



PATIENT

Jinx Rush

SPECIES

Canine

BREED

Cavalier

SEX

Female Spayed

AGE

9 years

WEIGHT

10lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

A. Nicastro, DVM

HOSPITAL NAME

Salt Marsh Animal
Hospital

REFERRING VET

Dr. Wiles

INVOICE

32449

DATE

8/21/23

PRESENTING CLINICAL SIGNS

History: Long history of atypical hypoadrenocorticism. On physiologic dose of Pred. Chronic intermittent diarrhea that hasn't responded to increase in Pred dose. New murmur, grade 2-3/6. Homemade diet - turkey and vegetables.

-Abnormal PE/Chem/CBC/UA Results: Na - 137 K+ - 5.1 HCT - 34.5%.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve appears thickened with mild prolapse into the left atrial lumen. Mild central MR. Normal velocity. Mild to moderate left atrial dilation. Moderate LV dilation with markedly increased sphericity and marked decline in myocardial function. Decreased LV wall thickness. The tricuspid valve appears mildly thickened. Mild RA/RV dilation. No overt evidence of pulmonary arterial hypertension. Trace TR. Normal velocity. The aortic valve is normal in morphology and mobility. No subvalvular ridge present; normal LVOT velocity with laminar flow. No aortic insufficiency. Normal pulmonic valve with no pulmonic insufficiency seen. No pericardial or pleural effusion noted. No obvious cardiac tumors.

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	5.2	2.7	NM	1.5	15	28	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	0.5	4.5	1.8	3.2	1.7
*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

LV dilation with a significant decline in systolic function is identified. Mild to moderate MR and trace TR are present as well, which may reflect concurrent valve disease in this predisposed breed. The LA is mild to moderately enlarged, indicating risk for progression to CHF in the future. No additional issues are identified in this study.



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Dilation and dysfunction can be primary in nature (DCM) or develop to secondary to taurine deficiency, myocarditis, hypothyroidism, tachycardia-induced cardiomyopathy, or infiltrative disease such as lymphoma. Given the uncommon breed, there is also concern for correlation with a nontraditional being fed in light of recent reports. A diet change is certainly recommended, as this is potentially the only treatable cause of these findings. A taurine level may be helpful as well, although supplementing taurine regardless of systemic levels is recommended as below (not all dogs with diet-related CM had abnormal taurine levels). A thyroid panel should be considered if not recently assessed. Finally, further systemic evaluation for underlying infiltrative contribution such as neoplasia is also reasonable (abdominal ultrasound, tick titers, etc.) although considered unlikely.

Prognosis is guarded at this stage, given mild to moderate LA dilation and risk for CHF. There will always be a risk for development of congestive heart failure, malignant arrhythmias (AF, VT), collapse and/or sudden death in the future.

Based on today's findings, Pimobendan and Spironolactone are recommended as below even without clinical signs. An ACEI would also be ideal; however, a baseline BP should be assessed. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF in the future. Monitor for development of a murmur, cough, labored breathing, exercise intolerance or collapse episodes.

Elective anesthesia is not advised, as there is high risk for complication. Risk: benefit ratio should be considered. Consider consultation with and/or referral to a facility with an anesthesiologist. Should you elect to proceed, cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, iso or sevoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 cage. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Moderate IV fluid restriction is recommended to avoid fluid overload, while considering comorbidities, hydration status, BP, etc. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

PLAN

Institute Pimobendan (0.25-0.3mg/kg PO q12h). Institute spironolactone 1-2mg/kg PO q12h. Change to more standard diet as discussed. Submit taurine level if desired. Supplement taurine, 1000mg PO q8-12h. Baseline BP recommended. If >130mmHg, institute ACEI 0.5mg/kg PO q12h.

A renal panel and BP are recommended in 1-2 weeks, then every 3-4 months lifelong to ensure tolerance of medications.

A recheck echocardiogram is recommended in 4-6 months, sooner if a murmur develops or any signs of cardiac disease are noted.



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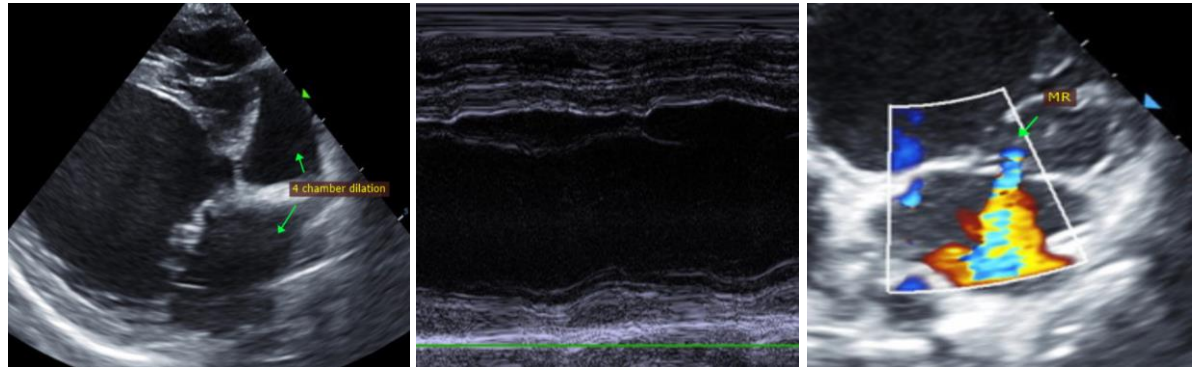
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IMAGES



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.

Maggie Machen Lamy, DVM
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