



PATIENT

Jackson Botha

SPECIES

Canine

BREED

Labrador Mix

SEX

Male Neutered

AGE

8 years

WEIGHT

77lbs

INTERPRETED BY

Maggie Machen
 Lamy, DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Faithful Friends
 Animal Clinic

REFERRING VET

Dr. Rideout

INVOICE

22998

DATE

3/8/22

PRESENTING CLINICAL SIGNS

History: Presented 3/6/22 for lethargic, shaking, inappetence. Palpable abdominal mass. Assess prior to anesthesia and screen for cardiac neoplasia.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.
 Normal cardiac silhouette. 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 70bpm (range 47-90bpm). 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 dysrhythmias observed.

ECG diagnosis: Sinus bradycardia with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild mitral valve thickening with no prolapse into the left atrial lumen. Trace mitral regurgitation with a normal left atrial dimension. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with trivial tricuspid regurgitation. Normal TR 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 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	1.9	1.1	1.0	31	60	0.3
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	0.7	34.9	2.3	4.5	3.1
*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)
				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)

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



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Clin North Am 15:1177, 1995	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)

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. No significant valvular leaks are visualized, and no evidence of pulmonary hypertension. No obvious intra or extra-cardiac masses are observed; however, it is worth noting that these are easily missed in the absence of effusion. Advanced thoracic imaging should be considered if suspicion is high.

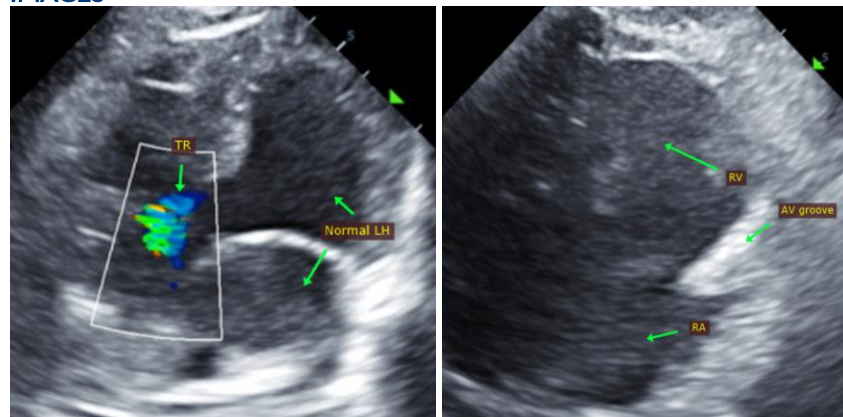
The ECG shows a bradycardia with respiratory variation. This is most consistent with a respiratory sinus arrhythmia, which is benign and typically due to high vagal tone. To confirm the diagnosis, response to light exercise/stress is recommended to ensure that the heart rate stimulates appropriately. Alternatively, or if there is any question on response, an Atropine Challenge can be performed to ensure a normal exuberant response. Assuming the heart rate does stimulate appropriately, causes of high vagal tone can be considered, such as neurologic, GI or respiratory disease. If the heart rate does NOT stimulate appropriately, further evaluation is advised (holter, referral, etc.).

Pending a normal HR response, there is no contraindication for general anesthesia prior to chamber enlargement if needed (an abnormal response would certainly be a contraindication).

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

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

IMAGES



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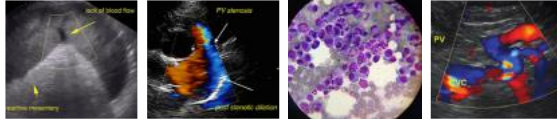
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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