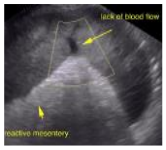
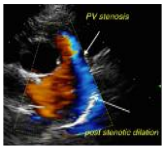
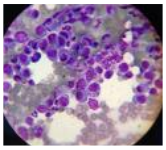
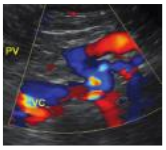
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Henry Chamney

SPECIES
Canine

BREED
Pitbull Mix

SEX
Male Neutered

AGE
10 years

WEIGHT
90lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Dana Alterman, RDCS, LVT

HOSPITAL NAME
Eubank Animal Clinic

REFERRING VET
Dr. Garb/Chamney

INVOICE
29263

DATE
2/27/23

PRESENTING CLINICAL SIGNS
History: Recent lethargy with questionably abnormal spleen. Recent bloodwork was high normal.

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, 20mm/mV. The underlying rhythm is sinus in origin with an average heart rate of 100bpm. Frequent APCs are suspected, based upon similarity to this sinus beat. The instantaneous heart rate is 250bpm. Occasional couplets appreciated. No VPCs, significant pauses or other dysrhythmias observed.
ECG diagnosis: Respiratory sinus arrythmia with frequent single and couplet APCs.

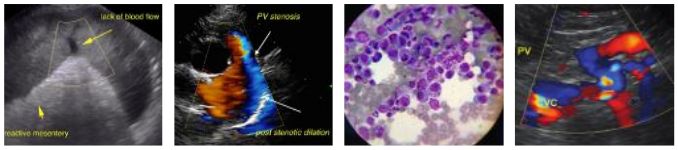
ECHOCARDIOGRAM FINDINGS
2D, m-mode, color flow and doppler imaging is available. Normal mitral valve leaflets with no prolapse into the left atrial lumen. No obvious mitral regurgitation with a normal left atrial dimension. Normal LV diameter with adequate myocardial function (for this signalment). The tricuspid valve appears normal with no 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. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	1.0	1.0	27	50	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	NM	0.8	0.9	40.8	2.5	4.1	2.9
*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 **Note: All measurements based upon multi-modal images and methods. An average value is reported.*				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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. No significant valvular leaks are visualized, and no evidence of pulmonary hypertension.



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The ECG does however identify frequent atrial premature contractions (APCs). APCs are generated from abnormal conductive or fibrotic tissue in the atria of the heart muscle, and even frequent single APCs will often cause no clinical signs in dogs. When sustained however, supraventricular tachycardia can lead to symptoms such as lethargy and collapse.

APCs are a very non-specific finding. They can be due to significant cardiac disease (not present in this study) or be extra-cardiac in origin; i.e., due to pain, stress, inflammation, cancer, metabolic disease, etc. In a senior large breed dog with possible systemic issues, further evaluation is recommended. Close monitoring for progression is advised. Also consider systemic screening, such as an abdominal ultrasound to monitor for any underlying abnormalities. A screening BP is also recommended. Given the amount of arrhythmia noted on this ECG, no treatment is clearly indicated. Highly recommend a holter monitor however, to further investigate the rate and rhythm throughout a 24 hour period.

With APCs, anesthetic risk is mildly elevated. Consider further systemic evaluation as discussed prior to proceeding. Avoid ketamine, telazol, Dexdomitor (or other alpha-2 agonists) and acepromazine. Monitor ECG/BP carefully during the procedure and intervene with IV diltiazem bolus/CRI if sustained SVT were to develop.

Monitor at home for collapse, exercise intolerance, and/or lethargy.

PLAN
Consider a holter monitor and systemic evaluation.

Going forward, a recheck ECG and echocardiogram is recommended in 4-6 months to assess for progression/persistence.

IMAGES

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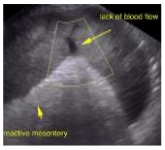

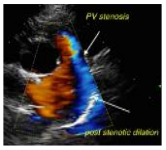

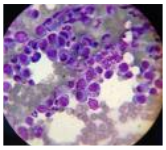
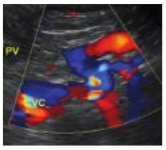

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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