



PATIENT

Rocky Tedesco

SPECIES

Canine

BREED

Yorkie/Chihuahua Mix

SEX

Male Intact

AGE

11 years

WEIGHT

5

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Samuel Gabriel, DVM

HOSPITAL NAME

CJAH

REFERRING VET

Dr. Gabriel

INVOICE

22820

DATE

2/25/22

PRESENTING CLINICAL SIGNS

History: Grade 5/6 heart murmur. Yesterday had one episode of collapsing and passed out for few seconds and then came back to normal. Assess prior to dental. Normal labs.

-Radiographs: Left sided cardiomegaly, no evidence of pulmonary edema.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Severe diffuse nodular thickening of mitral valve leaflets. Significant prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with severe left atrial enlargement. Mild LV dilation with increased sphericity and hyperdynamic myocardial function. Evidence of volume overload. The tricuspid valve appears mildly thickened with severe tricuspid regurgitation. Normal TR velocity. Mild right heart enlargement. 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.

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	5.3	2.1	NM	2.4	33	60	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	0.8	5	2.2	3.0	2.0
*Normal chamber parameters expressed as a mean value (SD)							
BODY WEIGHT DEPENDENT PARAMETERS							
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>							
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							
3 1.27 (5.3) 2.46 (2.46) 1.36 (5.5)							
5 1.40 (4.5) 2.74 (5.2) 1.60 (4.7)							
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 severe mitral and tricuspid regurgitation. Severe left atrial and ventricular enlargement indicates there is an elevated risk for spontaneous congestive heart failure. While a significant tricuspid leak is visualized, there is no evidence of pulmonary hypertension. No additional issues are identified.

A syncopal episode (assuming it was exertional in origin) in this patient is most likely cardiogenic in origin. Possible causes include poor forward blood flow leading to hypoxia, early CHF, severe pulmonary hypertension (not seen), an arrhythmia and/or blood pressure swings. In light of



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severity of disease on echocardiogram, there is concern this patient is progressing to early congestive heart failure and full lifelong cardiac supportive therapy is warranted as below. If the episodes continue despite therapy, other causes should be considered. 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.

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, 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.

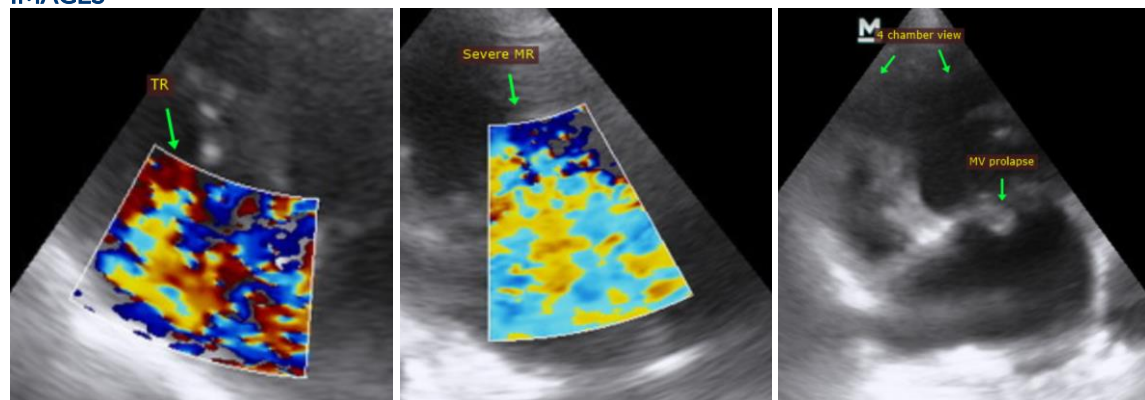
PLAN

Screening BP recommended. Institute low dose furosemide 1mg/kg PO q12h. Institute Pimobendan 0.3mg/kg PO q12h. Assuming BP >130mmHg, institute ACE-inhibitor Enalapril or Benazepril 0.5mg/kg PO q12h. If exertional syncope persists, highly recommend further evaluation.

Monitor SRRs at home. Monitor renal values in 10-14 days, then every 3-4 months while on diuretics.

Recommend conservative monitoring with a recheck echocardiogram in 4-6 months, sooner if any development of associated clinical signs occurs in the interim.

IMAGES





PATIENT

Rocky Tedesco

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.

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Canine

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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Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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