


PATIENT

Sammy Aver

PRESENTING CLINICAL SIGNS

Trouble breathing. Radiologist recommended.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART
BREED

Poodle Mix

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	<1.3	28-40	40-100	<0.6
PATIENT		4.6 max		1.3	45	80	0.1
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				
PATIENT	113	1.4	1.2		3.2	3.1	

SEX

MN

AGE

13yr

WEIGHT

46.8lb

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. No overt MR on Doppler. The left ventricle presented thicknesses with linear contour and subjective mild flattening of the interventricular septum without evidence of dilation or restriction. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. Contractility of the ventricular walls was adequate 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 mild prominent size compared to the LA with structure and content. No evidence of masses was noted. Tricuspid valvular assessment demonstrated mild thickening with moderate TR on Doppler. The right ventricle exhibited mild prominent size compared to the LV with normal chordae structure, myocardial echogenicity and thickness. Pulmonary outflow tract assessment revealed normal valve structure without evidence of pulmonic insufficiency, normal laminar flow, and normal measured RVOT velocity with subtle increased diameter compared to the aorta. 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.

INTERPRETED BY

 R. McKenzie Daniel,
 DVM, DABVP
 (Canine and Feline)

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Newton VH

REFERRING VET

Dr. Barron

Brief sonographic assessment of the liver revealed no evidence of hepatic congestive criteria.

INVOICE

12269ag

Transdiaphragmatic view revealed comet tail lung pattern, which is echogenic sound wave interface with microconsolidations within the caudal lung field. The lung field should not be visualized by sonogram unless pathology is present. Chest radiographs are recommended to rule out alveolar/lung disease such as neoplasia, thromboembolic disease, chronic inflammatory disease with microconsolidation.

DATE

11/28/2022

ULTRASONOGRAPHIC FINDINGS



PATIENT

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- Normal LA/LV- no evidence of left heart volume overload
- Mildly prominent RA/RV-suggestive of mild cor pulmonale
- Moderate to possibly severe pulmonary hypertension-estimated pulmonary pressure gradient ~ 80 mmHg based on measured TR velocity
- Non congested liver with transdiaphragmatic comet tail artifact

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

BREED

Poodle Mix

Other than cases of documented heartworm disease the underlying cause of pulmonary hypertension is often unclear or misunderstood. Acute or acute on chronic lower airway disease is suspected given the presence of transdiaphragmatic comet tail artifact.

SEX

MN

Correlation with three view chest radiographs is suggested. A heartworm test may be considered if not recently done although no visible heartworms were detected. Sildenafil 1-2 mg/kg PO BID with target dose of 1-3 mg/kg PO BID with as needed respiratory support would be reasonable. Exercise restriction is advised.

AGE

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Potential for sudden death if stressed or active cannot be definitively excluded.

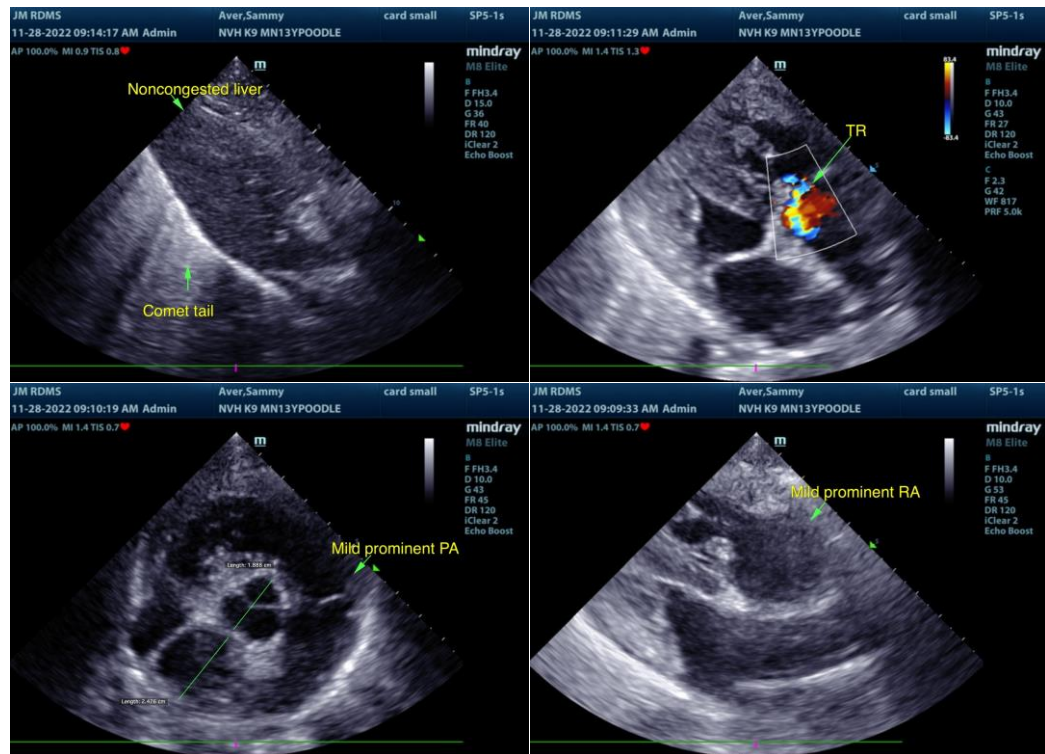
Sonographic monitoring for progressive right heart disease/failure as well as progressive pulmonary hypertension pending clinical response to therapy with initial recheck in 4-6 weeks, sooner if evidence of RHF is recommended. A guarded prognosis is indicated.

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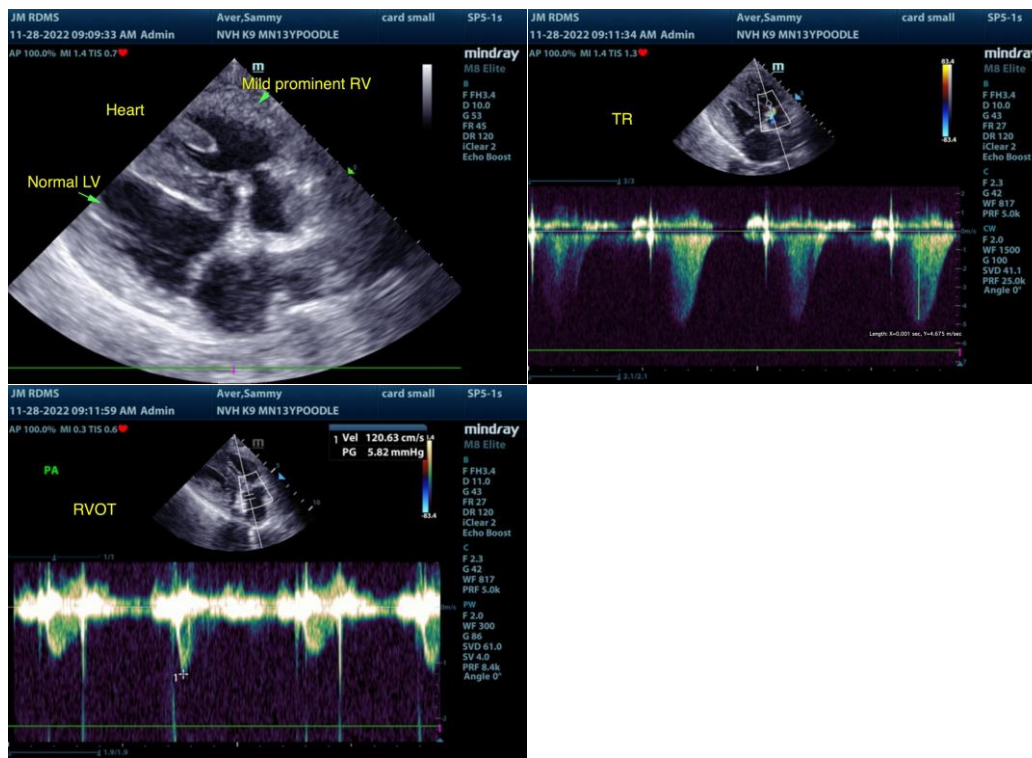
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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