



PATIENT

Lola Machado

SPECIES

Canine

BREED

Great Dane

SEX

FS

AGE

11 years

WEIGHT

139 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Whippany Vet
Hospital

REFERRING VET

Dr. Smith

INVOICE

17268

DATE

7/18/23

PRESENTING CLINICAL SIGNS

Coughing blood. No current meds.

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	<1.3	28-40	40-100	<0.6
PATIENT				1.1	22	44	0.65
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	NM	1.7	0.72		3.5	3.8	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 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 was noted on Doppler. The **left ventricle** presented normal thicknesses with maintained 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 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 systolic flow with subjective mild dilation of the visualized proximal aorta distal to the aortic valve. Normal aortic valve appearance was noted without evidence of thickening or valvular stenotic criteria. Moderate aortic insufficiency measuring >4 m/s was present on Doppler. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. No overt TR was noted on Doppler. 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). Subjective very scant **pericardial** effusion was present without evidence of free pleura fluid. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of overt masses in the visible window.



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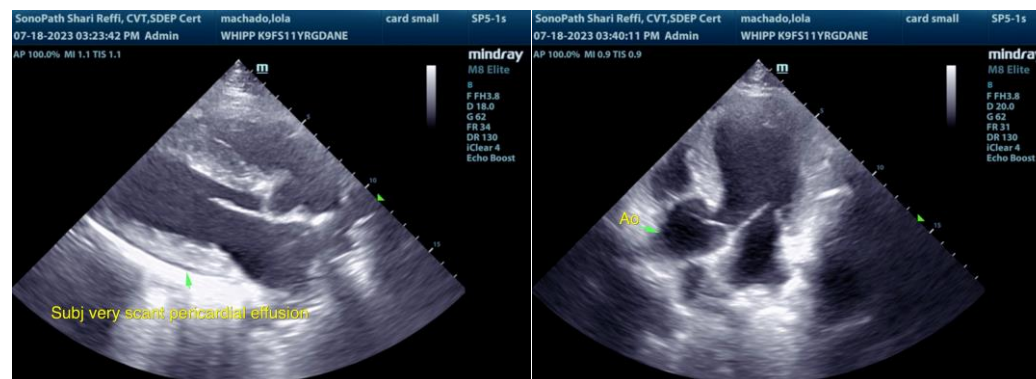
ULTRASONOGRAPHIC FINDINGS

- Normal LV volume with LV hypocontractility
- Normal LA / RA
- Normal RV
- Subjective mild post-valvular aortic dilation with moderate aortic insufficiency
- Subjective very scant pericardial effusion

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The LV hypocontractility is nonspecific with potential contributing factors including patient / age-related variant, hypothyroidism, and systemic disease. DCM criteria were not met. The lack of LA enlargement indicates that the risk of current/future complications secondary to LV hypocontractility is likely low. Although not definitive, the mild post-valvular aortic dilation with concurrent moderate aortic insufficiency may potentially suggest annuloaortic ectasia. However, this is a rare condition and further sonographic monitoring is advised. No evidence of aortic stenosis based on measured LVOT velocity. No other additional clinical issues such as right-sided cardiomyopathy or clinical pulmonary hypertension were noted. A definitive cause of the subjective very scant pericardial effusion was not obvious.

Given the lack of left or right heart chamber enlargement or evidence of clinical pulmonary hypertension, the coughing in this patient is most likely non-cardiogenic in origin. Abdominal ultrasound could be considered to assess for intrabdominal abnormalities as a potential systemic contributing factor to the patient's LV hypocontractility. Recheck echocardiogram is recommended in 3-4 months, sooner if clinical signs consistent with cardiac disease or dysfunction arise.





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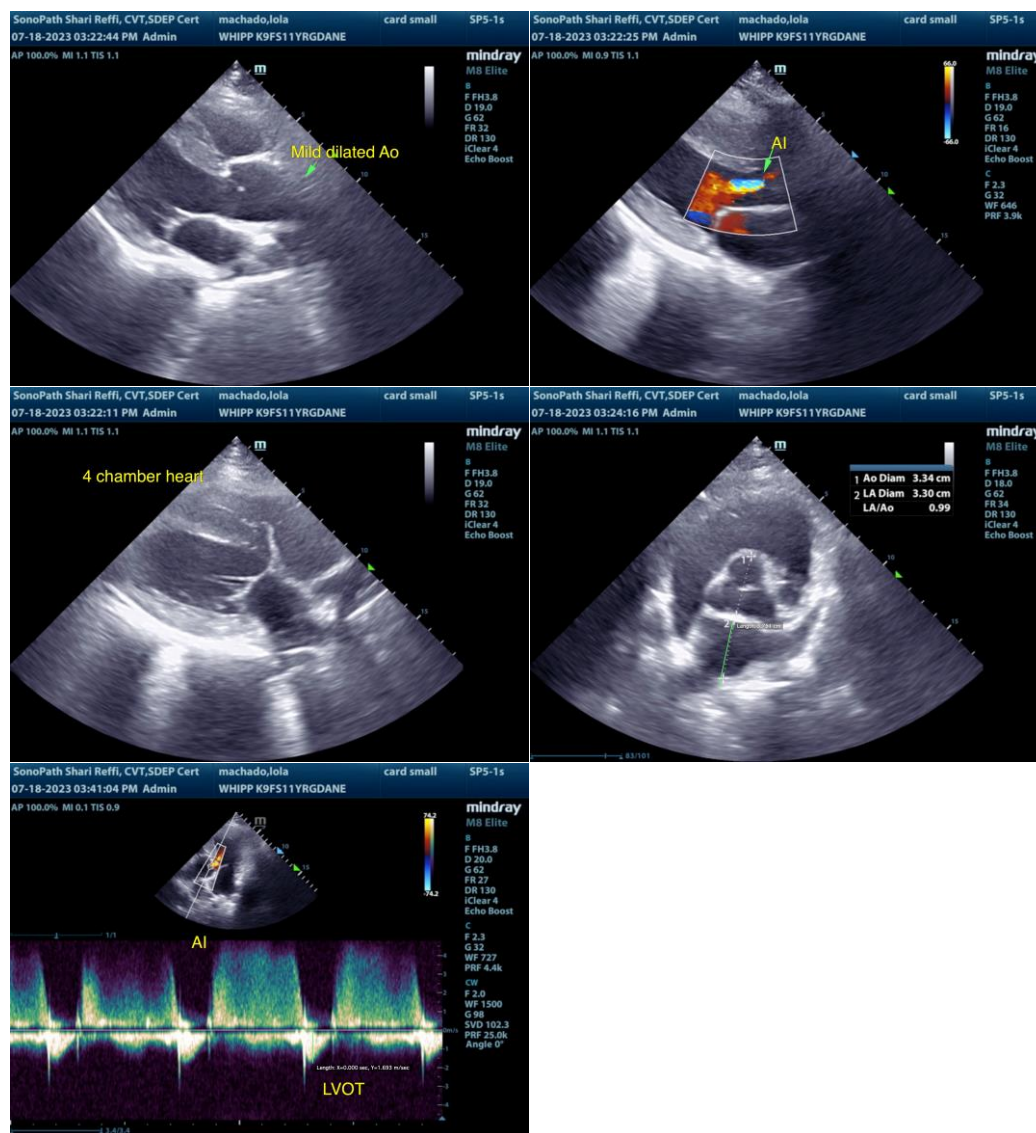
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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