



PATIENT

Stosh Bisioerek

SPECIES

Canine

BREED

Pomeranian

SEX

MN

AGE

13 years

WEIGHT

16.5

INTERPRETED BY

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

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr Kreier Badger
Veterinary Hospital
Ipswich

INVOICE

12627

DATE

11/16/21

PRESENTING CLINICAL SIGNS

3-4/6 systolic heart murmur noted. History of coughing and seizures. On Pimobendan, Gabapentin, Prednisone, Theophylline, Dx with bronchitis.

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			1.36	1.34	52	87	0.3
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	148	1.4	1.0		2.9	2.7	

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 measurable 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. Subjective mild tricuspid valve insufficiency was present 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. No evidence of arrhythmogenic disease was noted.



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ULTRASONOGRAPHIC FINDINGS

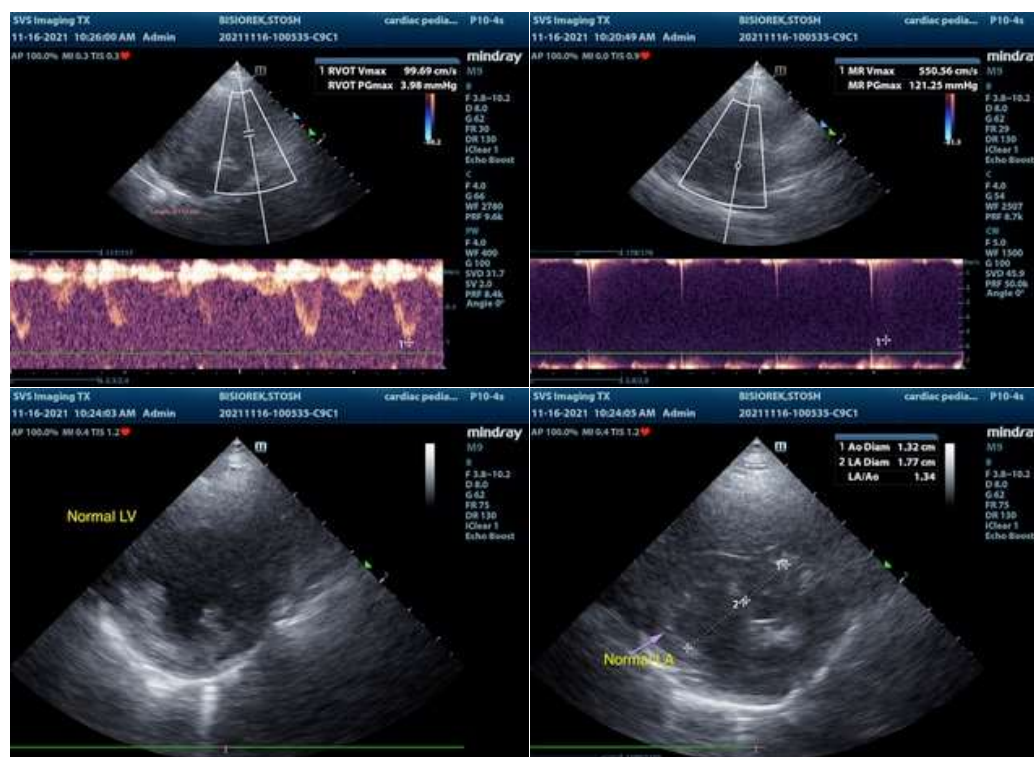
Primary Findings

- Chronic mitral valve disease (ACVIM B1)
- Mild tricuspid valve Insufficiency

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is most consistent with chronic degenerative valvular changes with secondary mitral valve insufficiency. The lack of left atrium enlargement indicates that the risk of future complications is low. However, the prognosis at this stage is highly variable. Given the lack of left atrium or left ventricle enlargement, specific cardiac medications secondary to mitral valve Insufficiency and associated left heart volume overload are not overtly indicated. No other clinical issues such as systolic dysfunction or evidence of clinical pulmonary hypertension based on tricuspid valve insufficiency velocity were noted. Overall, the appearance of the heart likely indicates a noncardiogenic cause of the cough with consideration for primary lower airway disease.

Continued as-needed respiratory therapy is recommended. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs suggestive of heart disease (elevated resting respiration rate, exercise intolerance, or similar), are noted.



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



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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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com