
PATIENT PRESENTING CLINICAL SIGNS

Chill Watts
 Emp Pet

SPECIES
 Canine

BREED
 Rough Collie

SEX
 FI

AGE
 4 years

WEIGHT
 26 kg

INTERPRETED BY
 R. McKenzie Daniel,
 DVM, DABVP

IMAGING PERFORMED BY
 Kelly Reschny

HOSPITAL NAME
 Graham AH

REFERRING VET
 Dr. Lukacs

INVOICE
 13170

DATE
 1/26/22

Possible seizure or syncope event 1/20/22, second event 1/24/22. During episodes, which last about 1 minute, patient gets up from laying position and runs, falls onto side, very stiff (no paddling), no urination/defecation during episode or foaming at mouth. At first episode possibly lost consciousness, at second episode appeared conscious but not fully aware. After episode, patient is disoriented for a few minutes, than back to normal. No known toxin exposure. No previous cardiac or neurologic abnormalities. Cardiac ultrasound/ECG recommended to help rule out cardiac cause vs. neurologic cause to episodes. Exam 1/20/22: No cardiac or neurologic abnormalities noted on physical examination, thoracic auscult NAF, ECG in house sinus. Bloodwork NSF. Has hx of allergic skin disease well managed with apoquel. To be used in breeding program.

Abnormal PE/Chem/CBC/UA Results: CBC: NAF Biochemistry (chem 17., lytes, TT4): ALKP low <10 U/L, amylase low 471 U/L, cholesterol high 9.24 mmol/L, mild hyponatremia 143 mmol/L BP 137/75 (MAP 98) 110/24/MAP 98

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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		1.5	NM	1.21	24.2	52.6	0.32
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	137	1.6	1.5		3.3	3.3	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was mildly subnormal as evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was



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noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. Trace TR was present on color doppler assessment. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window. No evidence of arrhythmia was noted.

ULTRASONOGRAPHIC FINDINGS

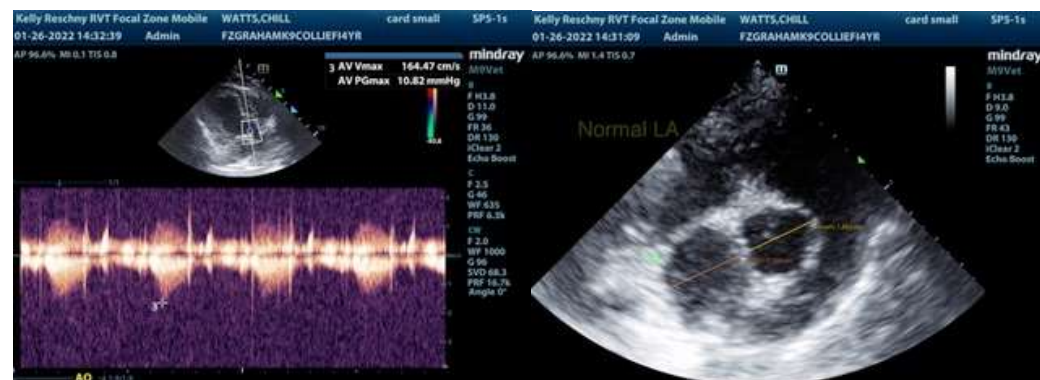
Primary Findings

- Overtly normal cardiac structure with mild LV hypocontractility
- Trace TR - estimated pulmonary pressure gradient not consistent with clinical pulmonary hypertension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No overt evidence of structural cardiac disease was present. The mild subnormal LV hypocontractility is of unclear clinical significance with potential causes including patient variant, systemic disease, hypothyroidism, while an athletic cardiac state can also present in this fashion. DCM criteria is not present. No overt indication for cardiac medications was evident given this cardiac presentation and lack of left or right heart chamber enlargement.

Holter monitor could be considered to assess for arrhythmogenic disease not present on in-house ECG. Sonographic monitoring is required for further assessment of persistent LV hypocontractility or development of left or right heart chamber enlargement for further prognosis. Recheck echocardiogram is suggested in 3-4 months, sooner if persistent / progressive potential syncopal episodes are noted.





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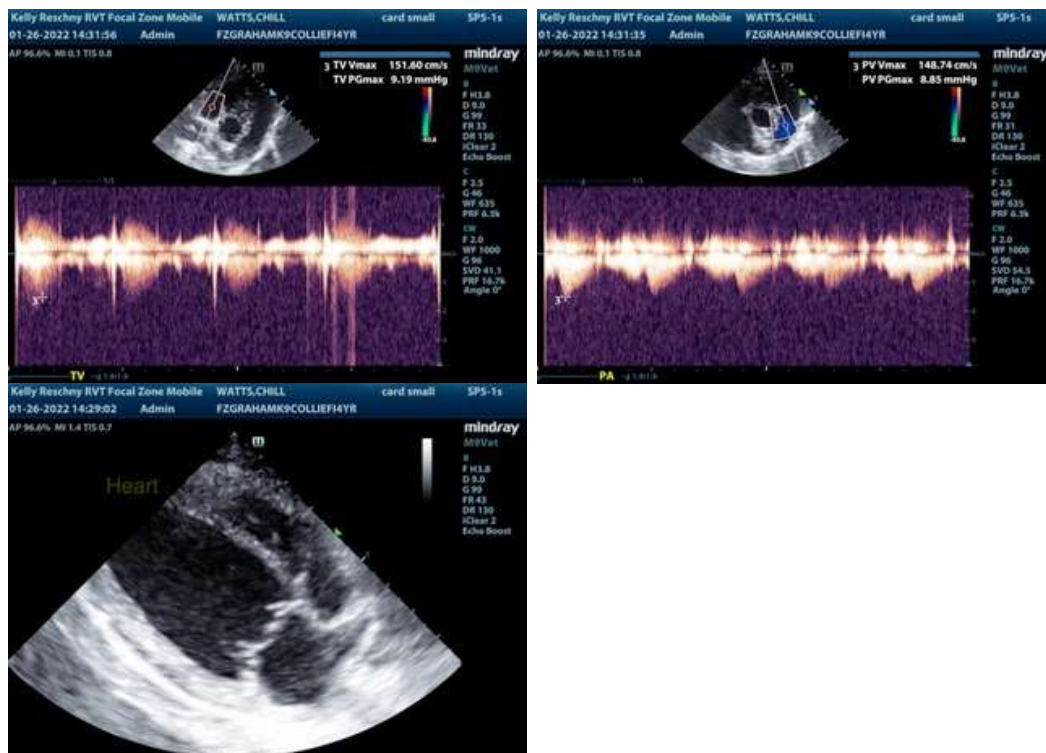
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. 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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