



PATIENT

Millie Ott

PRESENTING CLINICAL SIGNS

History: Grade 3/6 heart murmur. Assess prior to OHE.

SPECIES

Canine

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, 10mm/mV. The average heart rate is 145bpm (range 107-176bpm). 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.

BREED

Terrier

ECG diagnosis: Normal sinus rhythm with respiratory variation.

SEX

Female Intact

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal MV leaflets with no obvious prolapse. Trivial mitral regurgitation. Mild left atrial enlargement. Mild LV dilation with adequate myocardial function. Normal LV wall dimensions. The LV has a spherical appearance. The tricuspid valve appears subjectively normal, trace tricuspid regurgitation. The right heart is normal. No overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. No obvious aortic abnormalities identified, however the LVOT velocity is mildly elevated. Laminar flow. Pulmonic outflow velocities are normal. No aortic or pulmonic insufficiency. No obvious congenital shunts. No pericardial or pleural effusion noted. No cardiac tumors observed.

AGE

14 months

WEIGHT

14lbs

CARDIAC CHART

INTERPRETED BY

Maggie Machen
 Lamy, DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

The Ark Veterinary
 Clinic

REFERRING VET

Dr. Mercer

INVOICE

30222

DATE

4/12/23

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	NA	NA	1.5	1.5	33	64	0.37
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	2.7	1.5	6.4	1.5	3.0	1.8
*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)
				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



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The only cause of a murmur identified is mildly increased flow velocity through the aortic root. The aortic valve and LVOT appear normal, making this likely physiologic in origin. This type of outflow abnormality is heart rate dependent and will vary with hydration/volume changes as well. No obvious congenital shunts or defects are observed in this study; however, it is important to note that small abnormalities are easily missed without advanced diagnostics. Of some concern, the left heart is mildly dilated for this body size with a spherical appearance. A volume overloading issue, such as a small PDA, was not visualized in this image set making this finding of unknown origin. Given these findings, **consider referral in this case to ensure no additional abnormalities are identified.** If declined, reassessment is recommended in 6 months to screen for any progressive changes. The ECG is unremarkable.

No cardiac medications are indicated at this time. Monitor for any development of cough, labored breathing or exercise intolerance.

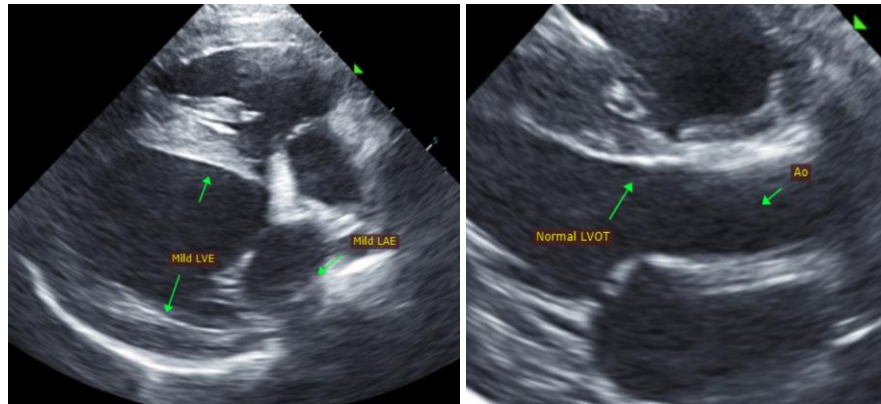
No cardiac contraindication for general anesthesia at this time; however, referral should be considered prior to proceeding.

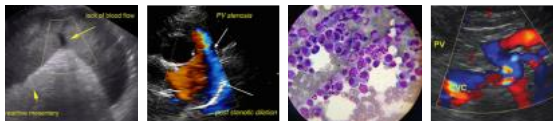
PLAN

Recommend referral in this case.

If declined, recommend recheck echocardiogram in 6 months to ensure no progressive issues are seen, sooner if any clinical signs arise in the interim.

IMAGES





PATIENT

Millie Ott

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.

SPECIES

Canine

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.

BREED

Terrier

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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