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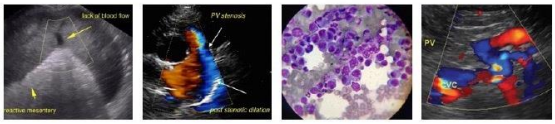

THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT
Bourbon Williams

SPECIES
Canine

BREED
Rottweiler Mix

SEX
Male Neutered

AGE
5 years

WEIGHT
101.4lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Kelly Reschny, RVT

HOSPITAL NAME
Graham Animal Hospital

REFERRING VET
Dr. Lukacs

INVOICE
23129

DATE
3/16/22

PRESENTING CLINICAL SIGNS

History: Presented 3/11/22 for presumed syncope episodes. Grain-free diet for 4 years. PE: NSF. Normal the next day. Grade 1/6 murmur. Started on Taurine 1000mg PO q12h and diet change.
-ECG report (Idexx): LAD, no arrythmias.
-CXR report (Idexx): VHS: 11.8, moderate cardiomegaly, remainder NSF.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

While the VHS is mildly elevated (11.0), the overall cardiac silhouette appears normal in size and contour. No obvious evidence of CHF.

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 125bpm with a largely regular rhythm. 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: Normal sinus rhythm with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Trace mitral regurgitation with no left atrial dilation. Normal LV diameter with adequate myocardial function for this breed. The tricuspid valve appears normal with no tricuspid regurgitation. 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 or 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	4.5	NA	1.0	1.2	33	60	0.6
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	1.8	1.2	46.0	3.4	4.5	3.0
*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 **Note: All measurements based upon multi-modal images and methods. An average value is reported.*				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
				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)

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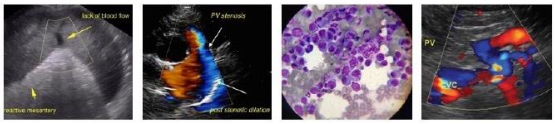

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Adapted from June Boon, Veterinary Echocardiography, 1998 Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435 Hansson et al, Vet Rad and Ultrasound 2002 Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177,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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. A small mitral leak is noted which may reflect early valve disease and follow up is advised. No other significant valvular leaks are visualized, and no evidence of pulmonary hypertension. The ECG is unremarkable with a normal sinus rhythm. No evidence of diet-related cardiomyopathy on this scan.

These findings certainly do not explain frequent syncopal episodes. The ECG is unremarkable, making an arrythmia unlikely. A holter monitor can still be considered, if the episodes persists. Neurologic events should also be considered, including full systemic evaluation (lab work and neuromuscular evaluation).

While the VHS is mildly increased on the chest radiographs, the overall cardiac size is subjectively unremarkable. This is likely a normal variant in light of the echo findings.

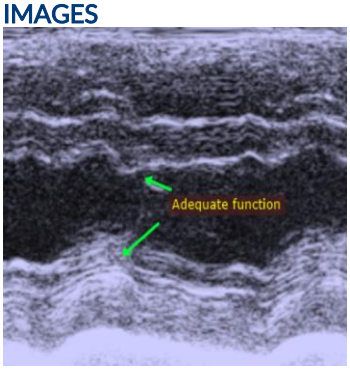
Monitor for development of a heart murmur, cough, labored breathing, exercise intolerance or recurrent collapse episodes.

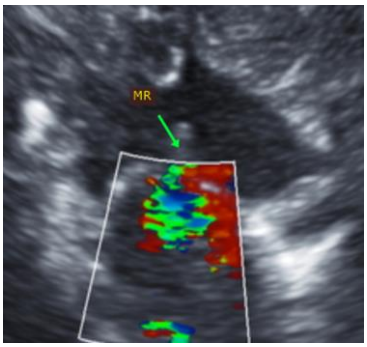
PLAN

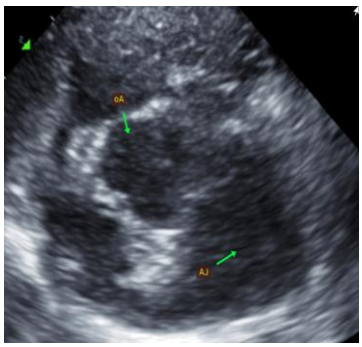
No obvious indication for Taurine supplementation. A diet change remains the conservative recommendation. Consider further evaluation for syncope episodes if they persists/recur in the future.

A recheck echocardiogram is recommended if a murmur or signs of cardiac compromise be noted in the future.

IMAGES







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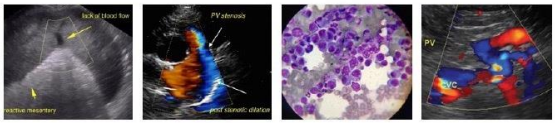

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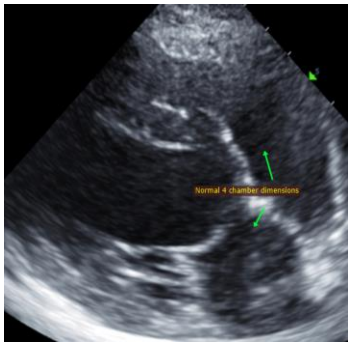

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com