


PATIENT

Benny Steiner

PRESENTING CLINICAL SIGNS

Heart murmur grade 4/6, and occasional syncope for several years; episodes are gradually increasing in frequency. Takes Enalapril 1.25 mg BID. Also has skin allergies, KCS.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: Normal Chem/CBC. Just mild cardiomegaly and no pulmonary edema on Radiographs.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART
BREED

Shih-Tzu

SEX

MN

AGE

15yr

WEIGHT

9.6lb

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	5.0	<1.0		1.3	39	73	0.24
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	NM	1.2	0.7		2.4	2.2	

INTERPRETED BY

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

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented moderate thickening consistent with endocardiosis. No evidence of chordae tendinea rupture. Doppler indicated measurable 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 subjective 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 disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window.

IMAGING PERFORMED BY

Dr. Bartus

HOSPITAL NAME

 Valley Veterinary
Service

REFERRING VET

Dr. Bartus

INVOICE

13439ag

DATE

04/10/2023

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B1).
- Mild TR with normal RA/pulmonary artery size.



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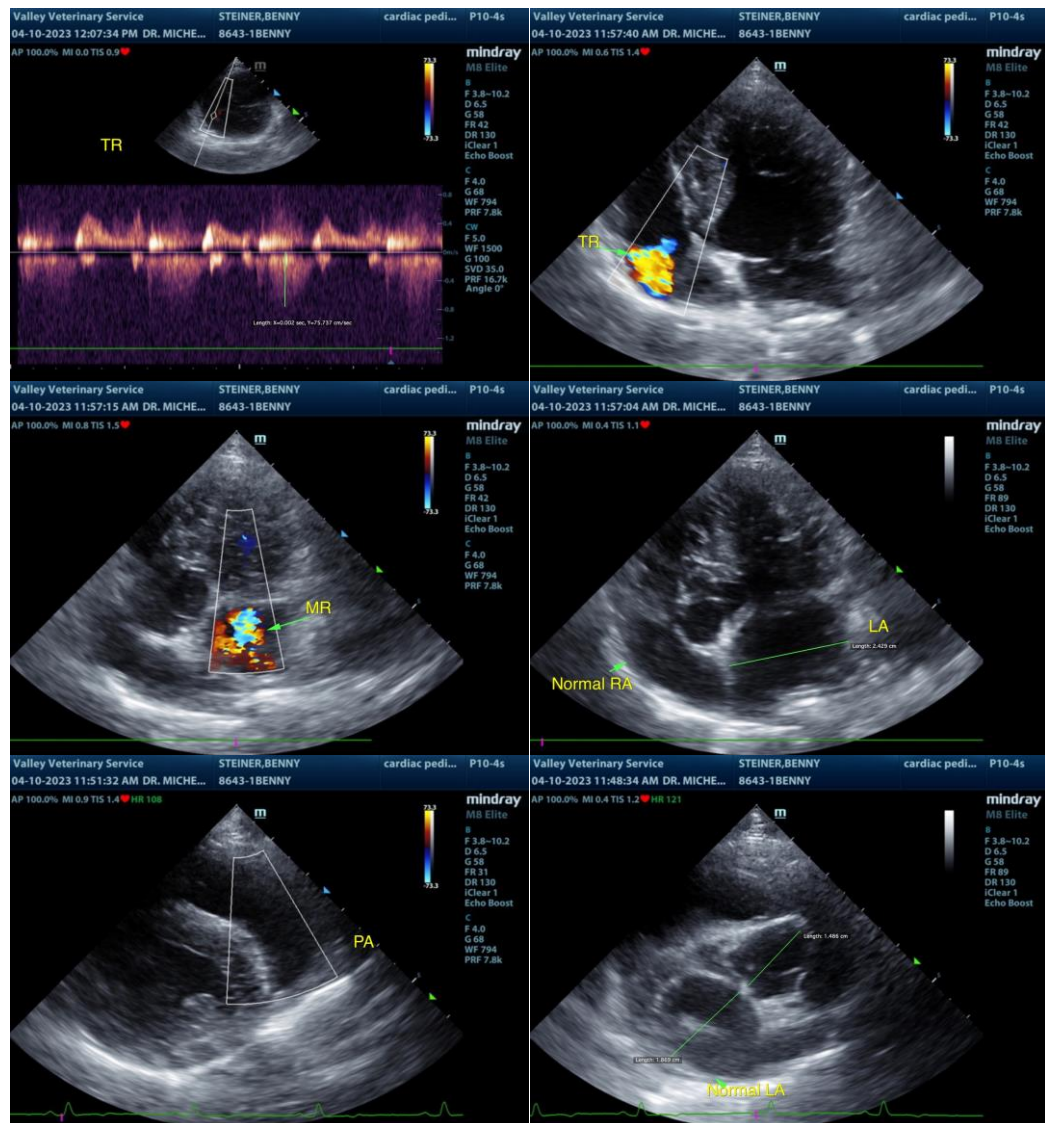
DATE

04/10/2023

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with concurrent primary MR and mild TR. The lack of overt left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is relatively low. The measured TR velocity was consistent with normal estimated pulmonary pressure gradient and in conjunction with lack of pulmonary artery or RA enlargement suggested that the clinical pulmonary hypertension is not present. No other clinical issues such as LV systolic dysfunction.

Assessment of syncopal episodes during excitement or exercise is recommended. The possibility of paroxysmal or increased frequency arrhythmia could be a consideration. A Holter monitor may be indicated if evidence of progressive syncope. No obvious indication for cardiac medications at this stage given overall normal left heart functionality. Prognosis at this stage is variable and serial sonographic monitoring is recommended with a recheck echocardiogram in 6 months, sooner if clinically indicated.





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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.

SPECIES

Canine

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.

BREED

Shih-Tzu

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

mac.daniel@sonopath.com

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