



PATIENT

Jameson Barrett

SPECIES

Canine

BREED

Pomeranian

SEX

Female Spayed

AGE

13 years

WEIGHT

8.7lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Julia Bakker, DVM

HOSPITAL NAME

Orange Blossom
Veterinary Imaging

REFERRING VET

Dr. Marr

INVOICE

45992

DATE

12/3/25

PRESENTING CLINICAL SIGNS

History: Grade 4/6 heart murmur. Harsh lung sounds. CXR showed slight cardiomegaly and concerning for early CHF. Started on Pimobendan 1.25mg 1 tab PO q12h, Furosemide 12.5mg 1/3 tab PO q12h. .

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Moderate mitral regurgitation with mild left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears thickened with trace tricuspid regurgitation. Prominent right heart. TR velocity indicative of early 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	6.5	3.0	1.3	1.4	58	90	0.12
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		1.9	1.3	3.9	1.5	2.4	1.0
*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)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and trace tricuspid regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. Mild pulmonary hypertension is noted, which is suspected to secondary to airway disease in this breed. No concurrent issues such as systolic dysfunction are noted in this study.

Given these findings, harsh lung sounds are unlikely to be cardiogenic in origin. Respiratory disease is considered most likely, and a CXR review of the films is strongly recommended. CHF would be highly unlikely; however, a Radiologist should confirm. Based upon what is seen here, **Lasix can be safely discontinued**. If the respiratory disease is poorly controlled/progresses long term, this can certainly lead to worsening of PAH. Clinical signs of significant PAH include



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exertional dyspnea/collapse. Continued monitoring is advised. Cough control is recommended lifelong (hydrocodone, intermittent AI prednisone, fluoroquinolone for acute flare up, etc.).

In a dog without significant left atrial enlargement, no cardiac medications are typically indicated. That being said, given long term administration and significant MR/TR this drug can decrease chamber dimensions. Based upon this and the finding of mild PAH, reasonable to continue Pimobendan. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1/B2). 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.

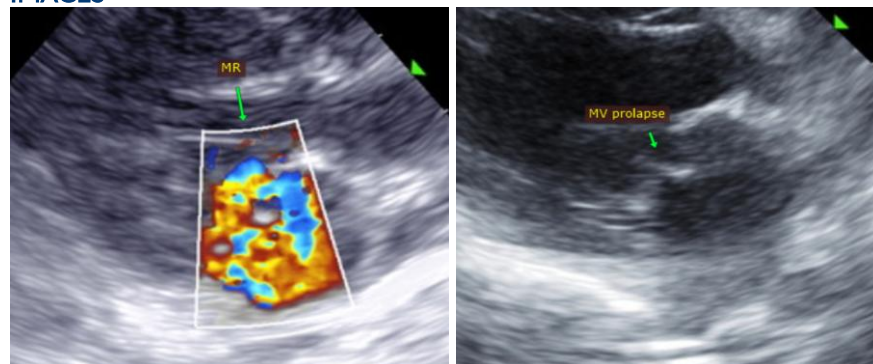
Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. **Pre-oxygenate for 5-10 minutes prior to induction.** Monitor for arrhythmias, hypotension, and hypoxia both intra and 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

Continue Pimobendan 0.3mg/kg PO q12h. BP recommended. CXR review and discontinue Lasix as discussed.

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

IMAGES



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.

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