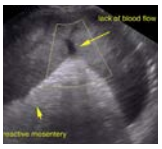
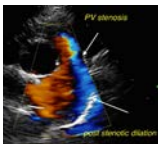
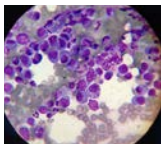
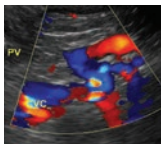
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Sparkle Good

SPECIES
Canine

BREED
Shih Tzu

SEX
Spayed Female

AGE
13 Years

WEIGHT
12.2 Pounds

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

IMAGING PERFORMED BY
Kim Liedberg

HOSPITAL NAME
SVS Imaging

REFERRING VET
Dr. Dhillon

INVOICE
25779

DATE
9/23/21

PRESENTING CLINICAL SIGNS

Heart murmur noted during PE. Known CHF. She is on vetmedin 5 mg and K9 cardiac support supplements. Frequent coughing and congestion.

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		<1.0	NM	1.47	54.2	87.2	0.25
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	122	1.0	0.8		2.0	1.8	

Cardiac Presentation

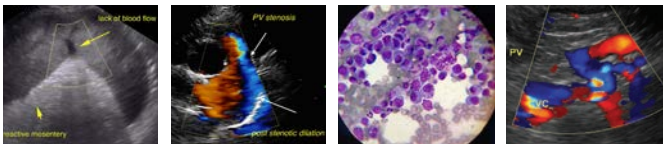
The echocardiogram for this patient presented excessive **left atrial size** expressed both in the LA/AO and LA max measurements Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated subjective mild to moderate 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. 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 (ACVIM B1-B2)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The study is consistent with chronic degenerative valvular changes with secondary mitral valve insufficiency. No other clinical issues such as systolic dysfunction or overt clinical pulmonary hypertension noted. Mild left atrial enlargement is present, yet the lack of significant left atrial



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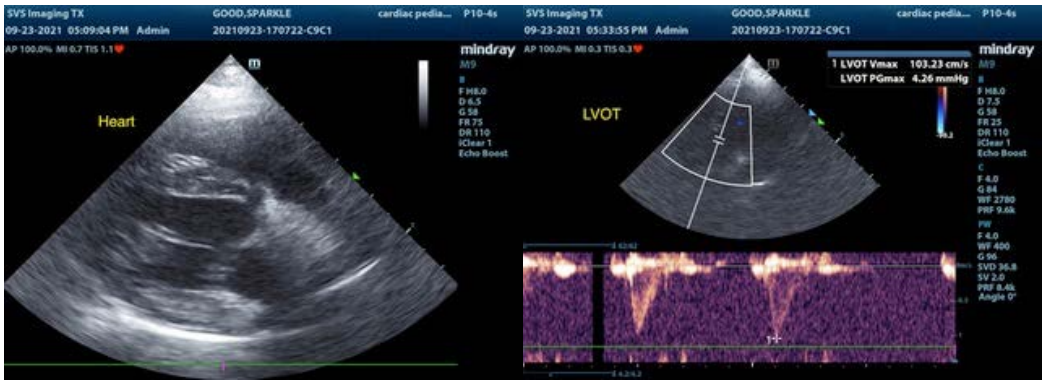
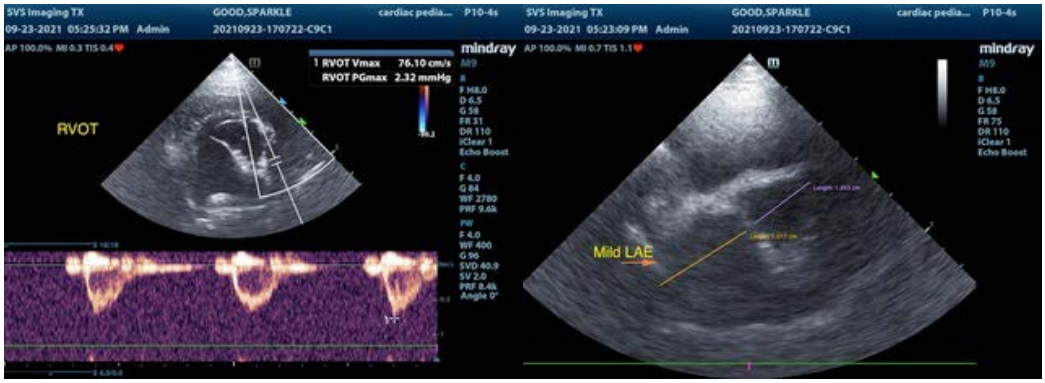
enlargement in this study indicates that the current and future risk for complication is relatively low and is not overtly supportive of congestion owing to left heart volume overload. The coughing and congestion in this patient may be multifactorial in origin, while primary lower or upper airway disease may be considered. Given these findings, continued Vetmedin at current dose would be appropriate, as this medication may help prolong cardiac changes associated with mitral valve insufficiency. Diuretic therapy would only be indicated if evidence of pulmonary edema on radiographs. Baseline resting respiration rate at home is suggested. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs consistent with heart disease i.e., elevated resting respiration rate, exercise intolerance, definitive pulmonary edema, etc. are noted.





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.

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