If not done, three view chest radiographs are recommended to assess for pulmonary or thoracic pathology.

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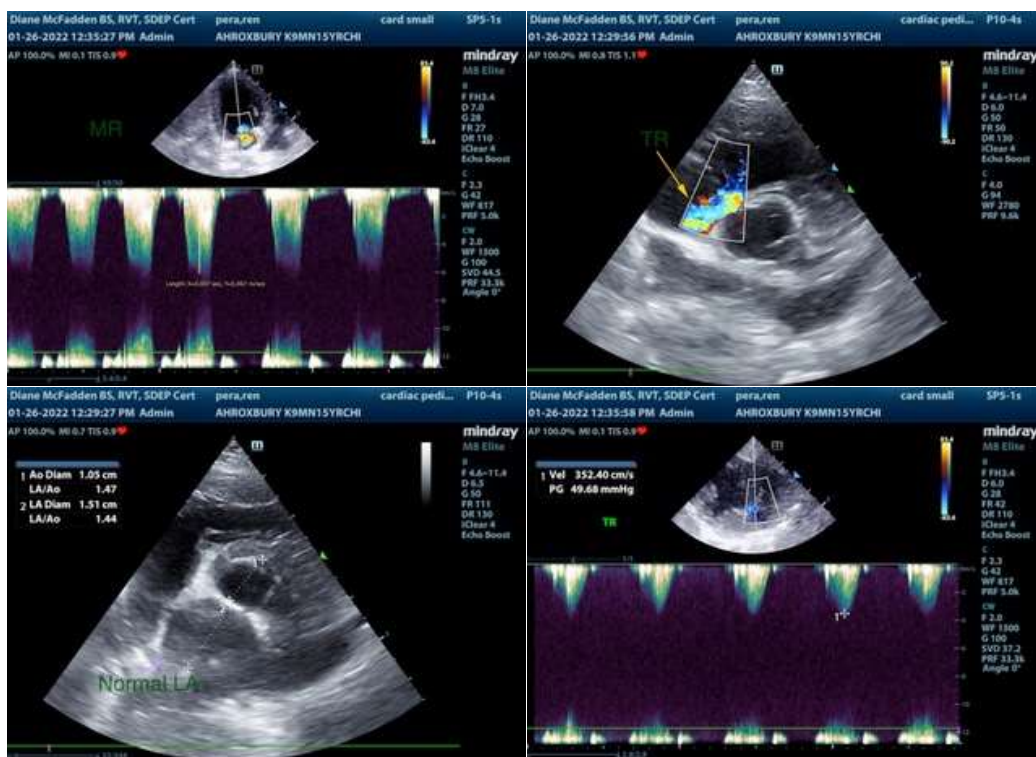
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I



PATIENT

can be of any further assistance please contact me.

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