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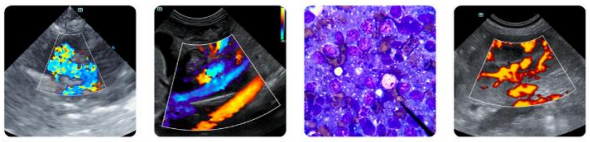


Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT

Max Glessner

SPECIES

Canine

BREED

Boxer

SEX

Male Neutered

AGE

11 years

WEIGHT

69.9lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Renee Trionfetti, VMD

HOSPITAL NAME

Blue Pearl Wyomissing

REFERRING VET

Blue Pearl Wyomissing

INVOICE

47841

DATE

5/13/26

PRESENTING CLINICAL SIGNS

History: Recent seizure-like episodes (cardiac vs neurological in origin). Evaluated in ER on 5/5/26 for 7 tonic-clonic seizures over a 4-day period. First seizure-like episode occurred in Feb 2026. On ER PE, No murmur noted, new inconsistent arrhythmia difficult to auscult due to panting but there are dropped pulses, lungs auscult clear, eupneic. rDVM also noted arrythmia; irregular heartbeat, washing machine rhythm, difficult to auscult over panting, asynchronous bounding femoral pulses, no murmur ausculted. Seizure-like episodes last about 5 mins, some less, described as tonic-clonic, post-ictal phase duration about 30-45 mins). On Keppra ER BID (new). Sedated with Butorphanol + Alfaxalone. BP: 180, 200mmHg (stressed). BP more relaxed: 120, 117, 115mmHg
Abnormal PE/Chem/CBC/UA Results. CXR showed no obvious nodules nor mediastinal mass or enlargement. Heart does not appear enlarged. PCV/TS - 47/7.0 EPOC - Glu - 138, normal ionized calcium, Lac - 3.14, pH - 7.355 rDVM: - Chem: ALP 1030 H, normal ALT/AST, Glob 3.7 mild H, PSL 467 H - CBC: Hct 51%, plts 421 H, remainder NSF - T4: 1.1-n - 4Dx: Neg x 4.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

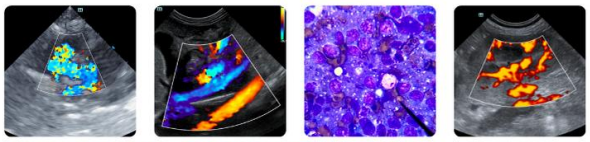
A single lead ECG is provided prior to sedation; 25mm/s, 10mm/mV. The underlying rhythm is sinus in origin with an average heart rate of 150bpm. A brief salvo of ventricular tachycardia is seen in the initial part of the tracing. P for every QRS complex and vice versa. The P and QRS morphologies are positive. Triplets, couplets and single VPCs seen throughout. No APCs, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with maglinant ventricular arrythmias.
*The ECG obtained following sedation shows no ventricular arrythmias.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve appears mildly thickened, with no obvious prolapse into the left atrial lumen. Trace central MR seen. Normal left atrial dimension. Normal LV diameter with adequate myocardial function. Normal LV wall thickness. The tricuspid valve appears normal in form and function. No overt evidence of pulmonary arterial hypertension or right heart compensation, however right heart is prominent. No tricuspid regurgitation. The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity. No aortic insufficiency. Normal pulmonic valve with no pulmonic insufficiency seen. No pericardial or pleural effusion noted. No obvious cardiac tumors. VPCs are noted throughout the study.

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		2.7	NM	1.3	28	50	0.3
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)



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NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	130	1.7	0.8	31.7	2.4	4.6	3.3
*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)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiac structure and function are essentially normal in this patient. There is mild right heart prominence in some views; however, this is angle dependent and may be a normal variant. The left heart dimensions are normal with trace MR appreciated. Finally, the systolic function considered adequate, and no cardiac tumors are identified.

The ECG does confirm that intermittent runs of ventricular tachycardia (VT) are present in this case. VT is a malignant arrhythmia generated from abnormal conductive or fibrotic tissue in the ventricles of the heart muscle, and when sustained can lead to symptoms such as lethargy and collapse. VT is considered a highly unstable rhythm, as there is great risk for fibrillation and sudden death.

VT can be a non-specific finding; however, a primary origin (ARVC) is suspected in this signalment. ARVC is a primary conduction disease common in Boxers, albeit the most common age of onset 6-8yo. ARVC can occur with or without systolic dysfunction and structural issues, however this should be monitored going forward for any progressive issues. It is always reasonable to rule out other differentials for VT (AUS, tick titers, troponin, etc.), particular given the advanced age of the patient. 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. ARVC/VT carries a HIGHLY variable prognosis, with some dogs able to remain asymptomatic for extended periods of time, and others developing exercise intolerance, syncopal episodes, and refractory arrhythmias/sudden death imminently.

Based upon the history and ECG findings, Sotalol should be initiated ASAP. If any further sustained VT is identified (or syncope is noted), **immediate hospitalization for Lidocaine should be offered**. Once the patient is stabilized and sotalol is on board, an extended time 6 lead ECG and/or holter monitor is a reasonable next step to allow monitoring of the rhythm throughout 24 hours of a normal day to ensure good rhythm control.

It should be noted that this patient also has what appear to be clonic/tonic seizures, which are less likely due to VT (although not ruled out). Response to anti-arrhythmic therapy will be telling; however, it is possible there are 2 issues at play.

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

Monitor at home for collapse, exercise intolerance, and/or lethargy. Anesthesia is not recommended until good arrhythmic control is achieved. Lifelong mild to moderate activity restriction is advised.

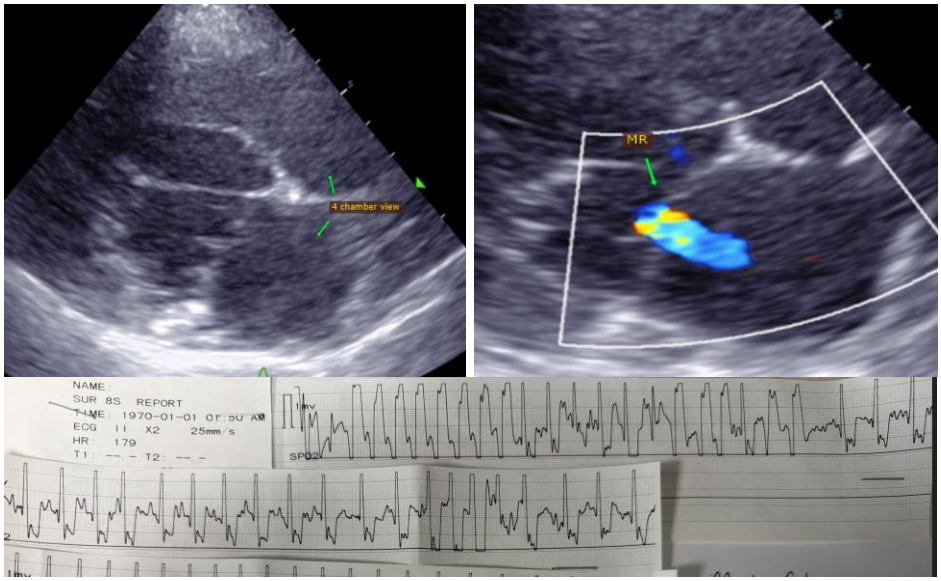
PLAN

If any further syncope or sustained VT is noted, immediate hospitalization for ECG monitoring and Lidocaine therapy is recommended. ASAP institute Sotalol therapy: Give a loading dose of 80mg, followed by 40mg PO q12h.

Recheck ECG in 1-2 weeks to assess response (goal is significant reduction in ectopy without a significant change in underlying sinus rate). Consider holter at this time if desired.

Recheck ECG and echocardiogram is recommended in 6 months to determine progression/control, sooner if any development of associated clinical signs.

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.

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