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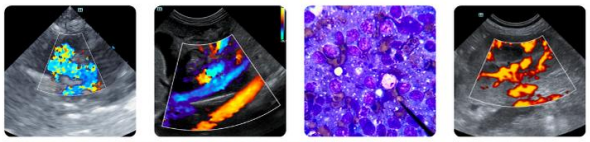
FOSTERING THE ART OF VETERINARY MEDICINE™



Clinical Sonography & Telecytology
Educational Teleconsultation Services™

SonoPath.com info@sonopath.com 1.800.838.4268

PATIENT
Molson McLaughlin

SPECIES
Canine

BREED
Lab

SEX
Male Neutered

AGE
11 years

WEIGHT
70lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Karen Ebersole, DVM, DABVP

HOSPITAL NAME
Scanvet

REFERRING VET
Dr. Fortin

INVOICE
45656

DATE
11/5/25

PRESENTING CLINICAL SIGNS

History: Recheck echo. Increased RR, intermittent mild cyanosis, increased respiratory effort. Dental disease and multiple cutaneous masses. Deep cough. BW: WNL.
-Current medications: Furosemide 75mg BID, Sotalol 40mg BID, Enalapril 10mg BID, Pimobendan 10mg BID, Galliprant 100mg SID.
-Pertinent previous echo findings (9/2024 BB): APCs, VPCs and couplets. CHF on CXR. CVD severe with MR/TR; stage C. LV: 7.4/5.1, FS: 31%, LA/AO: 2.7, TR: 3.3. Recommended triple therapy + Sotalol.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 110bpm (range 65-150bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. Isolated APCs are noted. Frequent multiform VPCs. No ventricular couplets are observed.
ECG diagnosis: Normal sinus rhythm with APCs and VPCs.

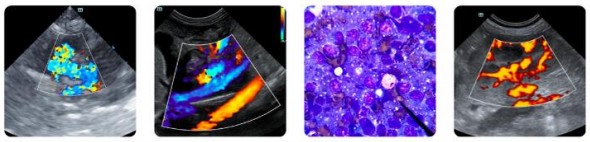
ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is diffusely thickened with prolapse into the left atrial lumen. There is severe eccentric mitral regurgitation present. The MR velocity is decreased. There is marked left atrial enlargement. There is marked left ventricular dilation. Left ventricular systolic function is mildly depressed. Mild right atrial and ventricular dilation (subjective). Mild thickening of the tricuspid valve with mild TR. Velocity consistent with early pulmonary hypertension. The aortic valve appears trileaflet with normal mobility. No significant AI. There is normal systolic flow velocity across the aortic valve. The main pulmonary artery is normal in diameter. The pulmonic valve is normal in appearance. Flow through the RVOT/PV is normal in velocity. Trace PI. Scant pericardial and pleural effusion. No cardiac masses are seen.

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	3.5	3.0	NM	2.8	25	48	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	1.1	NM	31.8	6.8	6.9	5.2
*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)

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
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease persists similar to what is described previously. The left heart is markedly dilated with mildly depressed function, which was also previously noted. The right heart is mildly affected as well with mild pulmonary hypertension. Despite this, scant pericardial and pleural effusion have developed, likely consistent with right-sided congestion. No additional structural issues are identified.

The ECG does show persistent arrythmias with both APCs and VPCs present. These were noted previously and Sotalol was initiated, likely due to the finding of ventricular couplets. Couplets are not appreciated here, and I would not alter the antiarrhythmic therapy at this time. The resting HR is relatively low, and any further medications may exacerbate this. This patient has high risk for development of atrial fibrillation at any time, and this can develop despite sotalol. Monitor for signs of AF, such as acute lethargy.

Give the totality of the findings, this patient is likely recurrent/refractory CHF. Dose adjustments are as below, including an increase in Lasix and addition of Spironolactone. Pimobendan can also be given TID if able. A blood pressure should be assessed to ensure Enalapril is appropriate.

Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home. Cough suppression to improve QOL can also be considered (hydrocodone, 0.2-0.4mg/kg up to q4-6h PRN) for any residual mechanical cough in the face of normal sleeping respiratory rates. It is important to note that the prognosis is poor to grave at this stage of the disease process with an expected survival time of weeks to months. Our goal is to maintain stability for the short term. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for acute progression of the cough, labored breathing, exercise intolerance or collapse episodes in the future.

Elective anesthesia is not advised, as there is high risk for complication.

PLAN

Consider hospitalization if the patient is or becomes unstable. Continue Sotalol as prescribed. Pending BP >130mmHg, continue Enalapril as prescribed (adjust if hypotensive). If able, increase Pimobendan to 10mg PO q8h. Increase Furosemide to 75mg PO q8h (if not possible, utilize 100mg PO q12h). Institute spironolactone 1-2mg/kg PO q12h.

Monitor renal values and BP in 10-14 days, then every 3-4 months while on diuretics to ensure tolerance of medications. Consider hydrocodone if needed for QOL.

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

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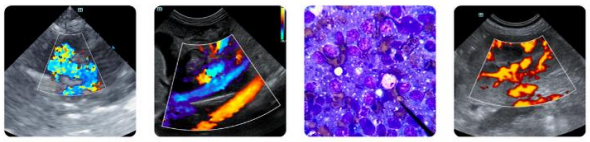

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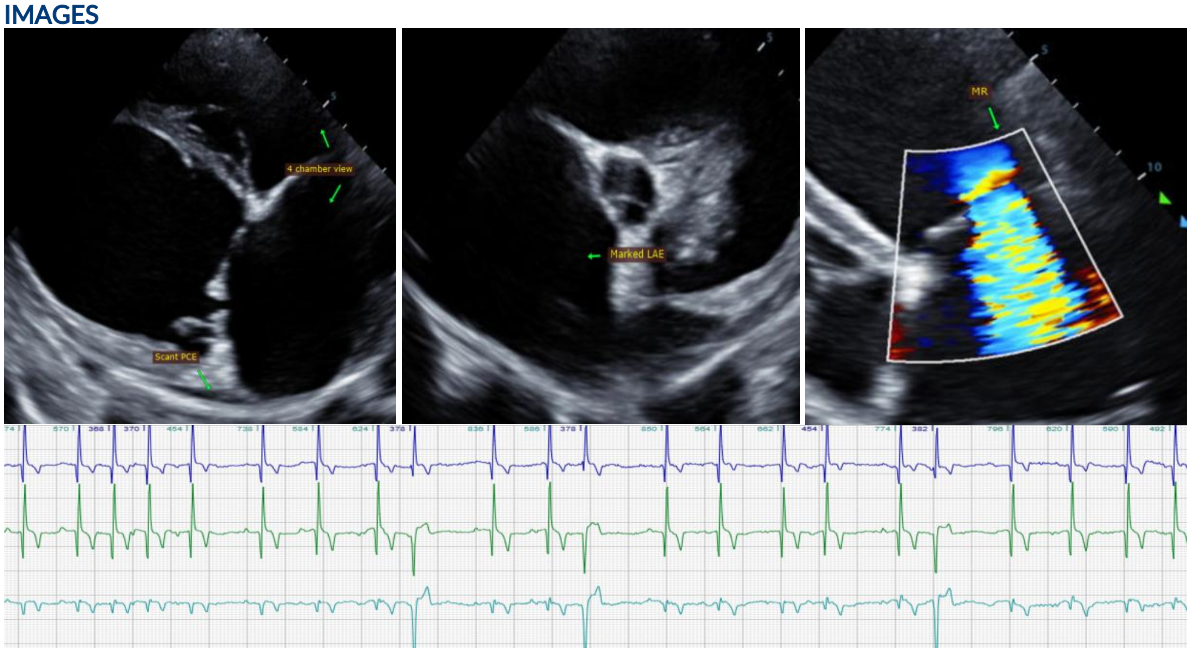

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com