



PATIENT

Mindy Sue Hammons

SPECIES

Canine

BREED

Maltese

SEX

Female Spayed

AGE

14 years

WEIGHT

51lbs; 2.3kgs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Melissa Weisman, DVM

HOSPITAL NAME

Minnesota Veterinary
Ultrasound

REFERRING VET

Dr. Weisman

INVOICE

32305

DATE

8/10/23

PRESENTING CLINICAL SIGNS

History: Presented 8-3-23 for respiratory distress. PE showed patient agitation with increased expiratory effort, resp rate=96rpm. HR was 168 and a grade IV/VI murmur was auscultated with good synchronous femoral pulses. SPO2=94%, CRT=1.5s. Patient improved on oxygen therapy and furosemide.

-CXR report: Bronchial pattern. Dynamic narrowing of the bronchus. Cardiac silhouette and pulmonary vasculature are normal.

Abnormal PE/Chem/CBC/UA Results: ProBNP: 2223, WBC=18.75, PMN=16.54.

-Current medications: Furosemide 12.5 Give 1/4 Tablet once daily.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>posterior) with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Borderline LV diameter with hyperdynamic myocardial function. The tricuspid valve appears subjectively normal, with no tricuspid regurgitation. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

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	4.9	NA	NM	1.65	55	90	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	NM	1.0	0.6	2.3	1.8	2.2	1.0
*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)
				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)
				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 moderate mitral regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication, however risk for progression to spontaneous congestive heart failure in the future is elevated. No additional issues are identified.



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Given these findings, CHF is unlikely to be the cause of the current respiratory signs. The CXR report does not list CHF as a differential and Lasix can be safely discontinued. This is supported by the findings of only moderate LA enlargement, a borderline normal LV and an E max velocity suggesting normal atrial filling pressures. Should the respiratory signs recur, further treatment/workup should be dictated by the CXR report.

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Given these findings, Pimobendan is indicated in this patient as below. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (B2).

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Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

SEX

Female Spayed

Once on the medication for 3-5 days, anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

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PLAN

Discontinue Lasix. Institute heart muscle support Pimobendan 0.25-0.3mg/kg PO q12h. If respiratory signs recur, repeat CXR and further respiratory treatment is warranted. Baseline BP is recommended.

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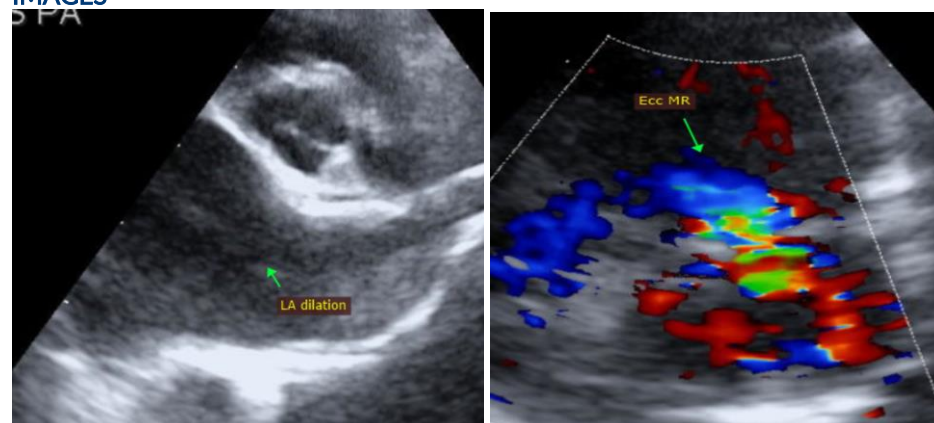
Maggie Machen Lamy,
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(Cardiology)

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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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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