IMAGING PERFORMED BY

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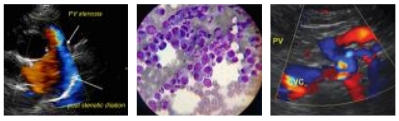

SonoPath
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PATIENT

Max Skwarek

SPECIES

Canine

BREED

Mixed

SEX

MN

AGE

2010

WEIGHT

30.6lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME

Bel Air Veterinary Hospital

REFERRING VET

Dr. Young

INVOICE

20724

DATE

8/24/21

PRESENTING CLINICAL SIGNS

History: Chronic left sided heart murmur. Asymptomatic. Assess prior to dental.
-Current medications: Iverheart Plus
-Sedation used: Not needed.
-STAT: Not requested.

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

Minimal cardiomegaly. No obvious evidence of CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mildly diffuse thickening of mitral valve leaflets with no obvious prolapse into the left atrial lumen. Trace central mitral regurgitation is identified. Normal MR velocity. Normal left atrial dimension. Borderline LV dimension with borderline LV function. The tricuspid valve appears subjectively normal, with no tricuspid regurgitation. The right heart is normal (subjective). 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. Normal pulmonic outflow velocities. Trace aortic insufficiency. No pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

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	5.0	NA	NM	1.4	30	58	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)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	87	1.9	0.74	13.9	2.2	3.7	2.6
*Normal chamber parameters expressed as a mean value				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)

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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

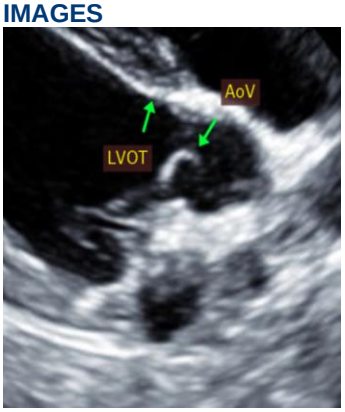
The only cause of a murmur identified is increased flow velocity through the LVOT/aortic root, which likely explains a chronic murmur. No obvious subaortic ridge or valvular abnormalities are visualized, and in the absence of structural abnormalities this is considered a benign flow murmur. It is reasonable to monitor periodically via recheck echocardiography in the future. Additionally screening for fluid status abnormalities (dehydration, anemia, etc.) is recommended through routine lab work as these abnormalities would make this finding more prevalent. A small aortic leak is noted, and a baseline BP is recommended. Trace mitral leak is considered most likely physiologic; however, serial monitoring is advised to screen for progression. Finally, the systolic function is borderline and follow up is advised. No additional issues identified.

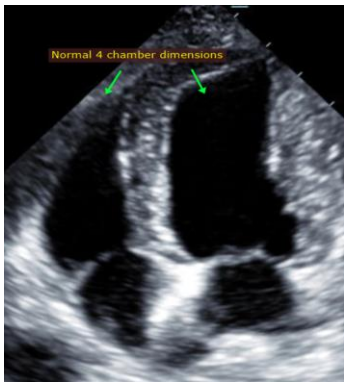
No cardiac medications are indicated. No cardiac contraindication for general anesthesia. Consider avoid BEG diets in this patient and screen a thyroid level if not recently assessed.

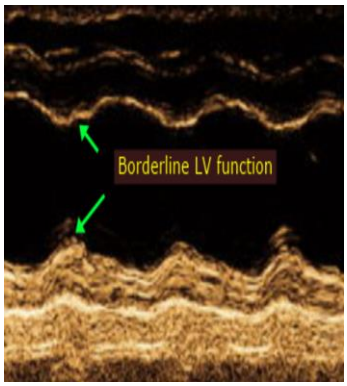
Monitor for any development of cough, labored breathing or exercise intolerance.

Recommend recheck echocardiogram in 12 months to screen for any progressive changes.

IMAGES







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.

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