



PATIENT

Nya Berner

SPECIES

Canine

BREED

Bull Mastiff

SEX

Female Spayed

PRESENTING CLINICAL SIGNS

History: Presented with tachycardia and coughing. Radiographs suggest an enlarged heart with pulmonary and perihilar congestion. No heart murmur noted on exam. Been on grain free diet for 1 year. History of food allergies. History of bilateral ACL surgeries and follow up repair surgeries. On Clavamox for coughing.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Severe left ventricular dilation with diminished systolic function. Decreased LV wall thickness with increased sphericity. Severe left atrial enlargement. The mitral valve appears thickened with no obvious prolapse into the left atrial lumen. Mild to moderate eccentric mitral and tricuspid regurgitation secondary to annular stretch. Moderate right atrial and ventricular dilation. TR velocity consistent with early pulmonary hypertension. The aortic valve is normal in morphology and mobility. No subvalvular ridge present; normal LVOT velocity. No aortic insufficiency. Normal pulmonic valve with no pulmonic insufficiency seen. No pericardial or pleural effusion noted. No obvious cardiac tumors.

CARDIAC CHART

AGE

2 years

WEIGHT

111lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Gentry

INVOICE

26881

DATE

10/13/22

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	4.5	3.0	2.4	2.0	10	18	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	168	1.2	1.3	50.3	5.0	9.8	8.8
*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)
				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

Unfortunately, this patient has severe biventricular myocardial failure. This is causing dilation and overload of all four chambers resulting in insufficiency of the mitral and tricuspid valve. The degree of dilation and pump failure resulting in historical congestive heart failure. Early pulmonary hypertension is noted, which is likely due to active congestion. No additional issues are identified.

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svsmobileimaging.com 309-737-3070

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Systolic failure can be primary in nature (DCM) or secondary to taurine deficiency, myocarditis, hypothyroidism, tachycardia-induced cardiomyopathy, or infiltrative disease such as lymphoma. In a relatively young dog with a history of a grain-free diet, diet-related issues are considered most likely. A taurine level can be submitted; however, regardless of results a taurine supplement is recommended with a diet change if not already doing. Finally, a thorough medical history to assess for prior issues is recommended (such as parvovirus, hypothyroid disease, etc.). A cardiac troponin and thyroid level can be submitted to assess for ongoing damage to the myocardium as well.

Based upon these findings, immediate lifelong cardiac supportive medications are recommended as below. Consider hospitalization for supportive care if patient is or becomes unstable. Tachycardia is noted in the history and an ECG is strongly recommended, as this patient is at high risk for malignant arrhythmias.

Prognosis is poor at this stage in the disease process, with an average survival time of 8-9mo for canine patients with active pulmonary edema on medications, however they generally are able to maintain a good quality of life for that period. Even with diet-related dysfunction, improvement will likely be minimal at this end-stage phase of disease.

Cases of systolic failure are at high risk for malignant tachyarrhythmias (such as AF or VT), and activity restriction is advised. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

Monitor for development of a cough, worsening labored breathing, exercise intolerance or collapse episodes in the future. Monitoring of sleeping breathing rates at home is recommended to assess response to medications and recurrence of CHF in the future.

PLAN:

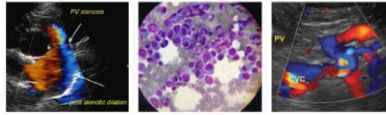
Consider hospitalization for IV diuretic, oxygen support and supportive care until stable. Discharge on the following: administer Lasix 1-2mg/kg PO q12. Administer Pimobendan 0.3mg/kg Po q12. Administer Spironolactone 1-2mg/kg PO q12h. Institute Taurine 1000mg PO q12h. Diet change ASAP, consider a traditional brand and formulation (Hills, Science Diet, Purina or Eukanuba) with mild salt restriction (such as a renal or geriatric option). Baseline ECG and BP recommended.

Monitor renal panel, heart rate, and BP every 3-4 months lifelong. Once patient is deemed normotensive (blood pressure >130mmHg), institute ACE-I 0.5mg/kg PO q12h.

Recheck echocardiogram and in 6 months to reassess cardiac function sooner if issues arise.

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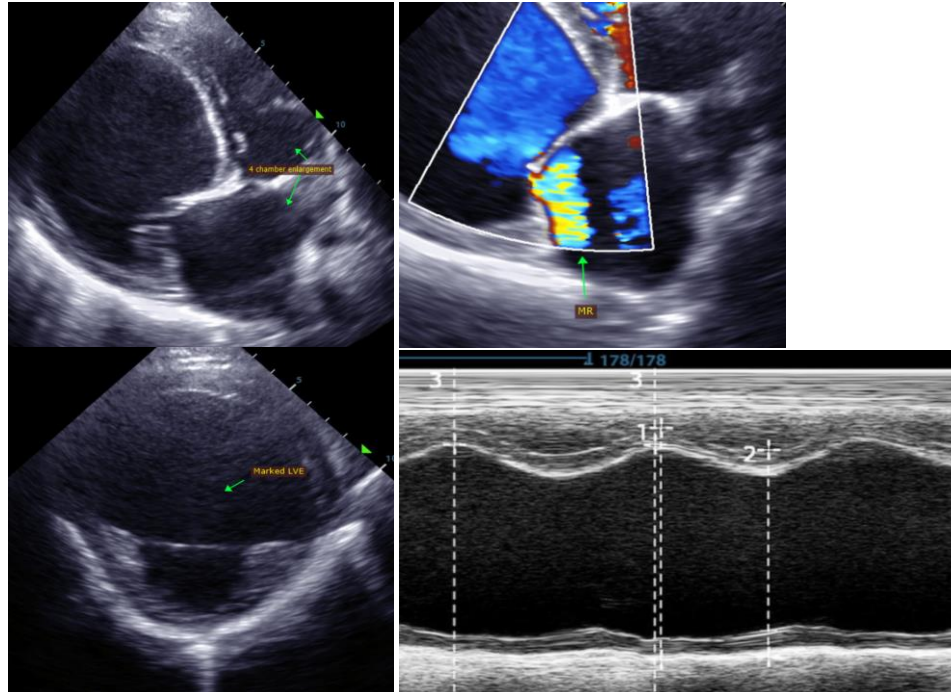
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IMAGES



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. 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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