


PATIENT

Missy Evans

SPECIES

Canine

BREED

Bichon Poodle Mix

SEX

Female Spayed

AGE

12 years

WEIGHT

17.6lbs

INTERPRETED BY

 Maggie Machen Lamy,
 DVM DACVIM
 (Cardiology)

PRESENTING CLINICAL SIGNS

History: Previously diagnosed with intestinal lymphangiectasia in Sept 2021. Had pan hypoproteinemia on bloodwork and US findings of loss of layering in ileum. No biopsies were done. Grade 1/6 heart murmur heard in June 2021. Hypoproteinemia controlled with daily Prednisone, Tylosin, Low fat diet and Vit B12 injections. Presented May 2023 with acute onset lethargy, increased effort and rate of breathing for about 18 hours. PE showed HR 160-180 with greatly increased resp rate and effort. Dog vomited food on way to clinic. Abdomen seemed distended and noted muscle loss over topline of dog. Clinical signs suggestive of CHF with now a Grade 3/6 heart murmur but rads did not show obv pulmonary edema or enlarged cardiac silhouette. Liver enlarged? Stomach distended and gassy intestines. Was given Lasix and Cerenia and by the next morning, marked improvement. When she got home that night, she vomited multiple elastic bands. Owner was not aware that dog may have gotten into anything. HR following day improved at 120bpm but still some increased resp effort. Bloodwork showed Albumin low again and low electrolytes(from the lasix?). Prednisolone 7.5mg SID, Tylosin 150mg SID, Lasix last given May 8, 2023. BP 120, 122, 128mmHg. -Abnormal PE/Chem/CBC/UA Results: Low albumin, electrolytes, globulin, Ca and cholesterol. Surprisingly normal ALT and ALKPPOS.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with mild left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with no tricuspid regurgitation. 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
IMAGING PERFORMED BY

Crystal Hill, RVT

HOSPITAL NAME

 Ingersoll Veterinary
 Services

REFERRING VET

Dr. Prystayko

INVOICE

30723

DATE

5/10/23

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	5.7	NA	1.4	1.4	37	70	0.2
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	100	1.7	0.9	6.7	2.0	3.0	1.9
*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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)

Adapted from June Boon, Veterinary Echocardiography, 1998
 Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
 Hansson et al, Vet Rad and Ultrasound 2002



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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)

SPECIES
Canine

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing mild mitral regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. No concurrent issues such as systolic dysfunction or pulmonary hypertension are noted in this study.

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These findings would suggest abdominal distention was noncardiogenic in origin. No indication for continued Lasix in this case. Other possibilities should be considered, such as hypoproteinemia, bloat, etc. Should the distention recur, in this instance abdominal radiographs would be strongly recommended.

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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. 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.

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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.

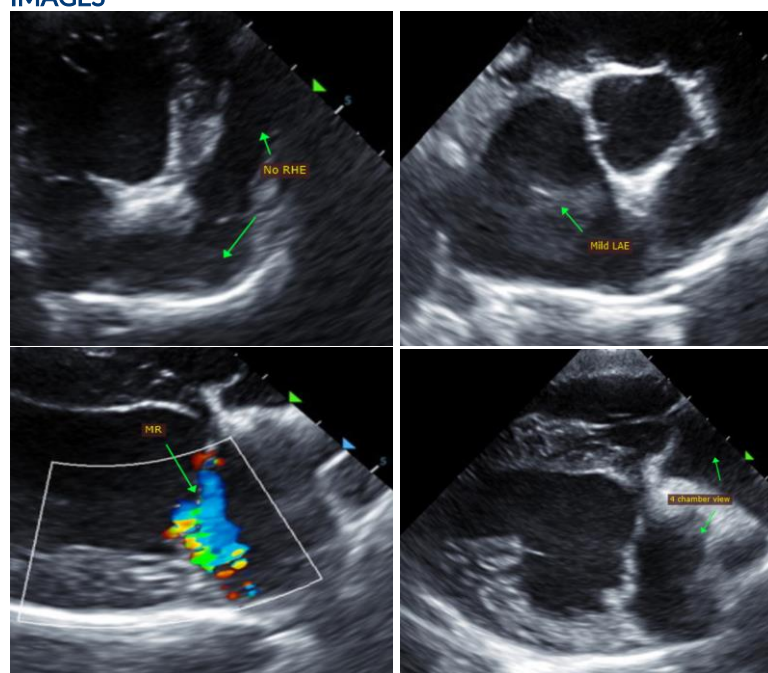
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Maggie Machen Lamy,
DVM DACVIM
(Cardiology)

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

IMAGES

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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.

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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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