
PATIENT PRESENTING CLINICAL SIGNS

Melody Rowe

SPECIES

Canine

BREED

Havanese

SEX

FS

AGE

13 years

WEIGHT

4.7 kg

INTERPRETED BY

 R. McKenzie Daniel,
 DVM, DABVP

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

 Beattie Pet Hospital
 Burlington

REFERRING VET

Dr. Ruggieri

PRESENTING CLINICAL SIGNS

January 7, 2021 - BAR, CRT < 2S, MM pink, euhydrated Had what appeared to be a seizure around 11am this morning. P was conscious, lying on right side, all four limbs were very straight and stiff, no paddling observed. Was crying out and yelping. Lasted roughly 30sec. Afterwards P was unable to walk, appeared weak. Ataxic. Hx of heart murmur, not on medication. O mentioned P sounds congested, abnormal breathing. Increased abdominal effort when at home lately. Not really coughing. Still E/D normally No V/D Lungs/Trachea: Positive tracheal pitch, coughing. Heart/Cardiovascular: Grade 4/6 SHM

Abnormal PE/Chem/CBC/UA Results: PCT 0.54% HIGH 0.14-0.46% rads: -The moderate bronchointerstitial pulmonary pattern in the caudodorsal lung fields is greater than that expected for a patient of this age and noncardiogenic pulmonary edema secondary to seizure activity is considered most likely. -Lesser consideration is made for cardiogenic pulmonary edema in the absence of any cardiomegaly or lobar venous congestion. -The mild diffuse bronchial pattern in the remainder of the lung fields is within normal expected limits for a patient of this age. -Cardiomegaly is not present and lobar venous congestion is not present. -The abdomen is normal.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.4	5.4	1.1	1.2	42.1	76.5	0.1
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
CARDIAC PARAMETERS	(BPM)	VMAX (m/s)	MAX (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	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	171	1.3	0.8		1.5	1.4	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. No evidence of valvular prolapse or chordae tendinea rupture. Doppler indicated measurable eccentric Insufficiency. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted with subjective mild flattening of the IVS. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate

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and in normal range for this patient 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 severe enlargement without overt evidence of masses. The right atrial diameter measured 1.9 cm. **Tricuspid** valvular assessment demonstrated concurrent thickening with potential for mild prolapse. Severe TR was present on color doppler assessment. The **right ventricle** exhibited concurrent severe increased size compared to the left ventricle with normal myocardial echogenicity and overt thickness. **Pulmonic** tract assessment revealed normal valve structure, subjective laminar flow with potential for mild increased diameter. Mild elevated RVOT velocity was present. No visible **pericardial** or free pleura fluid was noted. No overt evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

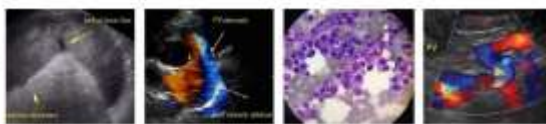
ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Severe pulmonary hypertension
- Severe RA / RV enlargement
- Concurrent compensated mitral valve disease with eccentric mitral valve insufficiency, normal left atrium

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The seizure-like episode experienced by this patient may be owing to syncope secondary to severe pulmonary hypertension, although potential for concurrent neurological component cannot be definitively excluded. Without evidence of concurrent left chamber enlargement, the underlying etiology for pulmonary hypertension may be unclear. Chronic lower airway disease, parasitic disease, i.e., heartworms, thromboembolic disease, or other is possible. Sildenafil 1.0 mg/kg PO BID, titrating up to target dose of 1.0-3.0 mg/kg PO BID is recommended. 2020 ACVIM consensus statement did not advocate for or against the use of Pimobendan as an adjunctive treatment for dogs with pulmonary hypertension, yet may be considered. Regardless, this patient is at continued risk going forward for recurrent syncopal episode and potential sudden death. Exercise restriction is advised. Monitoring for evidence of congestive right heart failure exhibited by ascites or congestive hepatopathy is recommended. As-needed oxygen supplementation may be required in this patient. Recheck echocardiogram suggested pending clinical response to therapy, may be considered in 4-6 weeks to assess for evidence of progression, potentially sooner if continued signs of respiratory distress, syncope, or evidence of right heart failure are noted.



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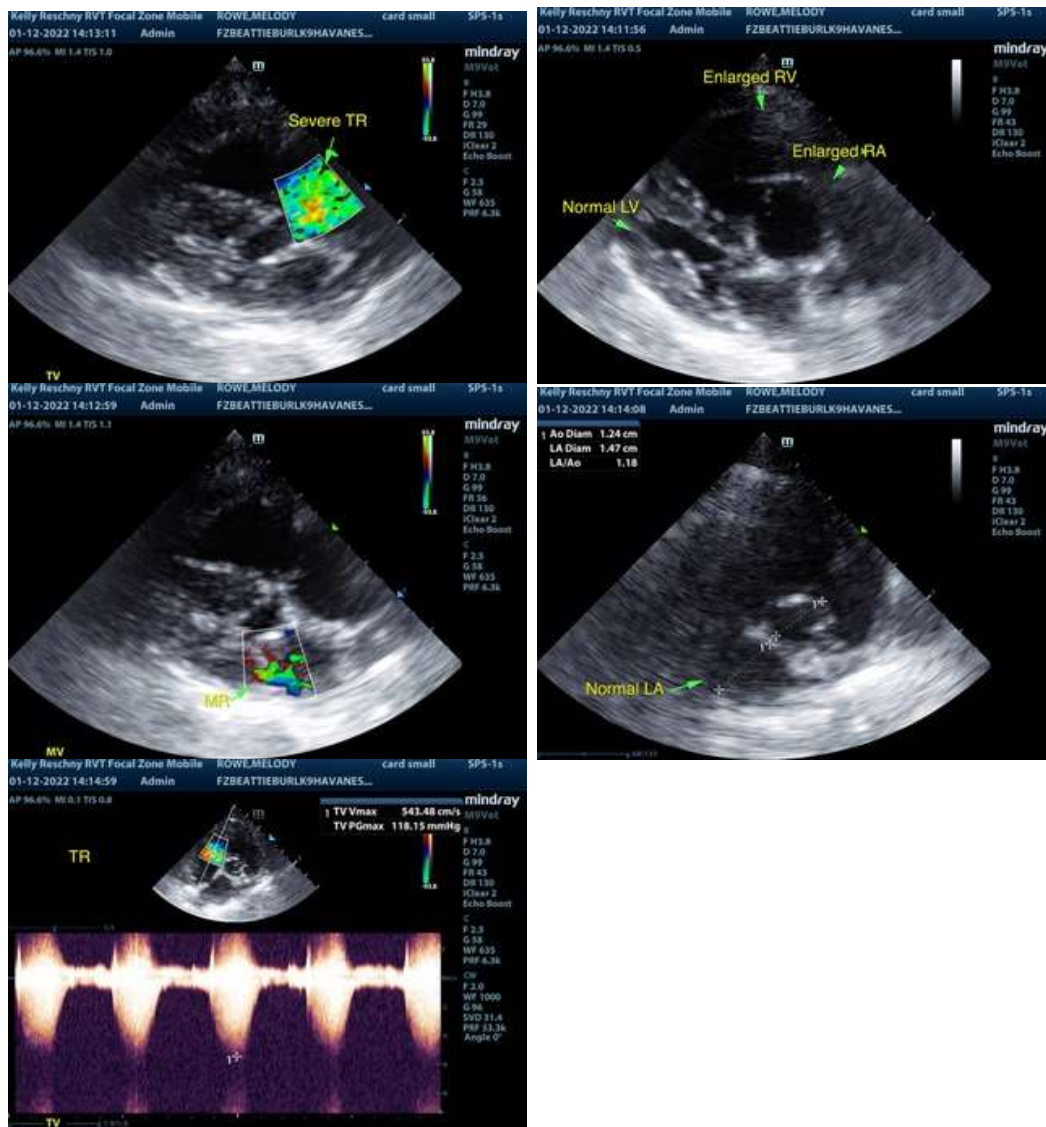
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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