

PATIENT

Annie Dinsmore

PRESENTING CLINICAL SIGNS

History: Grade 3/6 heart murmur.

SPECIES

Canine

BREED

CKCS

SEX

Female Spayed

AGE

8 years

WEIGHT

34lbs

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 from an AliveCor monitor; 50mm/s, 20mm/mV. The average heart rate is 130bpm (range 125-140bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive with normal dimension. Isolated VPCs throughout; singles only and monomorphic. No supraventricular premature beats, pauses or other dysrhythmias observed.

ECG diagnosis: Normal sinus rhythm with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Mild mitral regurgitation with minimal left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with mild tricuspid regurgitation. 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. Normal pulmonic and aortic outflow velocities with laminar flow. Trace aortic and pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

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	5.2	NM	NM	1.3	38	69	0.22
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	110	1.6	0.87	15.4	2.3	3.4	2.1
*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)

HOSPITAL NAME

Simmonds Veterinary Hospital

REFERRING VET

Dr. Cougar

INVOICE

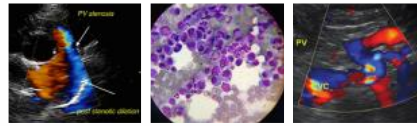
21490

DATE

10/12/21

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Mild degenerative valve disease is identified, with small leaks in all four valves. The mitral regurgitation is the most significant; however, remains in the mild category with minimal left atrial



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enlargement. A small aortic leak is noted, and a baseline blood pressure is recommended. No additional issues are identified. Prognosis is highly variable at this stage (B1) and monitoring for progression is advised.

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The ECG does confirm ventricular premature contractions (VPCs) as the cause of the arrhythmia. VPCs are generated from abnormal conductive or fibrotic tissue in the ventricles of the heart muscle, and even frequent single VPCs will often cause no clinical signs in dogs. When sustained however, ventricular tachycardia can lead to symptoms such as lethargy, collapse and sudden death. VPCs are a very non-specific finding. They can be due to significant cardiac disease (mild only in this study) or be extra-cardiac in origin, i.e., due to pain, stress, inflammation, cancer, GI disease, DIC/sepsis, etc. In an 8-year-old atypical breed, systemic evaluation may be warranted. An abdominal ultrasound to monitor for any underlying abnormalities, in addition to full lab work can be considered. Unfortunately, there is always an elevated risk for collapse and sudden death in any arrhythmic patient, and even on medications this risk unfortunately still persists.

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Based strictly upon the amount of arrhythmia present on the available ECG, anti-arrhythmic therapy is not clearly indicated. Pending results of systemic work up, can consider a holter monitor especially if any significant lethargy or collapse is noted.

WEIGHT

34lbs

Fish oil supplementation is recommended for dogs with arrhythmias (500-1000mg of omega 3 and 6 once to twice daily).

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(Cardiology)

Monitor at home for collapse, exercise intolerance, and/or lethargy. If a holter monitor is elected, this will dictate whether therapy is needed and follow up protocol.

Anesthetic risk is considered moderately elevated. Avoid ketamine, telazol, Dexdomitor (or other alpha-2 agonists) and acepromazine. Recommend having lidocaine CRI available for use in the event of worsening ventricular arrhythmias under anesthesia (CRI 50–75mcg/kg/min).

PLAN

Consider further work up through labs, abdominal ultrasound, etc.

IMAGING PERFORMED BY

Rebekah Jakum, CVT
ARDMS/RVT

A recheck echocardiogram/ECG is recommended in 6 months, sooner if symptoms of cardiac disease arise (cough, labored breathing, etc.).

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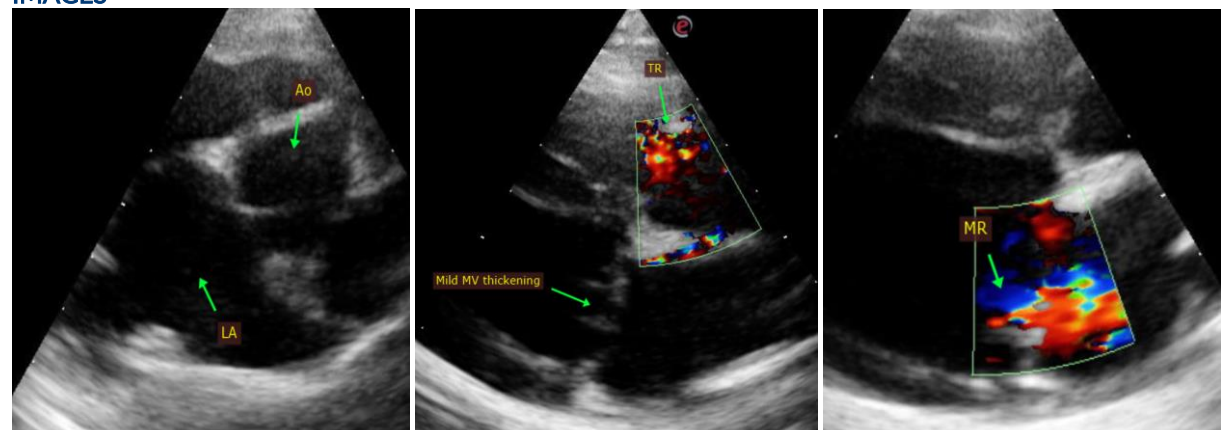
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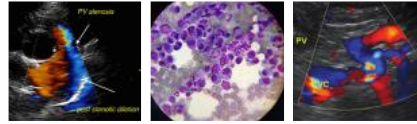
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IMAGES





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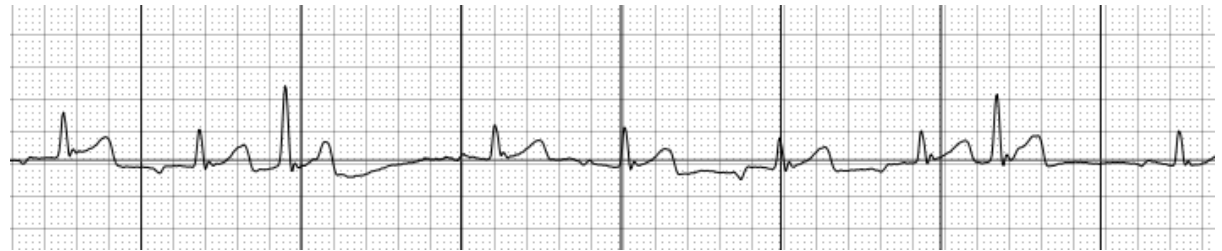
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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