



PATIENT

Ruby Ringe

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Female Spayed

AGE

11years

WEIGHT

8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kara Wallisch,
DVM

HOSPITAL NAME

Sondel Family
Veterinary Clinic

REFERRING VET

Dr. Wallisch

INVOICE

25048

DATE

6/29/22

PRESENTING CLINICAL SIGNS

History: Adopted last year. Treated for heartworm infection previously. Collapse episode last week after a walk – regained consciousness within 5 minutes. Occasional cough. Grade 4/6 heart murmur.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Trace eccentric mitral regurgitation with no left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears thickened with septal prolapse and trace tricuspid regurgitation. Normal velocity. Normal right heart. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic or 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	NM	2.5	NM	1.2	43	80	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	0.9	0.8	3.6	1.2	2.3	1.3
*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 trace mitral and tricuspid regurgitation. Despite significant valve pathology, both leaks appear hemodynamically insignificant. No left atrial enlargement indicates the current risk for complication is low. There is no obvious pulmonary hypertension, due to prior heartworm disease. Follow up is advised to screen for this development.

No cardiac cause for the episode is seen in this study. What is atypical is the length of 5 minutes is significantly prolonged for a simple syncopal event. Monitoring for recurrence is recommended with further neurologic and systemic evaluation as indicated.



PATIENT

Ruby Ringe

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Female Spayed

AGE

11years

WEIGHT

8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kara Wallisch,
DVM

HOSPITAL NAME

Sondel Family
Veterinary Clinic

REFERRING VET

Dr. Wallisch

INVOICE

25048

DATE

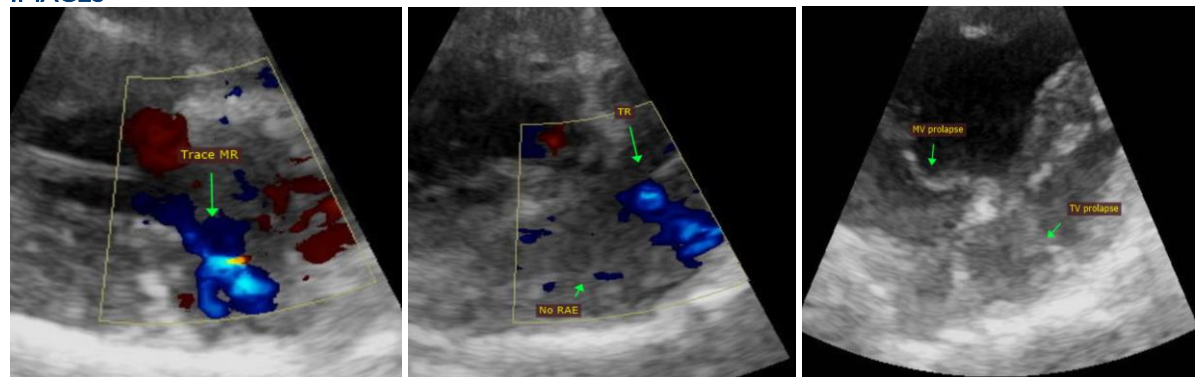
6/29/22

In a dog with no significant left atrial enlargement, no cardiac medications are clearly indicated. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1). 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 collapse episodes.

Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

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

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.

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



PATIENT

Ruby Ringe

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Female Spayed

AGE

11years

WEIGHT

8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

Kara Wallisch,
DVM

HOSPITAL NAME

Sondel Family
Veterinary Clinic

REFERRING VET

Dr. Wallisch

INVOICE

25048

DATE

6/29/22