



PATIENT

G. Ruppert Vukelic

SPECIES

Canine

BREED

Pomeranian

SEX

Male Neutered

AGE

7 years

WEIGHT

7.4lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

E. Petrone, DVM

HOSPITAL NAME

Long Branch Animal
Hospital

REFERRING VET

Dr. Petrone

PRESENTING CLINICAL SIGNS

History: Grade 4/6 heart murmur. Presented 1 week ago in respiratory distress. LA enlarged on tfast. gave Lasix, butorphanol, and oxygen. CXR showed cardiomegaly, mainstem bronchus compression, collapsing trachea. Sent home on Lasix trial 6.25mg PO Q12, Vetmedin 0.625 mg PO Q12, butorphanol 0.2mg/kg PO Q8-12 as needed for coughing, and Cerenia 1mg/kg PO Q24.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with marked prolapse into the left atrial lumen. Suspect ruptured chordae tendineae (see below). Moderate to severe eccentric mitral regurgitation with moderate left atrial dilation. Borderline LV diameter with hyperdynamic myocardial function. The tricuspid valve appears normal with no obvious tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. Trace aortic and no pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	5.7	NA	NM	1.74	55	92	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	1.6	0.5	3.4	1.74	2.8	1.1
*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 to severe mitral regurgitation. There is evidence of a possible ruptured chordae tendineae, which likely explains decompensation to CHF. Moderate LA dilation is noted without minimal LV dilation, which is common with an acute issue like a chord rupture (i.e., not as significantly dilated as you might expect with organic CHF). This is the single scenario where CHF can be seen without severe cardiomegaly and is suspected

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in this case. A small aortic insufficiency is noted, and a baseline blood pressure is recommended. No additional issues are identified.

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Given these findings, a ruptured chord leading to acute decompensation/CHF should be considered until proven otherwise. Coverage with broad spectrum antibiotics and maintaining the possibility of other primary respiratory issues should be considered if the response to Lasix is sub optimal. Continued full cardiac support is recommended as below in addition to supportive care/oxygen therapy as needed until stabilized.

BREED

Pomeranian

Long term prognosis is poor, 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. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

SEX

Male Neutered

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

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Administer Lasix 1-2mg/kg PO q12h. Administer Pimobendan 0.3mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Institute cough suppression if needed. Consider coverage with broad-spectrum antibiotic if indicated.

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(Cardiology)

A renal panel and BP is recommended in 5-7 days to ensure tolerance of medications. If doing well and BP >130mmHg, institute ACEI 0.5mg/kg PO 12h.

Recommend recheck echocardiogram in 4-6 months to screen for progression, sooner if episodes persist or development of additional clinical signs.

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E. Petrone, DVM

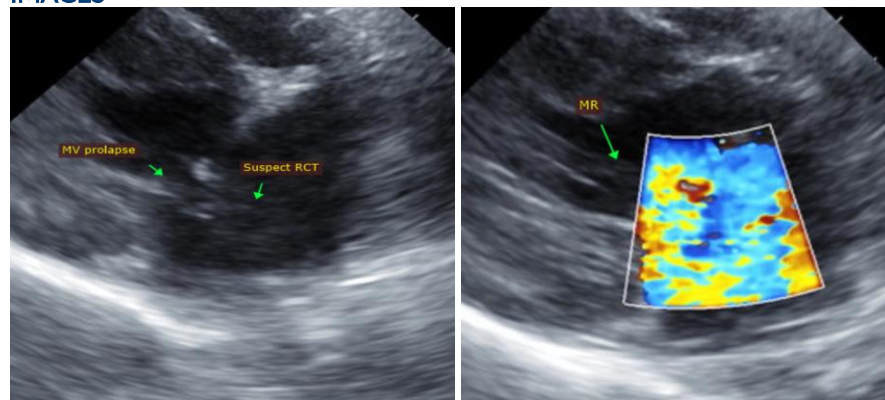
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The information and recommendations provided are based on the images presented by the referring



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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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