



PATIENT

Ansel Corcoran

SPECIES

Canine

BREED

Shepard Mix

SEX

Male Neutered

AGE

7 years

WEIGHT

63lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM DACVIM
(Cardiology)

IMAGING PERFORMED BY

Crystal Hill, RVT

HOSPITAL NAME

Snelgrove Veterinary
Service

REFERRING VET

Dr. Gunsinger

INVOICE

25965

DATE

8/23/22

PRESENTING CLINICAL SIGNS

History: Presented for coughing/gagging of 1 month duration, worse at night or when excited. PE overall unremarkable however new heart murmur noted. Previous history of reflux when younger. Coughing increased today during scan when laying in right lateral recumbency. Heart murmur, grade 2-3/6. Only meds Sulcrate and Omeprazole. HR 120, RR 36.

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; 25mm/s, 20mm/mV. The average heart rate is 80bpm (range 50-100bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P morphology is positive. No ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Sinus bradycardia with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. No mitral regurgitation is identified. Normal left atrial dimension. Normal LV diameter with adequate myocardial 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. 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

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	1.3	1.3	38	72	0.6
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	1.9	1.3	28.6	2.7	4.0	2.5
*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)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435



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Hansson et al, Vet Rad and Ultrasound 2002	35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995	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

The only cause of a murmur identified is increased flow velocity through the LVOT/aortic root. No obvious subaortic ridge or valvular abnormalities are visualized, and in the absence of structural abnormalities this is considered a benign flow murmur. If this is a new 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. No significant valvular insufficiencies were noted, and no structural issues identified.

Given these findings, the cough is unlikely to be cardiac in origin and primary respiratory causes should be considered. **The ECG shows a respiratory sinus arrhythmia which is common with respiratory disease and further supports this conclusion.** No indication for cardiac medications at this time. Consider further respiratory work up/treatment (hydrocodone, taper course of steroids, Enrofloxacin, TTW/BAL, etc.). If these findings are discordant with any prior imaging (i.e., echocardiogram was previously performed and diagnosed heart disease), further comparative evaluation is recommended as no structural disease is seen here.

No cardiac contraindication for general anesthesia. Pre-medicate with a vagolytic and ensure a normal response prior to proceeding.

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

PLAN

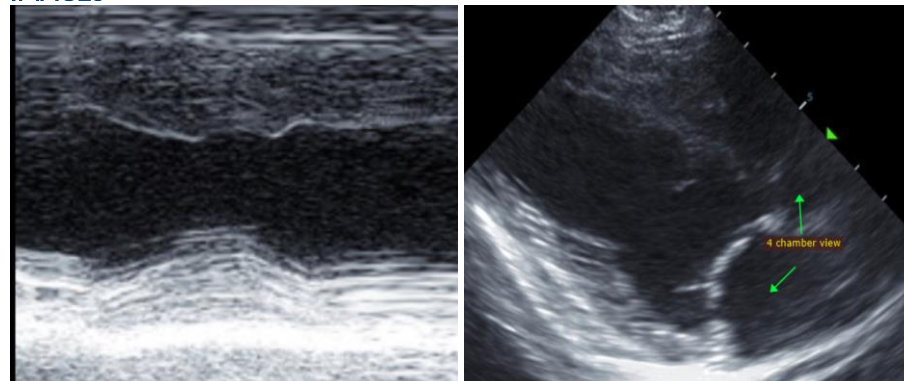
Consider further respiratory evaluation/therapy as discussed.

IMAGING PERFORMED BY

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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



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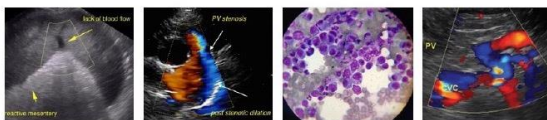
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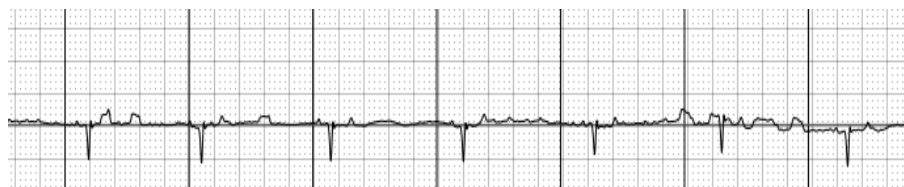
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Maggie Machen Lamy, DVM
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