

**PATIENT PRESENTING CLINICAL SIGNS**

Mabel Redenz 3-4/6 heart murmur present. clinically normal

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

BREED

Shih Tzu

SEX

Spayed Female

AGE

8 Years

WEIGHT

18 Pounds

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	5.6	2.6	1.4	1.23	44	77.1	0.19
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	148	1.3	1.0		2.64	2.7	

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Gromalak

**HOSPITAL NAME**

SVS Imaging

**REFERRING VET**

Dr. Vivek

**Cardiac Presentation**

The echocardiogram for this patient demonstrated mild subjective left atrial enlargement based on 3 separate LA measurement methods with subtle deviation of the intraatrial septum, potentially suggestive of minor increased left atrial pressure. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable eccentric mitral valve 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 adequate linear morphology. Minor tricuspid valve insufficiency was present on color 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.

**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral valve disease (early ACVIM early B2)
- Minor tricuspid valve insufficiency

**INVOICE**

24907

**DATE**

8/24/21



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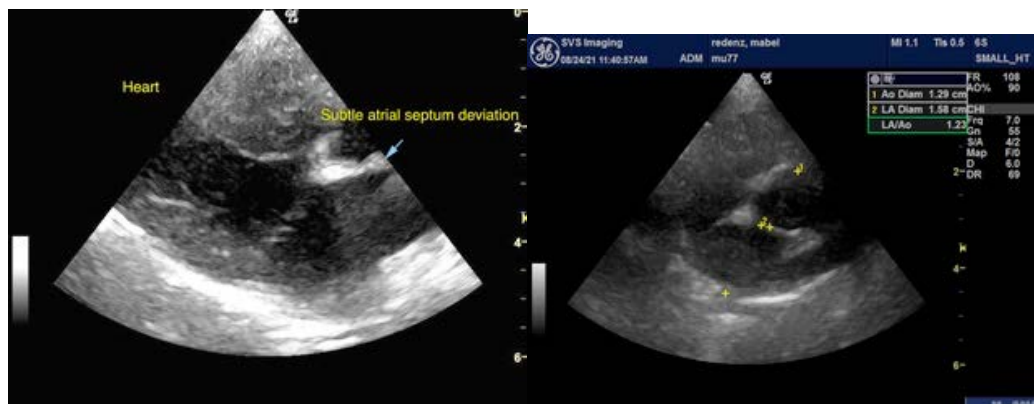
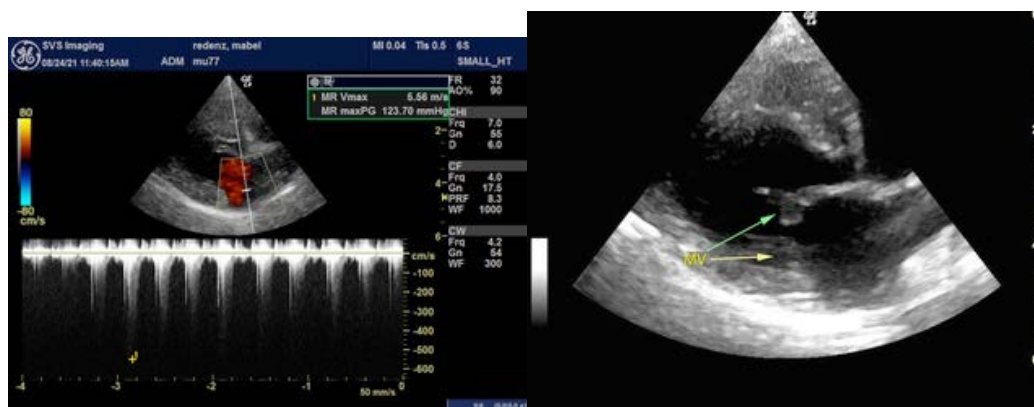
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur is chronic degenerative valvular changes with primary eccentric mitral valve insufficiency. Minor tricuspid valve insufficiency was also present, yet not considered clinically significant. Although the LA/AO heart base was within normal limits, subjectively the left atrium exhibited mild enlargement and subtle atrial septal deviation. Regardless, the lack of significant left atrial enlargement indicates that the risk of future complication is relatively low. No specific cardiac medications indicated. However, prognosis at this stage is highly variable, and continued monitoring is recommended. Recheck echocardiogram suggested in 6 months to assess for evidence of progression, sooner if clinical signs consistent with heart disease develop.



The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

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