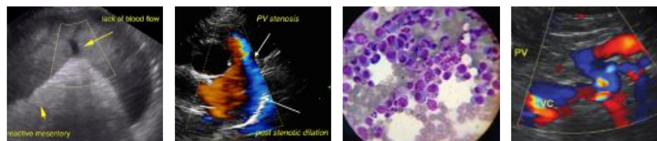
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Poppy Kim

SPECIES

Canine

BREED

Maltese

SEX

Female

AGE

10 years

WEIGHT

7.3

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Paul Kim

HOSPITAL NAME

Ridgefield Park AH

REFERRING VET

Dr. Paul Kim

INVOICE

14187

DATE

6/30/22

PRESENTING CLINICAL SIGNS

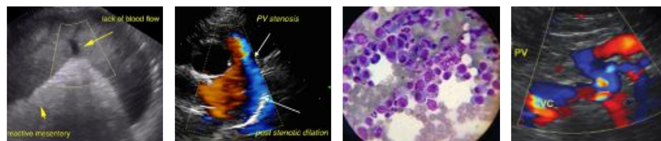
Patient Presented with heavy breathing, has collapsed twice. Upon exam a heart murmur grade 4/6 in both right and left side chest, is detected and X-rays showed an enlarged cardiac silhouette. Patient has been presenting syncopes lately.

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	<1.3	28-40	40-100	<0.6
PATIENT	>6.0	2.4		1.9	38.9	71.2	0.28
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	1.8	1.25		3.3	2.8	

Cardiac Presentation

The echocardiogram in this patient demonstrated moderately enlarged **left atrial** size based on 3 different LA measurement methods. Deviation of the Interatrial septum towards the right atrium, consistent with elevated left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented vegetative thickening more prominent in the septal leaflet consistent with endocardiosis. No evidence of chordae tendineae rupture or valvular prolapse was noted. Doppler indicated eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with subjective Increased left ventricle volume. 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 concurrent 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. No overt evidence of arrhythmia was noted.



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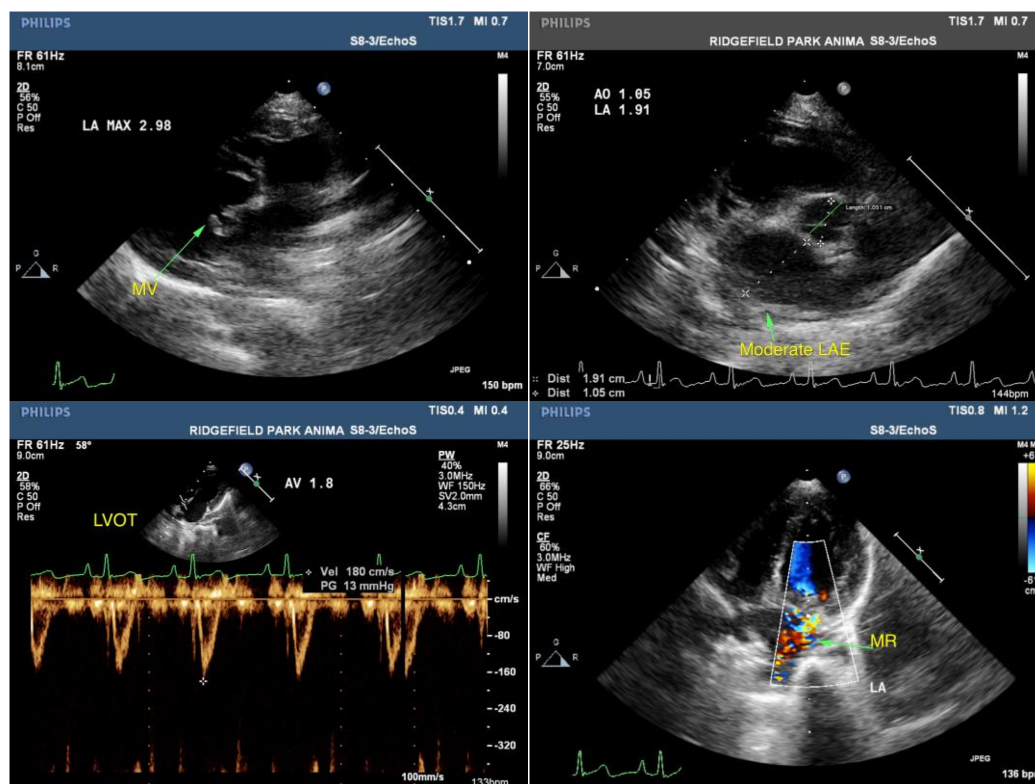
ULTRASONOGRAPHIC FINDINGS

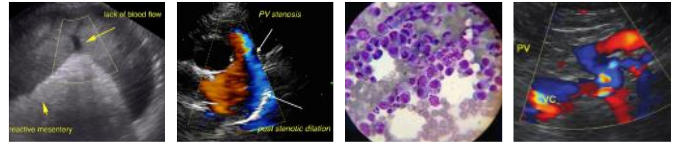
- Chronic mitral valve disease (ACVIM B2-C)
- Mild TR

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This study is consistent with chronic degenerative valvular changes more prominent in the septal leaflet with secondary eccentric mitral valve Insufficiency. Concurrent TR was present with evidence of mild increased pulmonary pressure, yet the measured TR velocity was not overtly consistent with clinical pulmonary hypertension.

Pimobendan 0.3 mg/kg PO BID along with diuretic therapy, Lasix 1.0-2.0 mg/kg PO BID, especially if evidence of pulmonary edema and in light of the reported heavy breathing, is recommended. Assessment of systemic blood pressure for evidence of systemic hypertension, given the increased MR velocity, is recommended. Concurrent ACE Inhibitor medication may be indicated If BP >130, (not advised if BP <130.) ECG assessment to rule out paroxysmal arrhythmia, as well as monitoring of BP and renal parameters, is advised. If persistent episodes of collapse or syncope, echocardiographic reassessment, specifically of the TR velocity, to assess for evidence of concurrent clinical pulmonary hypertension is recommended. Exercise restriction is advised. Overall, a guarded long-term prognosis pending clinical response to therapy.





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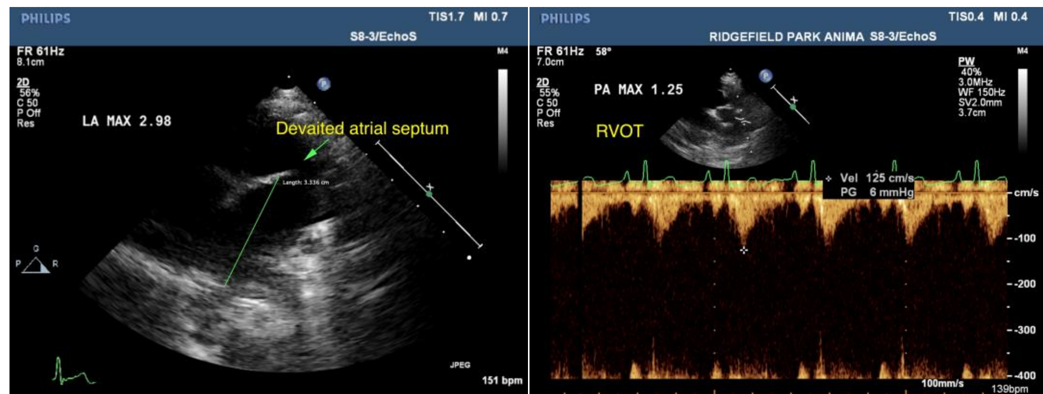

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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