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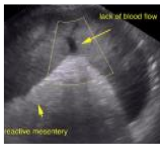
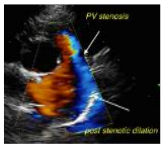
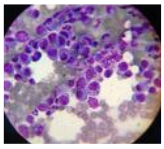
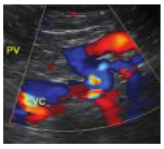

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1-800-838-4268 info@sonopath.com

PATIENT
Delilah Ferra

SPECIES
Canine

BREED
Mini Poodle

SEX
Spayed Female

AGE
13 Years

WEIGHT
N/A

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

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
AH of Sussex County

REFERRING VET
Dr. Obsharski

INVOICE
15848

DATE
6/2/22

PRESENTING CLINICAL SIGNS

History: Grade V/VI murmur, coughs, turns blue with exercise. Current meds: Pimobendan 1.25mg 1/2 bid.

Abnormal PE/Chem/CBC/UA Results: ALP 874, GGT 31, Lipase >1800, wbc 29.5, spec CPL 1634, u/a and acth pending

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	5.2	2.5	1.33	1.4	33	65	0.2
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	174	1.2	1.0	--	1.6	1.6	--

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. No evidence of chordae tendineae rupture or valvular prolapse. Doppler indicated measurable 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 concurrent 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.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B-1)
- TV insufficiency

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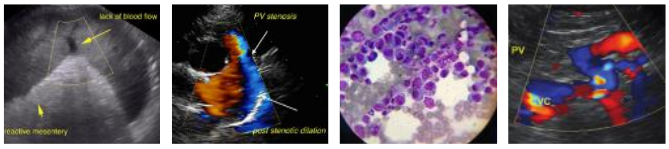

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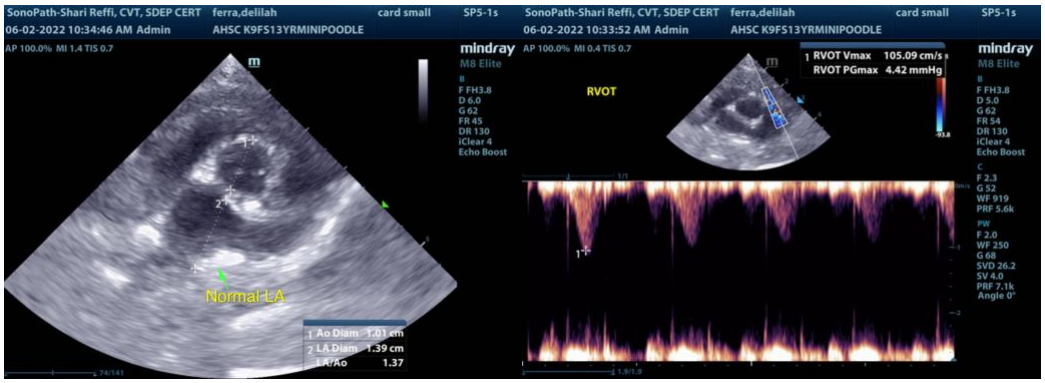
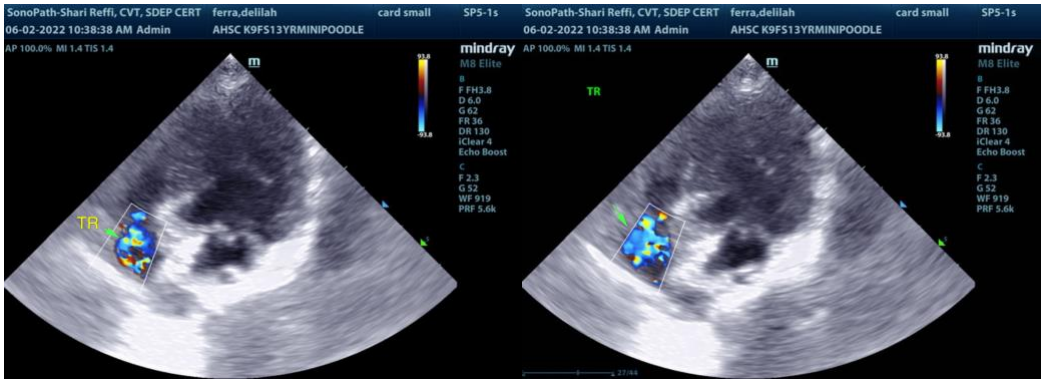
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is consistent with chronic degenerative valvular changes with secondary mitral and tricuspid valve insufficiency. The lack of left atrium enlargement indicates that the current and future risk of complications, secondary to mitral valve insufficiency is relatively low at this stage. However, prognosis is highly variable and serial sonographic monitoring is required for further assessment.

The measured TR velocity is equivalent to approximately 25 mmHg, suggestive of mild elevated pulmonary pressure, yet not overtly consistent with clinical pulmonary hypertension. Likewise, no evidence of pulmonary artery enlargement or right heart cor pulmonale was present. However, given the variability and TV insufficiency measurement, the possibility of low-grade to emerging pulmonary hypertension, given the possibility of chronic lower airway disease and exercise intolerance in this patient, cannot be definitively excluded.

Continued Pimobendan at current dose would be reasonable. Exercise intolerance and continued monitoring for evidence of persistent/progressive cyanosis during exercise, persistent respiratory signs and potential cardiac reassessment if these clinical signs are noted, would be reasonable. No overt evidence of hepatic congestion. Continued, as needed, respiratory support recommended.





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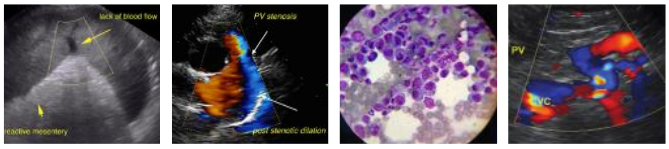

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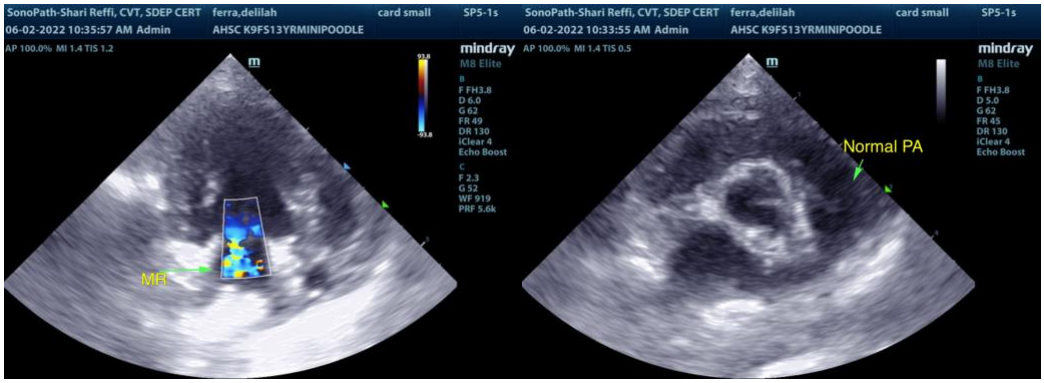

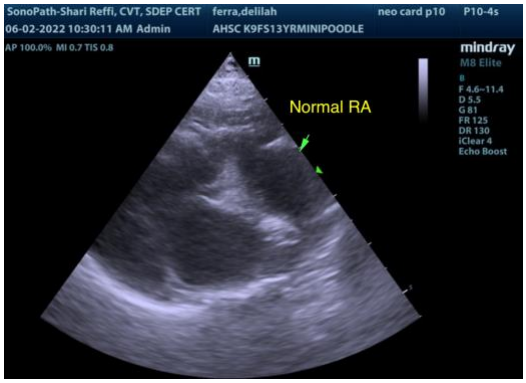

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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