


PATIENT

Toby Curie

PRESENTING CLINICAL SIGNS

 History: Episodes of syncope. Systolic murmur, grade 5 with missed beats.
 -Current medications: Furosemide 10mg BID, pimobendan 2.5mg BID, enalapril 2.5mg BID.

SPECIES

Canine

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 20mm/mV. The average heart rate is 110bpm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. Isolated APCs throughout, singles only. No SVT appreciated. No ventricular ectopic beats, pauses or other dysrhythmias observed. ECG diagnosis: Normal sinus rhythm with isolated APCs.

BREED

Pomeranian

SEX

Male Neutered

AGE

14 years

WEIGHT

14.9lbs

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Severe diffuse thickening of mitral valve leaflets. A flail anterior leaflet is visualized with a suspect ruptured chord. Mild prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with severe left atrial enlargement with a horizontal component. MR velocity is normal. Mild LV dilation with adequate myocardial function and evidence of volume overload. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Velocity consistent with early pulmonary hypertension. The pulmonic and aortic valves appear normal in appearance and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic insufficiency noted. No pericardial or pleural effusion seen.

INTERPRETED BY

 Maggie Machen Lamy,
 DVM DACVIM
 (Cardiology)

CARDIAC CHART
IMAGING PERFORMED BY

Kelly Reschny, RVT

HOSPITAL NAME

 Dundas Animal
 Hospital

REFERRING VET

Dr. Foster

INVOICE

20634

DATE

8/19/21

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	5.3	3.0	1.6	>2.0	37	70	0.33
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	2.0	1.4	6.8	2.8	3.5	2.2
*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 causing severe mitral and mild tricuspid regurgitation. Severe left atrial enlargement indicates there is an elevated risk for spontaneous congestive heart failure. A flail leaflet with a suspect ruptured chord is visualized which dramatically raises this risk. Mild pulmonary hypertension is noted which is likely secondary to chronic LA pressure elevation. No additional issues are identified.

Syncope in this patient is likely cardiogenic in origin given not only a flail leaflet/ruptured chord and severe disease but visualization of APCs. It is difficult to pinpoint an exact cause without further information such as chronicity, situational component, improvement with medications, etc. Recommend continued full cardiac support as below. If syncope persists or worsens, a holter monitor is recommended as what is seen on this tracing is unlikely to cause symptoms (isolated APCs only). These have certainly developed secondary to atrial dilation and should be monitored going forward. This patient is at exceedingly high risk for development of atrial fibrillation going forward.

Long term prognosis is guarded to poor; however, most dogs are able to maintain a good QOL on medications for an average of 8-12 months. Patient will always be at risk for recurrent CHF, development of worsening syncope and/or sudden death going forward.

Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home. Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or worsening collapse episodes in the future.

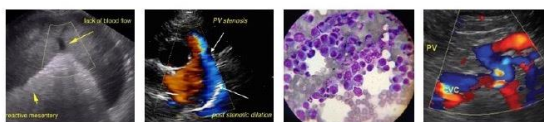
Elective anesthesia is not advised.

PLAN

Baseline BP strongly recommended. Continue Pimobendan, Enalapril and Lasix as prescribed pending results. Institute Spironolactone 1-2mg/kg PO q12h. If syncope persists, more historical information should be obtained. A holter monitor may be reasonable given the frequency of APCs.

Monitor renal values/BP in 10-14 days, then every 3-4 months lifelong.

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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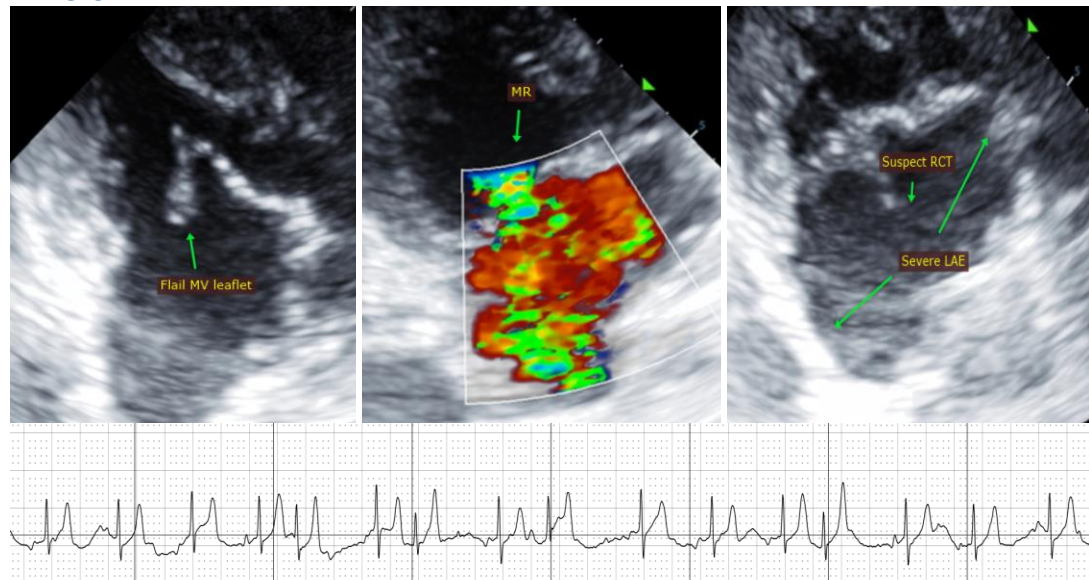
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IMAGES



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.

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