



PATIENT

Ginger Garten

SPECIES

Canine

BREED

Golden Retriever Mix

SEX

Female Spayed

AGE

1.22.10

WEIGHT

30.8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

HOSPITAL NAME

Stevenson Village
Veterinary Hospital

REFERRING VET

Dr. Rathbun

INVOICE

29604

DATE

3.15.23

PRESENTING CLINICAL SIGNS

History: Decreased app over the past ~6 weeks with weight loss of 5 pounds over the past month. 2/13/23 fracture of 204 that appeared open with no overt swelling, but other signs of moderate periodontal disease. PE unremarkable and CBC/Superchem/T4/UA was sent out (partially to also rule out a flare up of Ginger's historical ITP). Started Entyce, cerenia and started on gabapentin. Labs unremarkable, but UTI and started clavamox. Recheck 2/28/23 because she wasn't doing well. Labs 3/6/23 NSF. Rechecked 3/13/23. Ginger had lost 5 pounds since the last PE. Slight murmur (grade I-II/VI left apical systolic), possible right-sided heart enlargement.

-Current medications: Cerenia injection (1.4mL SQ on 3/13/23); currently on cerenia tablets (24mg - 2 tablets by mouth SID); Ginger was on 3.6mL Entyce PO SID for a few days starting on 2/13/23, Ginger was on clavamox 250mg at 1 tablet PO SID x9 days starting on 2/14-2/15; Ginger was on gabapentin (300mg PO BID-TID) for a few days starting on 2/13/23, then again for a few days starting on 2/28/23

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results: No previous.

-STAT: Not requested.

-Imaging performed by: Stephanie Warga RDCS, RVT.

ELECTROCARDIOGRAPHIC FINDINGS *clinic provided tracing.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 100bpm (range 47-150bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. Tall R waves. No ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Suspect profound respiratory sinus arrhythmia. Tall R waves.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with no left atrial dilation. Normal MR velocity. Normal LV dimension with mildly depressed myocardial function. The tricuspid valve appears normal with mild tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic and trace pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	5.6	2.4	NM	1.1	23	47	NM
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	92	0.8	0.7	14.0	2.1	3.4	2.6
*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

Chronic degenerative valve disease causing mild mitral and tricuspid regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. The systolic function is mildly depressed for this signalment, consider contributing issues such as an atypical diet or hypothyroidism. No additional issues are identified.

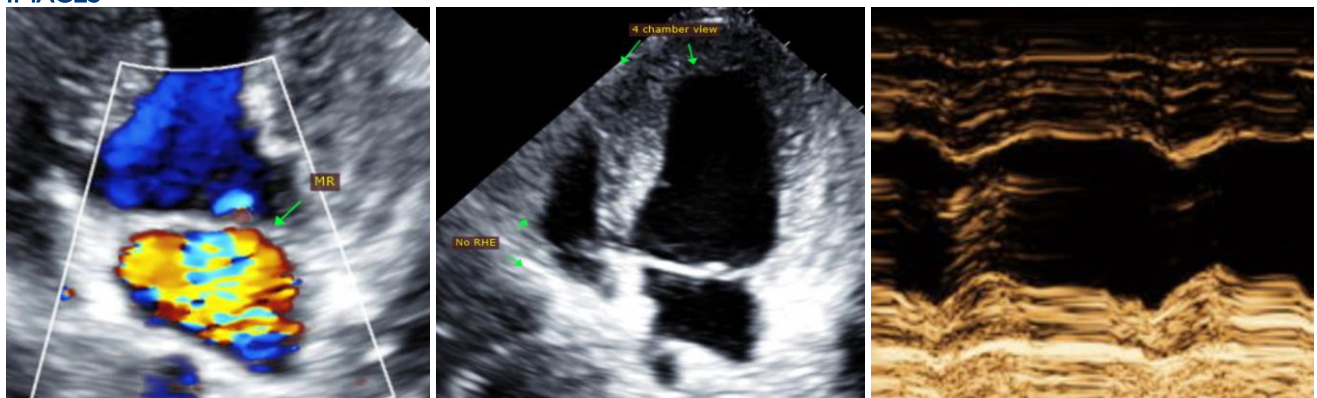
These findings would suggest the clinical issues are certainly noncardiac in origin and further systemic evaluation is recommended. The ECG is unremarkable with a respiratory sinus arrhythmia. This may suggest high vagal tone is present in this case. Consider causes of high vagal tone, such as neurologic or GI disease.

In a dog with no significant left atrial enlargement, no cardiac medications are clearly indicated. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1). Omega fatty acid supplementation and mild salt restriction may be of some long term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of 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.

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