



**PATIENT**

Boodah Currens

**SPECIES**

Canine

**BREED**

Japanese Chin

**SEX**

Male Neutered

**AGE**

12 years

**WEIGHT**

7.3lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Dana Alterman,  
RDCS, LVT

**HOSPITAL NAME**

Eubank Animal Clinic

**REFERRING VET**

Dr. Rouse

**INVOICE**

30443

**DATE**

4/25/23

**PRESENTING CLINICAL SIGNS**

History: Presented to ER with acute onset dyspnea. Grade 2/6 murmur, stenotic nares and mucoid/serous nasal discharge. History of BOAS and exercise intolerance.  
-Current medications: Unasyn, albuterol, hospitalized in O2 kennel, cerenia, nasal drops.

**ELECTROCARDIOGRAPHIC FINDINGS**

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 140bpm (range 115-150bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. No ectopic beats, pauses or dysrhythmias observed.

ECG diagnosis: Normal sinus rhythm with respiratory variation.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with no left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with no obvious tricuspid regurgitation. No right atrial and ventricular enlargement. The MPA and branches are dilated. The pulmonic and aortic valves are normal in morphology and mobility. 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)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	NM	NA	NM	1.3	53	96	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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	NM	NM	NM	3.3	1.3	1.9	0.9
<b>*Normal chamber parameters expressed as a mean value (SD)</b>				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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 mild mitral regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. More importantly moderate pulmonary hypertension is suspected, based upon a significantly dilated MPA. This is likely secondary to airway disease in this patient. No concurrent issues such as systolic dysfunction are noted in this study. The ECG is unremarkable with a normal sinus rhythm.

Given these findings, the reported breathing changes are unlikely to reflect CHF. This is based upon no left atrial enlargement and concurrent pulmonary hypertension, which is suspected to be related to primary respiratory disease. Highly recommend chest radiographs with a Radiologist review of the films for a thorough pulmonary evaluation. Based upon the information that we have, a broad-spectrum pulmonary antibiotic such as Baytril, as well as Sildenafil is indicated to help lower pulmonary pressures. Hydrocodone can be utilized to help get the cough under control.

Assessment of progression in the future will help predict long term prognosis, which is guarded at this stage. 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.

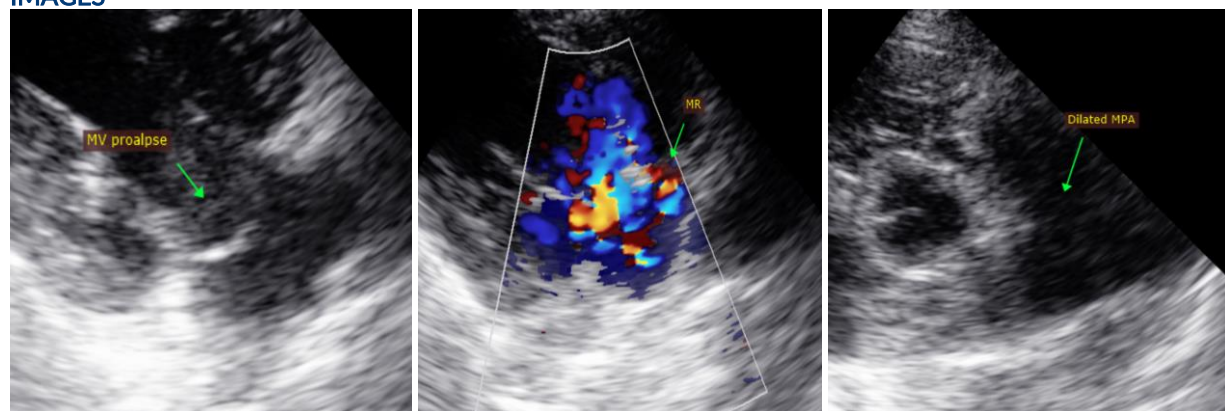
Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively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

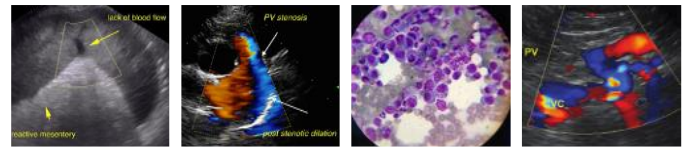
**PLAN**

Chest radiographs Radiologist review of the films. Institute Sildenafil 1-2mg/kg PO q12h. Institute Baytril or similar antibiotic, Hydrocodone, etc. pending CXR results.

Recommend conservative monitoring with a recheck echocardiogram in 6-12 months, sooner if any development of clinical signs.

**IMAGES**





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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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