

## PATIENT

Ollie McAfee

## SPECIES

Canine

## BREED

Golden Retriever

## SEX

Female Intact

## AGE

2 years

## WEIGHT

64.4lbs

## PRESENTING CLINICAL SIGNS

History: Presented for 3 episodes of suspect syncope over past 3 months. PE on 7/26 was unremarkable -- grade 1 L sided murmur ausculted 7/27. P has had 3 "fainting" episodes over the last 3 months (on 5/18 & 5/12 noted in previous records). P comes in from playing outside and falls/stumbles over suddenly, no shaking or abnormal eye movement, P appears to be conscious, no incontinence. Lasts about 30 seconds, every time O picks her up immediately. P then acts normal about 1 minute after. No vomiting or diarrhea before, during, or after event. Every time this has happened O has administered Simparica Trio ~1 week prior. O is concerned this is the reason. Last episode was 1-2 months ago, but O did give Simparica Trio a few weeks ago and no episode since. BW on 5/13 was WNL at previous vet (James Island AH). Was sent to ER by James Island Vet in May, P was triaged away due to normal vitals/mentation. P had hx of heart murmur as puppy (grade 2/6 noted on 9/2020, but no murmur noted since). HR/RR/BP = 120/32/150.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild mitral valve thickening with no obvious prolapse into the left atrial lumen. No mitral regurgitation; normal left atrial dimension. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with trace TR. Normal velocity. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension or significant right heart disease. The pulmonic and aortic valves are normal in morphology and mobility. Mildly elevated LVOT and normal RVOT velocity. No aortic insufficiency. Trivial pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac tumors seen.

## CARDIAC CHART

### INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

### IMAGING PERFORMED BY

Andrea Nicastro

### HOSPITAL NAME

Sun Dog Cat Moon

### REFERRING VET

Dr. Clayton

### INVOICE

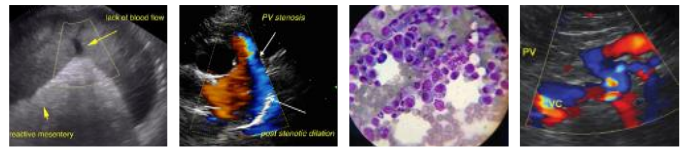
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### DATE

7/27/22

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	NA	NA	NM	1.2	37	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	2.0	0.9	29.2	2.5	4.1	2.6
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				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)

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**

The only cause of a murmur identified is a mildly elevated aortic outflow velocity. This is a benign flow abnormality which typically develops secondary to heart rate and/or volume changes. Baseline lab was reportedly normal in May without evidence of volume depletion. The overall cardiac structure is normal with adequate systolic function and no significant valve regurgitation.

Syncopal episodes may be caused by a variety of underlying conditions. The first important delineation is cardiogenic syncope versus seizure, with the hallmark of syncope being of short duration and normal mentation immediately prior to and following the episode. Possible causes for cardiogenic syncope include vaso-vagal events, brady or tachyarrhythmias, or another underlying disease causing poor cardiac output (like dilated cardiomyopathy). Because it can be difficult to differentiate between syncope and seizures, the episodes may also be due to underlying neurologic causes.

Today we were able to rule out several potential causes for the episodes. The echocardiogram ruled out significant structural problems with the heart and along with a normal activity level and physical examination, underlying structural disease is very unlikely. Additionally, no obvious cardiac neoplasia or effusions were seen in this study. Despite a normal structure and function however, occasional bouts of increased or decreased heart rate are possible and may cause a syncopal episode (ECG not submitted). A baseline ECG and/or holter monitor can be considered if no additional cause is identified.

No cardiac medications are indicated. Monitor at home for any further episodes, cough/labored breathing and/or exercise intolerance.

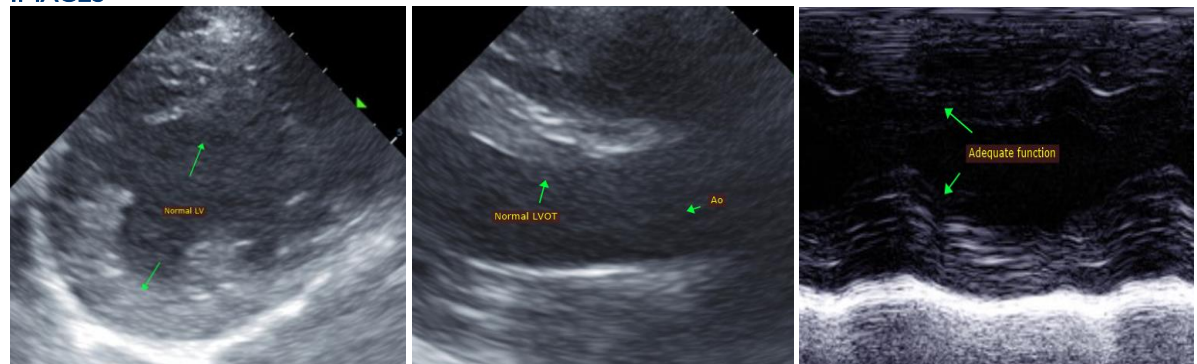
No cardiac contraindication for general anesthesia based upon these findings.

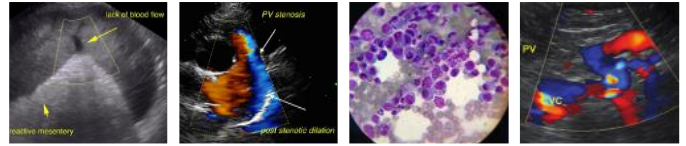
**PLAN**

Consider further systemic evaluation as discussed. Consider an ECG and/or holter monitor as discussed.

Recheck echocardiogram is recommended in 12-18 months to screen for development of disease, the preexisting murmur may mask.

**IMAGES**





**PATIENT**

Ollie McAfee

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. 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.

**BREED**

Golden Retriever

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

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