

**PATIENT**

Murphy Ryan

PRESENTING CLINICAL SIGNS

History: Previously presented for acting sluggish and abnormal heart sounds. Radiographs show mildly enlarged heart. Diagnosed hypothyroid; was put on thyroid medication and is doing much better.

SPECIES

Canine

BREED

Boxer

SEX

Male Neutered

AGE

7 years

WEIGHT

79.8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. George

INVOICE

24757

DATE

6/13/22

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve with no obvious prolapse into the left atrial lumen. Trace mitral regurgitation with mild left atrial dilation. Normal LV dimension with mildly depressed myocardial function. Normal LV wall thickness. The tricuspid valve appears normal with trace TR. Normal 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. Mildly elevated aortic outflow velocities; laminar flow. No aortic insufficiency. Normal pulmonary outflow velocity with no pulmonic insufficiency. No pericardial or pleural effusion noted. Occasional premature beats noted throughout.

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	4.9	2.1	1.3	1.4	25	48	0.7
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	160	2.2	1.1	36.2	3.0	4.2	3.2
*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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Mild changes are appreciated in this study. The LV is normal in dimension; however, the function appears mildly depressed. This may be a normal variant, reflect early primary structural disease or may be due to recently diagnosed hypothyroidism. The LA is mildly dilated, indicating low risk for complication. Trace MR and TR appear hemodynamically insignificant. Finally, a mildly elevated aortic outflow velocity is noted, which may cause a soft benign flow murmur depending on heart rate in the future. Occasional premature beats are noted throughout and **an ECG is strongly recommended.**

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PATIENT

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Given these findings, no medications are indicated. Consider screening for additional causes of LV dysfunction, such as a nontraditional diet.

SPECIES

Canine

Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. I generally recommend fish oil supplementation in any Boxer, given the anti-arrhythmic properties of omega fatty acids.

BREED

Boxer

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.

SEX

Male Neutered

PLAN

Baseline ECG is recommended as discussed. Baseline BP is recommended every 6 months. Consider diet history.

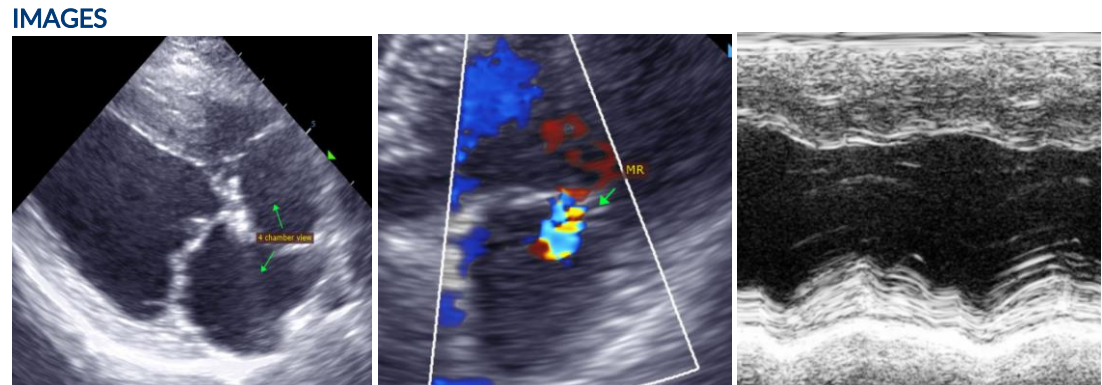
AGE

7 years

Recheck is recommended in 6 months, sooner if clinical signs arise.

WEIGHT

79.8lbs

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Kim Liedberg

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.

HOSPITAL NAME

SVS Imaging WI

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

REFERRING VET

Dr. George

Maggie Machen Lamy, DVM
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