

PATIENT

Neo Wikstrom

PRESENTING CLINICAL SIGNS

History: Grade 4/6 systolic murmur ausculted. Thoracic radiographs showed concern for pulmonary edema.

SPECIES

Canine

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only. Normal cardiac silhouette. No obvious evidence of CHF.

BREED

Chihuahua

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, 10mm/mV. The average heart rate is 140bpm (range 107-166bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. Some variation in QRS morphology is appreciated; however, this is suspected to be artifactual. The P and QRS morphologies are positive. No ectopic beats, pauses or other dysrhythmias observed. ECG diagnosis: Normal sinus rhythm with respiratory variation.

SEX

Male Neutered

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with mild left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with no 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. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

AGE

9 years

WEIGHT

12.6lbs

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

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	NA	1.7	1.6	48	82	0.2
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	155	2.0	1.6	5.7	1.7	2.3	1.2
<i>*Normal chamber parameters expressed as a mean value (SD)</i>							
BODY WEIGHT DEPENDENT PARAMETERS							
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>							
					1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
					1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
					1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
					1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
					2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
					2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
					2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
					2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
					2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
					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

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Dr. Preiser

INVOICE

24307

DATE

5/19/22

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

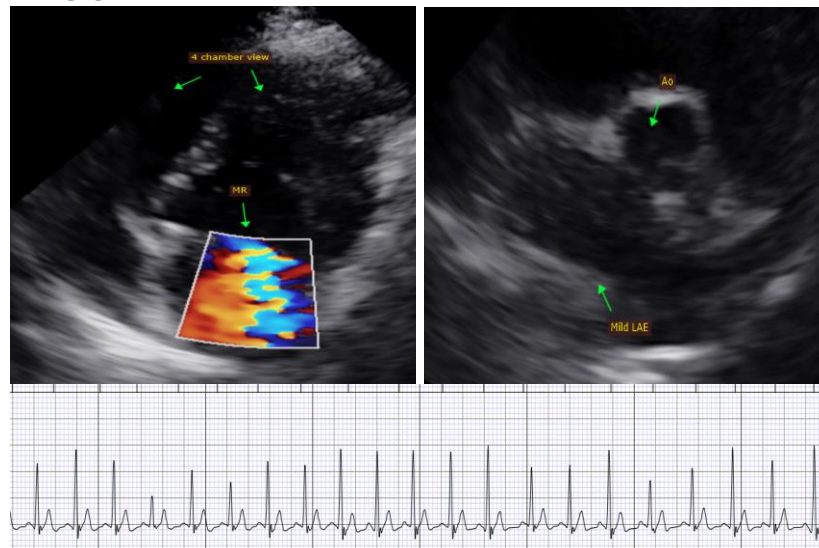
Chronic degenerative valve disease causing mild mitral regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. Despite mild LA dilation there is no LV dilation suggesting overall stability. No concurrent issues such as systolic dysfunction or pulmonary hypertension are noted in this study. The ECG is unremarkable with a normal sinus rhythm.

These findings would make congestive heart failure unlikely. No obvious congestion is seen on the chest radiographs, supporting this conclusion. No respiratory signs are mentioned in the history; however, if present these are likely primary respiratory in origin. Further evaluation may be warranted.

Given these findings, 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

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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.

SPECIES

Canine

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

BREED

Chihuahua

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

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