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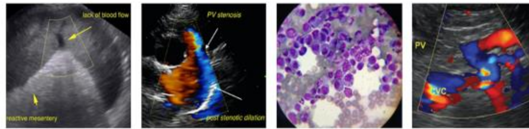


SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Paco Arnoldi

SPECIES

Canine

BREED

Chihuahua Mix

SEX

MN

AGE

2010

WEIGHT

13

INTERPRETED BY

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

IMAGING PERFORMED BY

Rebekah Jakum, CVT ARDMS/RVT

HOSPITAL NAME

New Britain VC

REFERRING VET

Dr. Bandekar

INVOICE

15980

DATE

1/26/23

PRESENTING CLINICAL SIGNS

-5/6 murmur, coughing, wheezing.

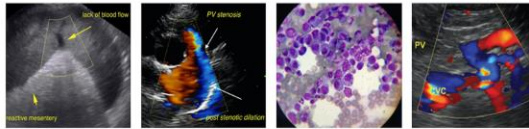
Medication: Lasix 12.5 BID

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	5.9	3.0		1.9	55	87	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	BELOW	BELOW	BELOW	BELOW
PATIENT	147	1.2			3.2	2.5	

Cardiac Presentation

The echocardiogram in this patient demonstrated mild to moderate enlarged **left atrial** size based on 2 different LA evaluations. The cranial and caudal **mitral** valve leaflets presented mild to moderate thickening consistent with endocardiosis. Doppler indicated measurable moderate eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with subjective mild 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 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. No evidence of arrhythmia was noted. Significant pericardial lung artifact prohibited complete echocardiographic evaluation.

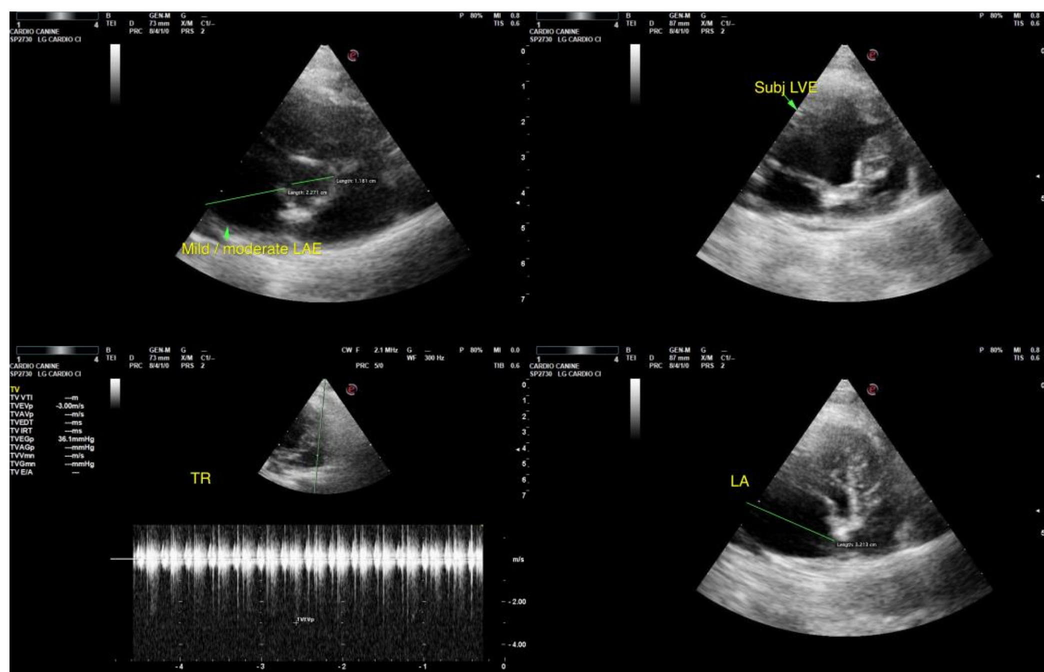
ULTRASONOGRAPHIC FINDINGS

- MR / TR
- Mild to moderate LA / LV enlargement
- Significant pericardial lung artifact

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is consistent with chronic degenerative valvular changes with secondary primary MR and concurrent TR. The degree of LA enlargement indicates that the current and future complication going forward secondary to MR is mild to moderately elevated. Subjectively, the degree of LA / LV enlargement was not definitively consistent with cardiogenic cough yet cardiac contribution to the cough is certainly possible.

Pimobendan 0.3 mg/kg PO BID along with the lowest effective dose of Lasix 1.0-2.0 mg/kg PO BID is warranted. A multifactorial component to the patient's coughing and wheezing with possible concurrent upper or lower airway disease is possible. As-needed concurrent respiratory support is recommended. The estimated pulmonary pressure gradient based on measured TR velocity was suggestive of mild increased pulmonary pressure, yet not overtly consistent with clinical pulmonary hypertension. The prognosis is highly variable and sonographic monitoring is advised. Recheck echocardiogram is suggested in 4-6 months, sooner if persistent clinical signs including respiratory signs are noted.



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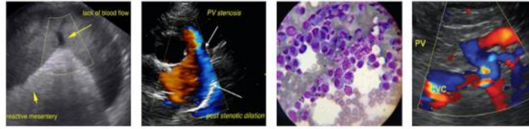

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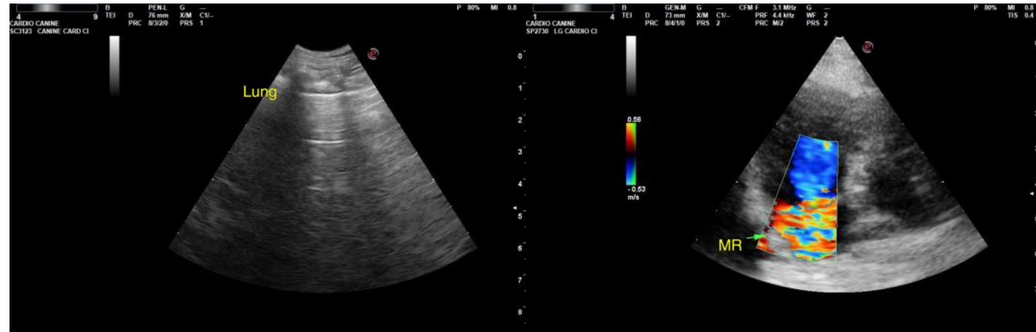

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
mac.daniel@sonopath.com