

PATIENT

Trixy Love

SPECIES

Canine

BREED

Toy Poodle

SEX

Female Spayed

AGE

11 years

WEIGHT

9.44lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Dana Alterman,
RDMS, LVT

HOSPITAL NAME

Eubank Animal Clinic

REFERRING VET

Dr. Bannon

INVOICE

20376

DATE

8/2/21

PRESENTING CLINICAL SIGNS

History: 4/6 murmur with occasional pauses that appear to be associated with breathing, unable to rule out arrhythmia.

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, 20mm/mV. The average heart rate is 140bpm (range 83-200bpm). The rhythm is likely sinus in origin, although intermittent AV block is not entirely ruled out. Some variability in PR interval. The P and QRS morphologies are positive. No ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Suspect normal sinus rhythm with profound respiratory variation. Cannot rule out intermittent AV block, APCs, etc.

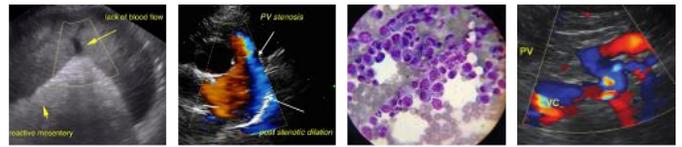
ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with significant prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with mild left atrial dilation. 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.

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	NA	NM	1.4	37	57	0.16
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		1.1	4.3	1.7	2.6	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				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)

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



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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. No concurrent issues such as systolic dysfunction or pulmonary hypertension are noted in this study.

The ECG is unfortunately difficult to interpret, with dramatic HR variability and possible P wave variability. This is a weakness of a single lead tracing, as artifact can also have this appearance. Given an asymptomatic animal, the simplest approach would simply be a mild exercise challenge to assess HR with exertion. If the HR becomes regular and persistently elevated, a normal sinus arrhythmia is suspected. If the response is atypical (ie the rate/rhythm remains variable and irregular), highly recommend a 6 lead tracing if possible.

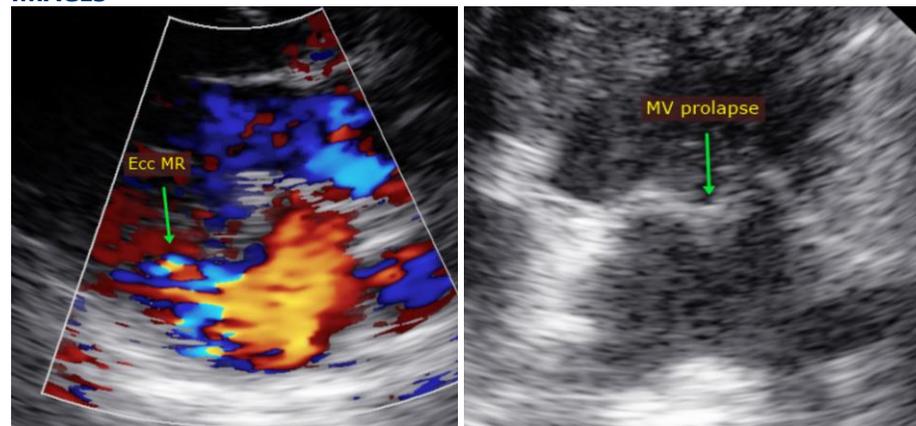
Given these findings, no cardiac medications are clearly indicated. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

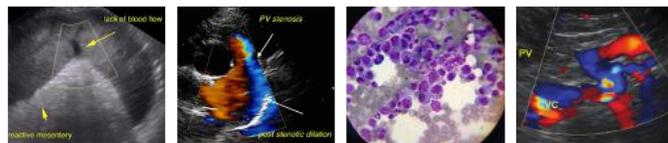
Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively 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.

Plan: Consider mild exercise response. If atypical, consider a 6 lead tracing if possible

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

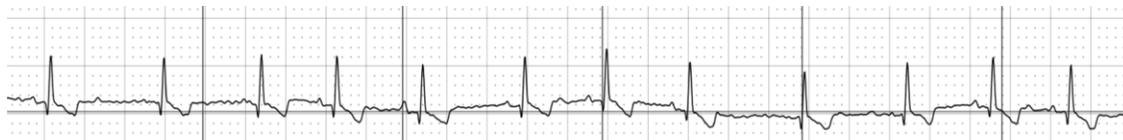
IMAGES





PATIENT

Trixy Love

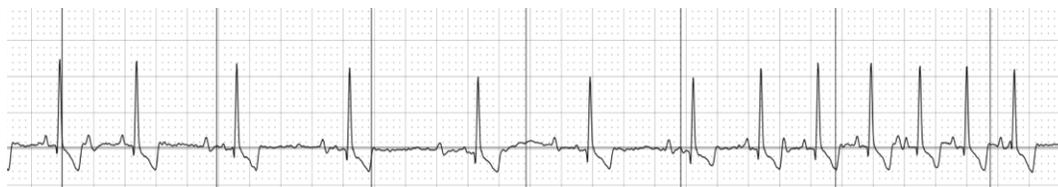


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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

AGE

11 years

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.

WEIGHT

9.44lbs

Maggie Machen Lamy, DVM
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info@sonopath.com

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