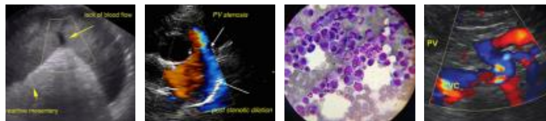
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Indiana Reed

SPECIES

Canine

BREED

Papillion

SEX

MN

AGE

10yr

WEIGHT

10.4lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh CVT

HOSPITAL NAME

VCA Westmoreland AH

REFERRING VET

Dr. Bugarovich

INVOICE

12877ag

DATE

02/03/2023

PRESENTING CLINICAL SIGNS

Heart murmur Grade 5/6 with palpable thrill- lungs wnl Per o, only coughing when he gets excited (1-2xweek) severe dental disease Heart Rate and Respiratory Rates HR- 164, RR- 32

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

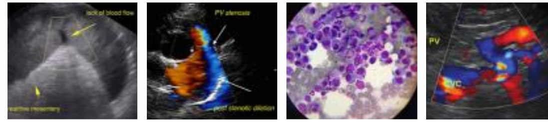
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT	5.6	2.5	1.6	1.6	37.6	72	0.1
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (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	164	1.8	0.9		3.7	2.95	

Cardiac Presentation

The echocardiogram for this patient presented moderate excessive left atrial size with minor subjective horizontal component based on 3 different LA measurements. Subtle deviation of the interatrial septum towards the right atrium suggestive of mild increased left atrial pressure was noted. The cranial and caudal mitral valve leaflets presented moderate thickening more prominent in the septal leaflet with mild septal leaflet prolapse consistent with endocardiosis. Doppler indicated measurable moderate eccentric insufficiency. The left ventricle presented thicknesses with linear contour and mild increased LV 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 adequate linear morphology. 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 B2) with mild mitral valve prolapse



PATIENT
Indiana Reed

SPECIES
Canine

BREED
Papillion

SEX
MN

AGE
10yr

WEIGHT
10.4lb

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

IMAGING PERFORMED BY
Jenna Walsh CVT

HOSPITAL NAME
VCA Westmoreland AH

REFERRING VET
Dr. Bugarovich

INVOICE
12877ag

DATE
02/03/2023

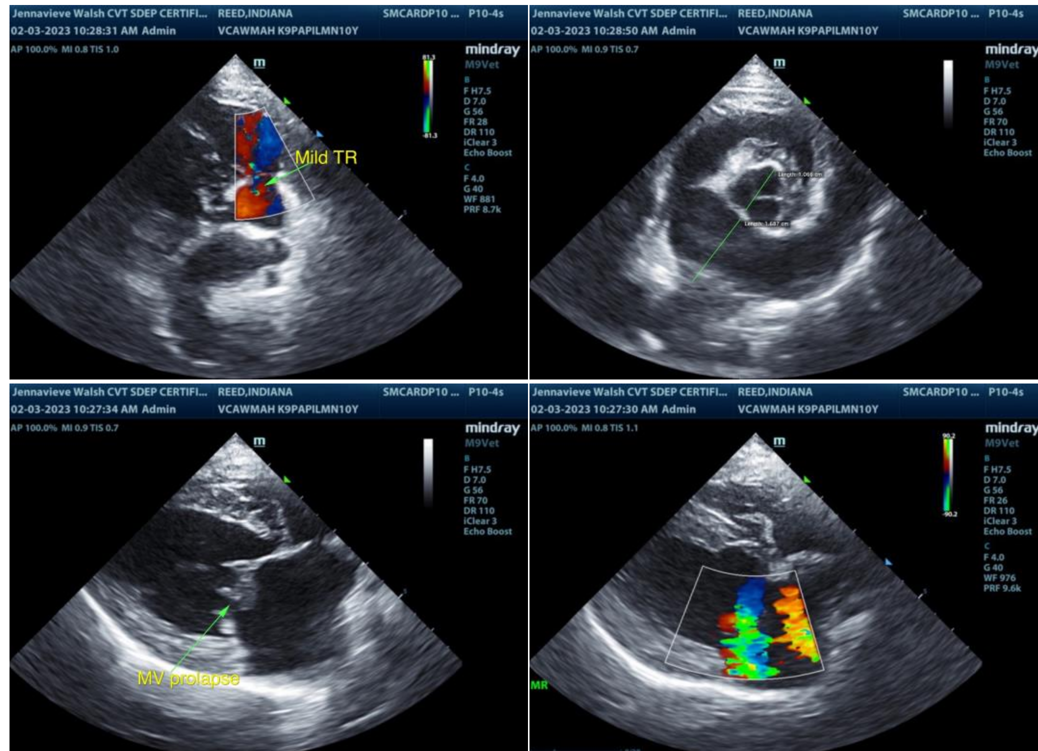
- Mild TR-estimated pulmonary pressure gradient ~ 25 mmHg suggestive of mild increased pulmonary pressure yet not consistent with overt pulmonary hypertension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The moderate LA enlargement implies that the risk of complication secondary to MR is moderately elevated at this time yet the reported resting respiration rate suggests that the heart remains compensated. Pimobendan 0.3 mg/mg PO BID along with weak diuretic spironolactone 1-2 mg/kg PO BID is recommended. The periodic coughing may be multifactorial potentially owing to early mainstem bronchi irritation or compression owing to LAE or possible concurrent lower airway disease. Anti-tussive medication hydrocodone as needed may prove beneficial. Monitoring of resting respiration rate is recommended. Anesthetic risk is considered moderately elevated yet may be reduced once on Pimobendan for 3-5 days. If anesthesia is needed the following protocol is recommended.

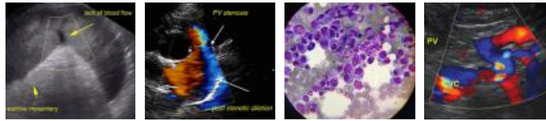
Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

Prognosis at this stage is variable and serial sonographic monitoring is recommended with a recheck echocardiogram in 6 months, sooner if clinical signs are noted.



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.



PATIENT

Indiana Reed

SPECIES

Canine

BREED

Papillion

SEX

MN

AGE

10yr

WEIGHT

10.4lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh CVT

HOSPITAL NAME

VCA Westmoreland AH

REFERRING VET

Dr. Bugarovich

INVOICE

12877ag

DATE

02/03/2023

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com