



PATIENT

Gizmo Lueras

SPECIES

Canine

BREED

Shih Tzu

SEX

Male Neutered

AGE

11 years

WEIGHT

13.3lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Dana Alterman,
RDCS, LVT

HOSPITAL NAME

Eubank Animal Clinic

REFERRING VET

Dr. Russman

INVOICE

23067

DATE

3/14/22

PRESENTING CLINICAL SIGNS

History: Recheck echo.

-Current medications: Pimobendan and Lasix.

-Pertinent previous echo findings (10/21 MML): Moderate MR, no LA/LVE, no TR. LA: 1.67, LV: 2.5.

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; 50mm/s, 20mm/mV. The average heart rate is 150bpm (range 107-2000bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. No ectopic beats, pauses or other dysrhythmias observed. ECG diagnosis: Profound respiratory sinus arrhythmia.

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. Moderate eccentric mitral regurgitation with minimal left atrial enlargement. Normal LV diameter with adequate myocardial function. The tricuspid valve appears thickened with septal prolapse and trace tricuspid regurgitation. Borderline velocity. Normal right atrial and ventricular diameter and morphology. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No pulmonic insufficiency. No aortic insufficiency. No pericardial or pleural effusion noted.

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	2.7	NM	1.5	36	70	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	1.0	1.2	6.0	1.8	2.5	1.6
*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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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 persists with evidence of relative stability. Moderate mitral and mild tricuspid regurgitation are unchanged without significant progression in left heart



PATIENT	dimensions. No obvious concurrent issues are identified. The ECG is similar to previous as well with a respiratory sinus arrhythmia.
Gizmo Lueras	
SPECIES	As was mentioned in the prior study, CHF is considered highly unlikely in this case and Lasix and Pimobendan are likely unnecessary. Going forward, any cough is suspected to be respiratory in origin and Hydrocodone may be beneficial.
Canine	
BREED	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.
Shih Tzu	
SEX	Anesthetic risk is considered mild if needed. Due to high vagal tone, pre-medicate with a vagolytic. 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.
Male Neutered	
AGE	PLAN
11 years	No obvious indication for cardiac medications.
WEIGHT	Recommend conservative monitoring with a recheck echocardiogram in 6-12 months, sooner if any development of clinical signs.
13.3lbs	
INTERPRETED BY	IMAGES
Maggie Machen Lamy, DVM, DACVIM (Cardiology)	
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Dana Alterman, RDCS, LVT	
HOSPITAL NAME	
Eubank Animal Clinic	
REFERRING VET	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.
Dr. Russman	
INVOICE	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.
23067	
DATE	Maggie Machen Lamy, DVM Diplomate of the American College of Veterinary Internal Medicine (Cardiology) info@sonopath.com
3/14/22	