



PATIENT

Nicholas Beaty

PRESENTING CLINICAL SIGNS

History: Presented on 4/8/22 for lethargy. Grade 4/6 systolic murmur ausculted. Patient had a seizure/syncopal episode on arrival to the hospital. Was stable throughout the study.

SPECIES

Canine

BREED

Shih Tzu

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with minimal prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Mild LV dilation with adequate myocardial function. The tricuspid valve appears normal with trace 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.

SEX

Male Neutered

CARDIAC CHART

AGE

12 years

WEIGHT

14lbs

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	5.6	NM	1.5	1.7	45	77	0.37
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	130	2.0	0.6	6.4	2.4	3.4	1.9
*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)

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Dr. Preiser

INVOICE

238126

DATE

4/21/22

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and trace tricuspid regurgitation. Moderate left atrial enlargement indicates current relative stability with risk for progression to spontaneous congestive heart failure in the future. No obvious additional issues such as pulmonary hypertension or systolic dysfunction are noted at this time.

No definitive cardiac cause for acute syncope is seen in this study (i.e., no PAH, no obvious rupture or tears, reasonable cardiac output, etc.) and other causes should be considered. These possible causes include vasovagal events, intermittent arrhythmias, neurologic/systemic issues, etc. That being said, if the episodes are occurring with significant exertion there certainly is a possibility that regurgitant volume is involved and Pimobendan may help. A baseline BP should

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be obtained. An intermittent arrhythmia cannot be ruled out without a holter monitor, and this should be considered if episodes continue undiagnosed. Further systemic evaluation may also be considered including AUS. Finally, atypical seizures should also be considered, pending more extensive history/situational nature of the episodes.

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Given these findings, it is responsible to institute Pimobendan given the degree of disease and risk for progression. It is important to note, even with disease seen here this is not suspected to be causing lethargy in this patient. Further systemic evaluation is advised.

BREED

Shih Tzu

Anesthetic risk is considered mildly elevated. Once on the medication for 3-5 days, 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.

SEX

Male Neutered

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

AGE

12 years

PLAN

Baseline BP and further evaluation for lethargy. Institute Pimobendan 0.25- 0.3mg/kg BID. Consider a holter monitor, other systemic causes as discussed if episodes recur.

WEIGHT

14lbs

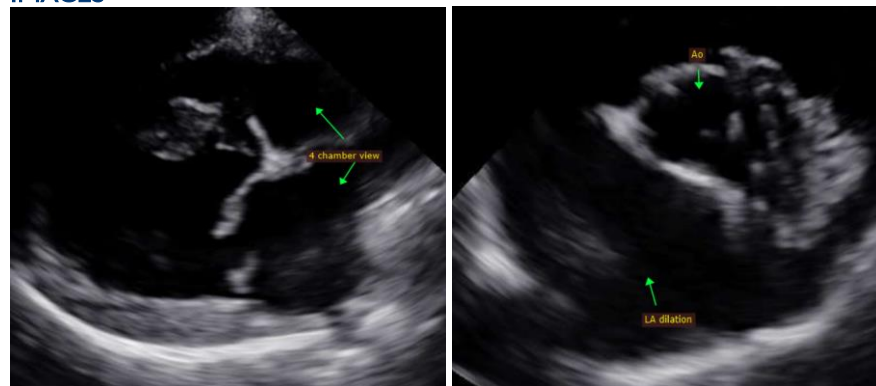
Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Tom McNeill

IMAGES**HOSPITAL NAME**

SVS Imaging CT

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.

REFERRING VET

Dr. Preiser

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.

INVOICE

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Maggie Machen Lamy, DVM
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