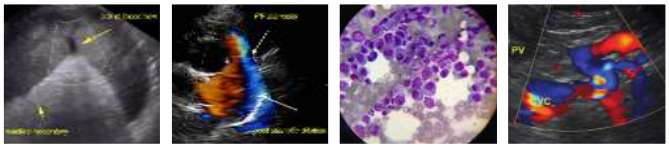
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Hope Andrycich

SPECIES

Canine

BREED

Cavalier King Charles

SEX

FS

AGE

10 years

WEIGHT

27.1 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional VH

REFERRING VET

Dr. Hartwick

INVOICE

13421

DATE

2/25/22

PRESENTING CLINICAL SIGNS

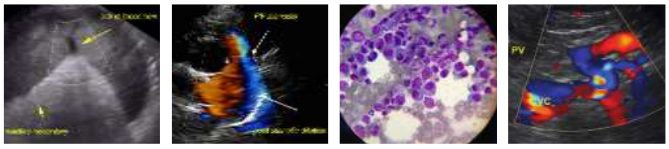
Patient with history of systolic heart murmur, presents for grade 5-6/6 heart murmur. Had echo at other DVM in 2020, started treatment with Pimobendan in July of 2021. Occasional dry cough, severe dental disease, active, no exercise intolerance. Reassess cardiac status and evaluate and need for additional meds, or med changes. Screening for anesthesia for dental. Current meds: Pimobendan 2.5 mgs x 1 1/2 tab PO 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	5.2	3.2		1.76	51.1	86.1	0.35
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	94	1.7	0.96		5.2	4.4	

Cardiac Presentation

The echocardiogram in this patient demonstrated moderate to severely enlarged **left atrial** size based on 3 different LA measurement methods. The left atrial enlargement exhibited mild horizontal component. Deviation of the interatrial septum towards the right atrium indicative of elevated left atrial pressure was present. The cranial and caudal **mitral** valve leaflets exhibited vegetative thickening consistent with myxedematous degenerative changes with mild prolapse of the anterior leaflet. Doppler indicated measurable significant eccentric insufficiency. The **left ventricle** presented normal thicknesses with primarily maintained linear contour with 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 vegetative thickening with subjective moderate insufficiency. 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



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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, potential ACVIM Stage-C) with mild anterior mitral valve leaflet prolapse
- Moderate TR- estimated pulmonary pressure gradient suggestive of mild elevated pulmonary pressure, yet not overtly consistent with clinical pulmonary hypertension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

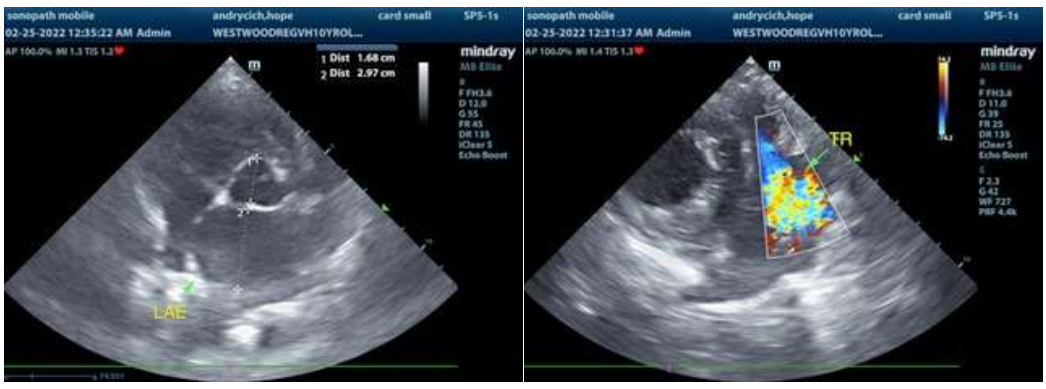
The moderate to severe left atrium enlargement, as well as emerging left heart volume overload, indicate that the risk of current and future complications going forward is significantly elevated.

Continued Pimobendan 0.3 mg/kg PO BID with the addition of diuretic therapy i.e., Lasix 1.0-2.0 mg/kg PO BID at the lowest effective dose is recommended.

The coughing in this patient may be multifactorial in origin yet suspected to be secondary to mainstem bronchi irritation or compression owing to left atrium enlargement with potential for concurrent lower airway component, given the dry description. Hydrocodone therapy may prove beneficial. Baseline monitoring of resting respiration rate at home is recommended. Serial monitoring of renal parameters and blood pressure, as well as ECG assessment to assess for potential development of arrhythmias such as atrial fibrillation, is recommended.

This patient is at Increased anesthetic risk and anesthesia is only advised if definitely needed. If anesthesia is elected, the following protocol is recommended with judicious IV fluid use, given the potential for fluid overload, as well as brief anesthetic time as possible. Recheck echocardiogram is suggested in 4-6 months, sooner if clinical signs arise.

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.



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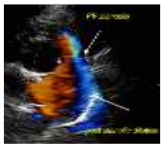
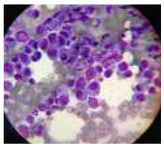
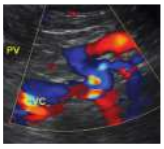

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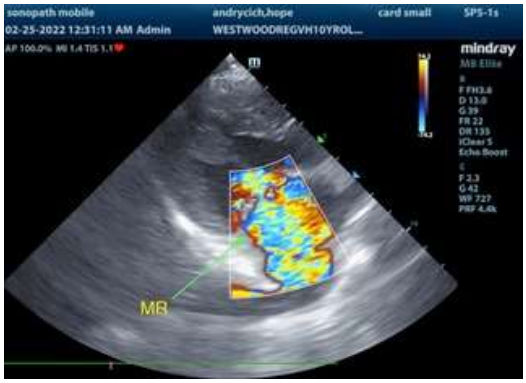

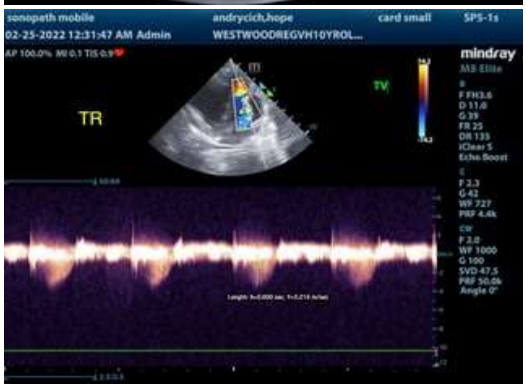

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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