


PATIENT

Cookie Hastings

SPECIES

Canine

BREED

Cavalier

SEX

Male Neutered

AGE

10 years

WEIGHT

24.5lbs

INTERPRETED BY

 Maggie Machen Lamy,
 DVM DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Kelly Reschny, RVT

HOSPITAL NAME

 Ingersoll Veterinary
 Service

REFERRING VET

Dr. Prystayko

INVOICE

27127

DATE

10/26/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. Asymptomatic heart murmur grade 2/6 left sided detected on annual exam August 2019. No treatment. Coughing started December 2020, systolic murmur grade 3/6- x-rays, enlarged heart (VHS=14). Started vetmedin 2.5mg- 1BID. Coughing resolved with vetmedin. 3.7lb weight loss in past month. BP 94, 104, 100, 96mmHg.

-Current medications: Vetmedin 2.5mg BID, Synovi G SID, Metacam PRN

-Pertinent previous echo findings (2/2021 JB): Mild MR. Noncardiac cough. No medications suggested.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 50mm/s, 20mm/mV. The average heart rate is 120bpm (range 65-150bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. No ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Profound respiratory sinus arrhythmia.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with minimal prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with mild left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with mild tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic and mild pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

CARDIAC CHART

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	5.8	2.0	1.0	1.4	53	90	NM
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	NM	1.4	0.9	11.1	2.4	3.2	1.5
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

Adapted from June Boon, Veterinary Echocardiography, 1998
 Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
 Hansson et al, Vet Rad and Ultrasound 2002
 Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995



PATIENT

Cookie Hastings

SPECIES

Canine

BREED

Cavalier

SEX

Male Neutered

AGE

10 years

WEIGHT

24.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kelly Reschny, RVT

HOSPITAL NAME

Ingersoll Veterinary
Service

REFERRING VET

Dr. Prystayko

INVOICE

27127

DATE

10/26/22

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation persists. Compared to the prior study, findings are similar with persistently mild disease. Lack of significant left atrial enlargement indicates the current risk for complication is low. No additional issues are noted in this study. The ECG shows a respiratory sinus arrhythmia, further supporting mild disease with concurrent respiratory issues/high vagal tone.

Given mild disease appreciated on two serial exams, there is **no clear indication for Pimobendan in this case**. Pimobendan has no known impact on a noncardiogenic cough and improvement is considered most likely to be coincidental. That being said, if the cough returns repeat CXR are strongly recommended. As the previous VHS was severely enlarged, which is not supported by this study. Consider further cough treatment, such as Hydrocodone as dictated by the clinical picture.

Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1). Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

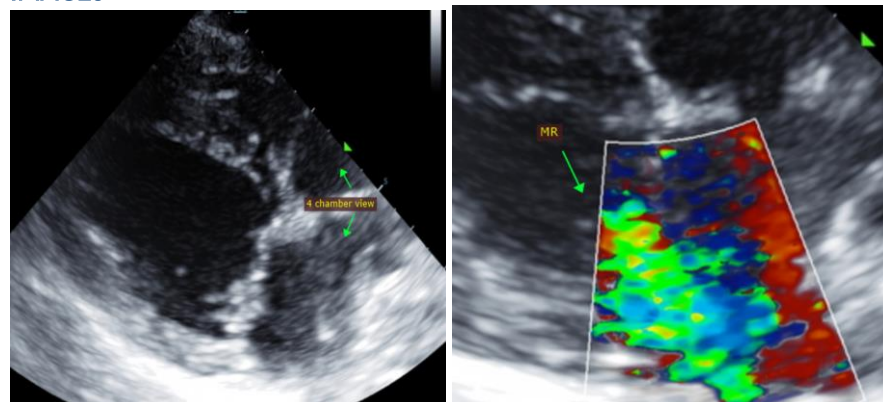
Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

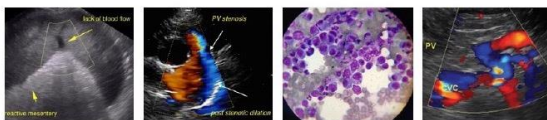
PLAN

No obvious indication for continued Pimobendan. If the cough returns in the future, repeat CXR is recommended with a Radiologist review of the films. Consider Hydrocodone as discussed.

Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES





PATIENT

Cookie Hastings

SPECIES

Canine

BREED

Cavalier

SEX

Male Neutered

AGE

10 years

WEIGHT

24.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

Kelly Reschny, RVT

HOSPITAL NAME

Ingersoll Veterinary
Service

REFERRING VET

Dr. Prystayko

INVOICE

27127

DATE

10/26/22



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. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com