



PATIENT

Pablo Blais

SPECIES

Canine

BREED

Rat Terrier

SEX

Male Neutered

AGE

14 years

WEIGHT

14.4lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques,
LVT/RVT

HOSPITAL NAME

Brighton Greens
Veterinary Hospital

REFERRING VET

Dr. Janeway

INVOICE

25710

DATE

8/10/22

PRESENTING CLINICAL SIGNS

History: Grade 5/6 systolic murmur on exam 6/22, pt has abdominal effort to breathing. Severe dental disease.

-Radiographs: Mild generalized cardiomegaly with significant left atrial enlargement.

-ECG: There are no pathologic arrhythmias noted on this ECG tracing. The R wave amplitude is increased; . Tall P waves are noted.

-BP: 206 205,202,207,210,207

-Current medications: Was started on Vetmedin 1.25mg PO BID , benazepril 2.5mg PO SID, hydrocodone 0.25 x 5mg tab PO TID, Pt evaluated 7/12 and found to have continued abdominal effort to breathing. O continued to decline echo, Rx Lasix- o did not start. 7/26 recheck continued dyspnea, o started Lasix 12.5mg PO BID, o states pt was ataxic on Lasix and discontinued medication.

-Abnormal PE/Chem/CBC/UA Results: AST 70, BUN 61, Creat 1.2 BUN/Creat 51, K+ 6.2, TG 598, PSL 276 CK 1082, platelet 433k, UA USG 1.014, pro 3+, occult bl likely iatrogenic from cysto OPG not submitted, accuplex neg x 4.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>posterior) with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Mildly increased LV diameter with hyperdynamic myocardial function. The tricuspid valve appears subjectively normal, with no tricuspid regurgitation. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

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	5.4	NA	NM	1.7	46	78	0.34
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	0.96	6.5	2.6	3.5	1.9
*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



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication, however risk for progression to spontaneous congestive heart failure in the future is elevated. No additional issues are identified.

Given these findings, reasonable to Pimobendan in this patient as below. If the ACE-I is well tolerated, this is also reasonable to continue going forward. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (B2).

While mainstem bronchi compression may certainly be contributing to a chronic increase in a cough, this does not explain labored breathing. Primary airway issues should also be considered (tracheal collapse, COPD/chronic bronchitis, etc.). Consider hydrocodone for any mechanical component due to cardiomegaly. Repeat chest radiographs are recommended, particularly because the symptom has progressed. No indication for Lasix based upon what is seen here; however, screening for early congestion is advised.

The reported blood pressure is elevated and should be reassessed for accuracy particularly given no reported clinical signs of severe hypertension (retinal changes, etc.) or evidence of LVH on echo. Ideally obtain serial measurements in a controlled, low stress environment and continue until 3 consecutive readings plateau within 5mmHg of variability. If persistently >180mmHg despite a relatively calm demeanor, recommend institution of amlodipine to effect. Additionally, if deemed accurate, screening for predisposing underlying causes of SHT is recommended (Cushings, PLN, adrenal tumor, etc.), as primary disease is relatively uncommon and a rule out diagnosis.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

Anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

PLAN

CXR recommended to screen for respiratory changes. Administer Pimobendan 0.3mg/kg PO q12h. Administer ACE-I 0.5mg/kg PO q12h. Discontinue Lasix. Continue Hydrocodone as needed. Reassess BP as discussed.

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.



Portable Animal Western Sonography, Inc.

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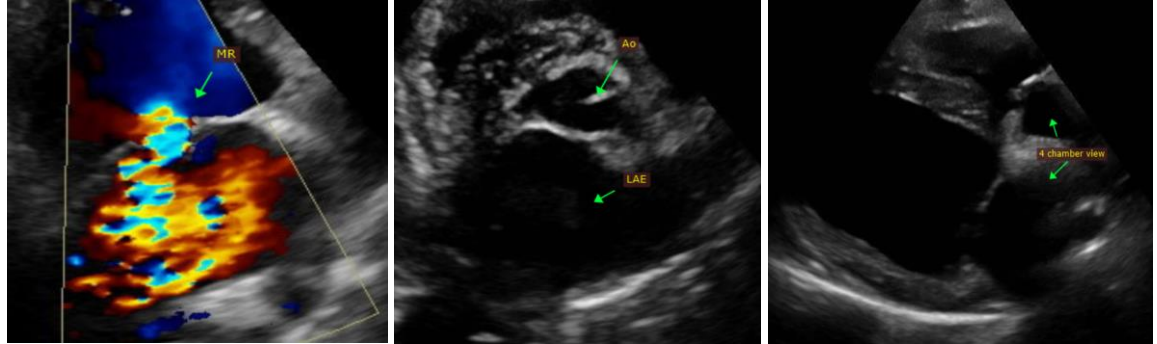
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IMAGES



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.

Maggie Machen Lamy, DVM
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