

PATIENT

Emma Vetsch

SPECIES

Canine

BREED

Boxer

SEX

FS

AGE

8y

PRESENTING CLINICAL SIGNS

History: Recheck echo. History of 1+ year of coughing and a heart murmur. Owner has tried different antibiotics, anti-tussives, and repeat courses of doxycycline which has not improved the cough. Abnormal PE/Chem/CBC/UA Results: PE WNL. 2/5 left sided heart murmur. Non-productive cough exhibited when patient is excited or playing with other dogs (sometimes will vomit when this happens). Also left hind lameness that has not been worked up. Pertinent previous echo findings (MML 3/2021): normal, LVOT 1.9m/s. Coughing at that time.

ECHOCARDIOGRAM FINDINGS

2D, m-mode and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no obvious prolapse into the left atrial lumen. No mitral regurgitation is identified. Mild left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears subjectively normal, with trace tricuspid regurgitation. Normal velocity. The right heart is normal (subjective). No overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. No aortic abnormalities identified, however the LVOT velocity is mildly elevated. Normal pulmonic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

CARDIAC CHART

WEIGHT

58lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging

REFERRING VET

Dr. Merkes

INVOICE

24110

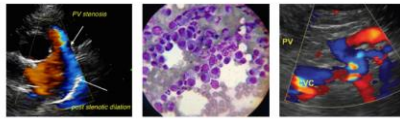
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5/9/22

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		2.2	NM	1.3	33	60	0.55
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	120	1.96	0.91		2.6	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 <i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i> 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				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)
				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

Largely unchanged cardiac dimensions and function. The murmur remains benign in origin, and no systolic function or other issues are identified. The LA is mildly enlarged, which is suspected to be a normal variant common in this breed. No significant valvular insufficiencies were noted, and no structural issues identified.

**PATIENT**

Emma Vetsch

Given these findings, the cough remains unlikely to be cardiac in origin and primary respiratory causes should be considered more likely. Consider further respiratory work up/treatment (hydrocodone, taper course of steroids, Enrofloxacin, etc.). Given the refractory nature of the symptom, advanced evaluation such as TTW/BAL should be considered.

SPECIES

Canine

No cardiac medications are indicated. No cardiac contraindication for general anesthesia.

BREED

Boxer

Monitor for any development of cough, labored breathing or exercise intolerance.

SEX

FS

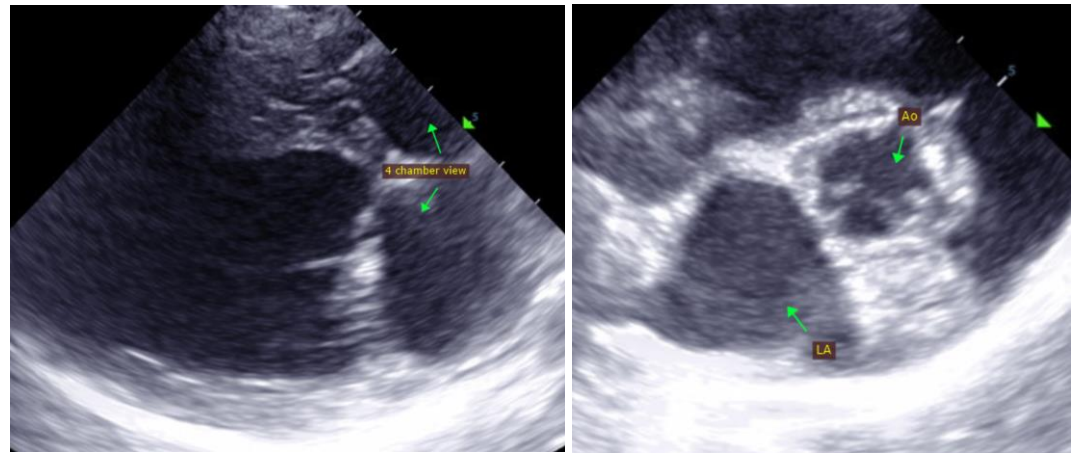
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Recommend recheck echocardiogram in 12-18 months to screen for progression or development of concurrent cardiac disease that the preexisting murmur may mask.

IMAGES**INTERPRETED BY**

Maggie Machen
Lamy, DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Sarah Pender, CVT

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. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

HOSPITAL NAME

SVS Imaging

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