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Clinical Sonography & Telecytology
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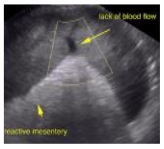

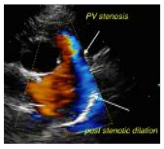

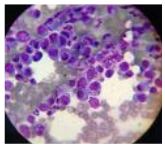
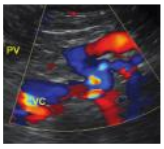

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Coco Edwing

SPECIES

Canine

BREED

Shih Tzu

SEX

FS

AGE

14 years

WEIGHT

12 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Newton Vet

REFERRING VET

Dr. Wyman-Greenwald

INVOICE

13910

DATE

5/19/22

PRESENTING CLINICAL SIGNS

-Syncopal episodes at home, grade II/VI R sided murmur. No current meds.

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	5.6	3.3	1.3	1.3	36.2	69.3	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	134	1.0	0.9		2.0	1.85	

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 subjective mild vegetative thickening consistent with mild endocardiosis. 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 adequate linear morphology and normal kinesis. Mild to potential moderate TR was present 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). Trace pulmonic insufficiency was present on doppler. 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 arrhythmia was noted.

Brief sonographic assessment of the liver revealed no evidence of hepatic congestion or ascites.

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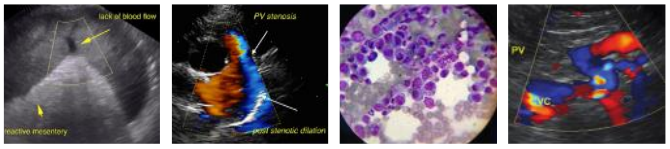

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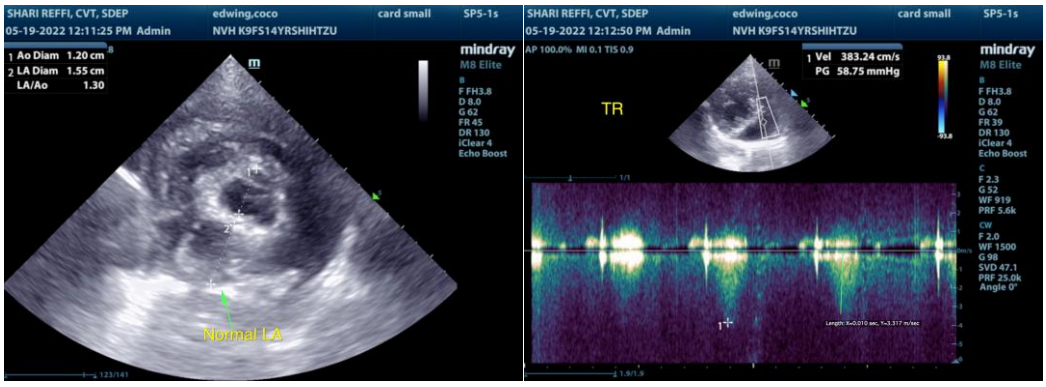
ULTRASONOGRAPHIC FINDINGS

- Compensated mitral valve insufficiency, normal left atrium
- TV insufficiency - estimated pulmonary pressure gradient based on measured TR velocity suggestive of mild pulmonary hypertension
- Trace pulmonic insufficiency

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the lack of LA enlargement, the hemodynamic effects of the mitral valve insufficiency appear to be low. No evidence of emerging left heart volume overload was noted. The reported syncopal episodes in this patient may potentially be owing to pulmonary hypertension, which aside from cases of heartworm disease, is often of unclear etiology. Assessment of potential occurrence of syncopal episodes during increased activity or excitement Is suggested. However, given the measured pressure gradient and without overt evidence of pulmonary artery enlargement or cor pulmonale, the degree of pulmonary hypertension may be considered of unclear clinical significance.

ECG assessment is suggested to assess for or rule out paroxysmal arrhythmia. Initial empirical low-dose Sildenafil trial at 1.0 mg/kg PO BID would be warranted with an assessment of clinical response. If positive clinical response yet continued episodes of syncope, Sildenafil target dose of 1.0-2.0 mg/kg with upward titration could be considered. Recheck echocardiogram is suggested in 6 months, sooner if continued syncopal episodes or evidence of left heart disease are noted. The mitral valve insufficiency appears to be stable at this stage, yet serial sonographic monitoring is required for further prognosis.



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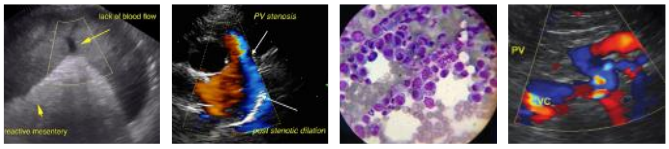

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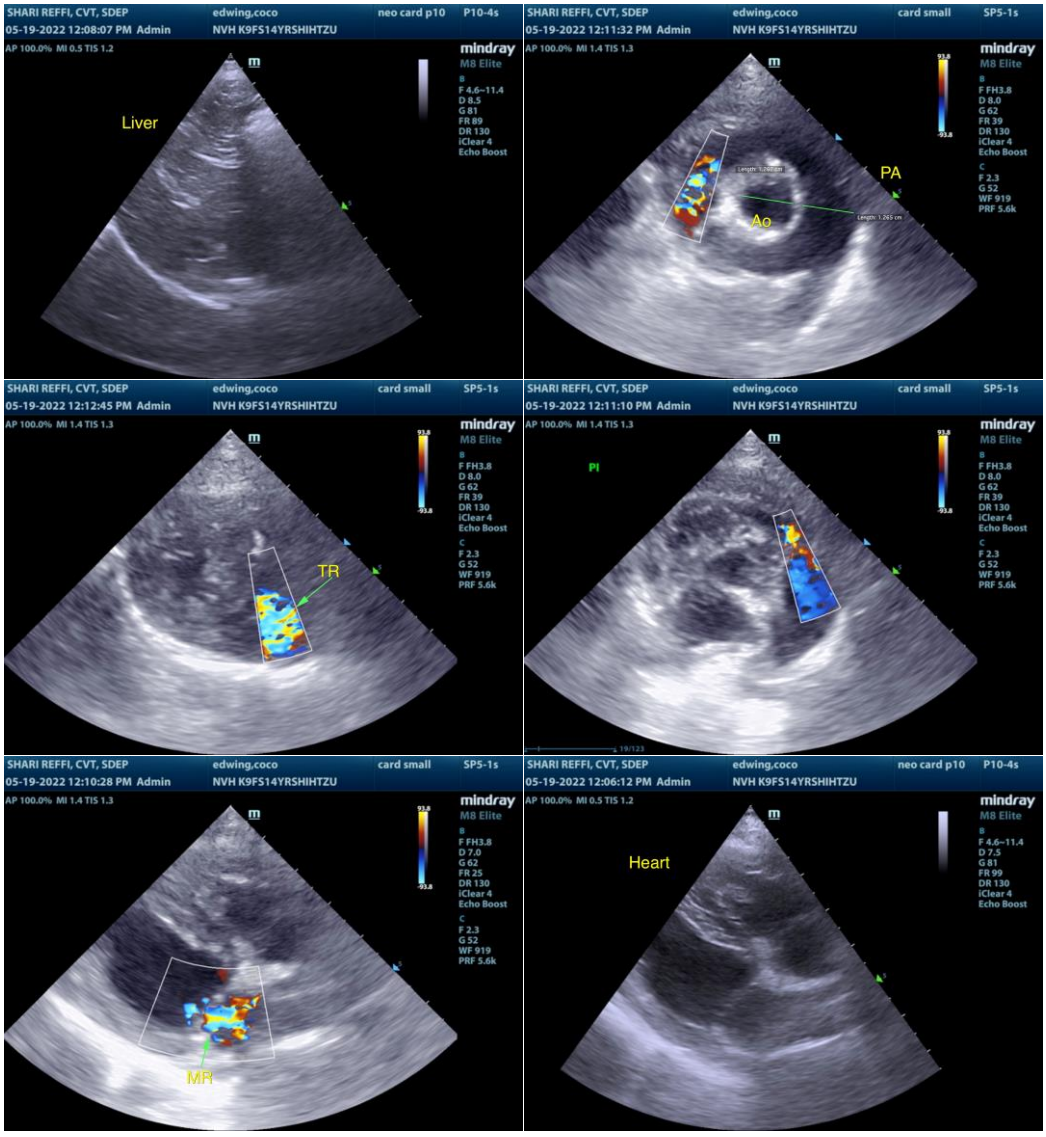

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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