



PATIENT

Rosey Franz

SPECIES

Canine

BREED

Schnoodle

SEX

Female Spayed

AGE

10.18.08

WEIGHT

18lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

HOSPITAL NAME

Chadwell Animal
Hospital

REFERRING VET

Dr. Schaupp

INVOICE

25121

DATE

7.1.22

PRESENTING CLINICAL SIGNS

History: Grade III/IV systolic murmur discovered in Jan 2022. Murmur appears to have increased to a Grade IV/V. No arrhythmia appreciated. Lungs are clear. Recent episodes of weakness. Had a seizure 2 weeks ago (first time). On 6/23 owner described the dog running after a rabbit and then staggered to stand needing support. Did not lose consciousness

- Pertinent abnormal PE/Chem/CBC/UA Results: 21, 2022 was all normal.
- Current medications: Prescribed Anipryl 6 weeks ago for cognitive dysfunction- 10 mg QD.
- Blood pressure: 88/70mmHg.
- Sedation used: Torbugesic/Valium IV.
- Pertinent previous ultrasound results: No previous.
- STAT: Recommended and declined at this time.
- Imaging performed by: Stephanie Pearce RDCS, RVT.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is markedly diffusely thickened with prolapse into the left atrial lumen. There is severe eccentric mitral regurgitation present. The MR velocity is normal. There is severe left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is mildly dilated. Mild right atrial and right ventricular dilation. The tricuspid valve is mildly thickened with mild to moderate tricuspid regurgitation. Velocity indicative of moderate to severe pulmonary hypertension. The MPA and branches are mildly dilated. No pericardial/pleural effusion or 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	5.0	4.5	NM	2.4	58	89	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	180	1.2	0.54	8.2	3.0	3.7	1.7
*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							
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				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)

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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing severe mitral and mild to moderate tricuspid regurgitation. Severe LA dilation enlargement indicates the risk for spontaneous congestive heart failure is elevated and cardiac supportive medications are indicated as below. There is also at least moderate to severe pulmonary arterial hypertension which should be monitored going forward. No additional issues are identified. No intra or extra-cardiac masses are appreciated; however, it is important to note that these are easily missed in the absence of effusion. If suspicion is high, advanced imaging may be warranted.

Syncope in a dog with this degree of structural disease is most likely cardiogenic in origin. Cardiac causes include pulmonary hypertension (moderate to severe in this case), early CHF/poor cardiac output (possible), rupture of a chord or LA tear (not seen), arrhythmia (possible), or vasovagal events (possible). Given the degree of LA dilation and the severity of MR, I am concerned for early CHF and decompensation as a possibility. Baseline radiographs are recommended, although regardless, full cardiac support is warranted as below and monitor closely for improvement/persistence of symptoms. Sildenafil is also recommended to lower pulmonary pressures. If episodes still persist, other causes should be investigated (holter monitor, neurology consult, etc.).

Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home. Prognosis is guarded to poor given the severity of cardiac disease and dilation and high risk for decompensation, worsening collapse episode, and/or development of spontaneous CHF.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit.

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.

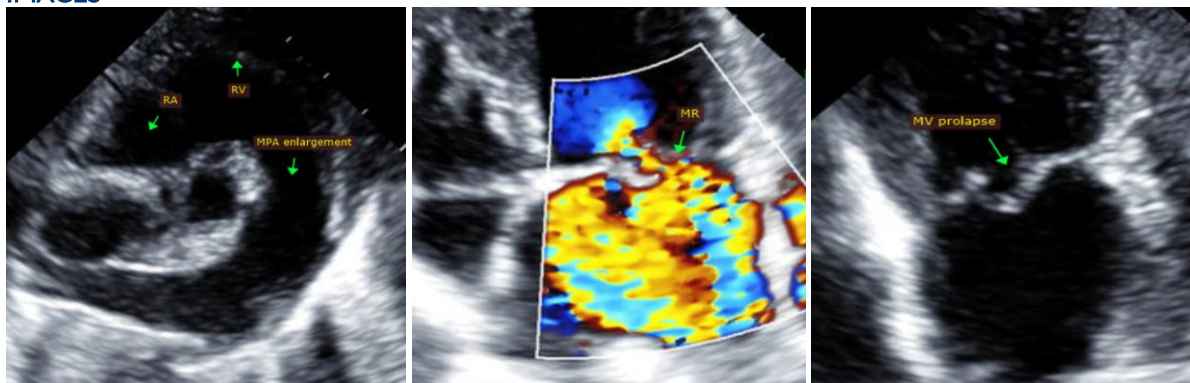
PLAN

Baseline CXR is recommended. Institute Pimobendan 0.3mg/kg PO q12h. Institute furosemide (Lasix) 1mg/kg PO q12h. Institute Spironolactone 1-2mg/kg PO q12h. Institute sildenafil 1-2mg/kg PO q12h. If syncope persists, further evaluation is advised.

Lab work and BP are recommended in 1-2 weeks to ensure tolerance of medications, then every 3-4 months lifelong. If patient is normotensive, institute ACE-I 0.5mg/kg PO q12h.

A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise.

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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