

## PATIENT

Shelby Torquato

## SPECIES

Canine

## BREED

Cockapoo

## SEX

Female Spayed

## AGE

9 years

## WEIGHT

23lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING

### PERFORMED BY

Jennifer Todd, DVM

## HOSPITAL NAME

Lambs Gap Animal  
Hospital

## REFERRING VET

Dr. Todd

## INVOICE

20658

## DATE

8/20/21

## PRESENTING CLINICAL SIGNS

History: Recheck echo. History of grade IV/VI heart murmur and chronic degenerative valvular disease. Her owner reports that she is doing well, occasional cough reported. Grade IV/VI systolic heart murmur is ausculted today.

-Current medications: She is currently taking pimobendan at 0.3 mg/kg Q 12hours.

-Blood pressure: 140/61mmHg.

-Pertinent previous echo findings (1/2020 MML): Moderate MR, moderate LAE, mild LVE, mild TR. LA; 3.1, LV: 3.5.

**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; 25mm/s, 10mm/mV. The average heart rate is 70bpm (range 45-75bpm; noted heart rate prior to sedation 120bpm). 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.

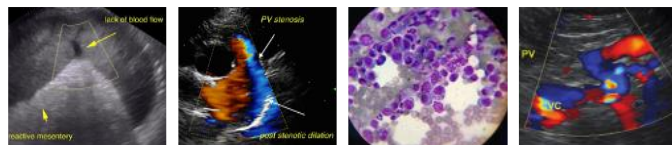
ECG diagnosis: Sinus bradycardia with respiratory variation secondary to sedation.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>posterior) with minimal prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Mild to moderately increased LV diameter with hyperdynamic myocardial function. The tricuspid valve appears subjectively normal, with mild tricuspid regurgitation. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No aortic and mild pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

## 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	NA	NA	1.6	1.8	50	92	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	1.6	1.0	10.4	2.5	4.0	2.0
*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)
*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)
Adapted from June Boon, Veterinary Echocardiography, 1998							



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Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435	35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Hansson et al, Vet Rad and Ultrasound 2002	40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
Bonagura et al. Echocardiography: principles of interpretation, Vet	50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Largely stable disease is identified on exam. Moderate mitral and mild tricuspid regurgitation are unchanged, and the left atrial dimension is stable. Compared to the prior study, the LV is mildly increased comparatively; however, overall, the progression is mild. No additional issues are identified at this time. The ECG is unremarkable with a normal sinus rhythm.

Given these findings, no additional medications are indicated and continue Pimobendan lifelong as was previously prescribed. Continued assessment of progression in the future will help predict long term outcome, however prognosis remains guarded at this stage (B2).

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.

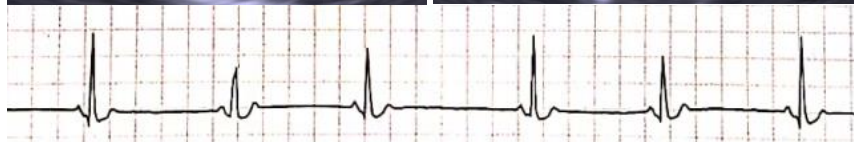
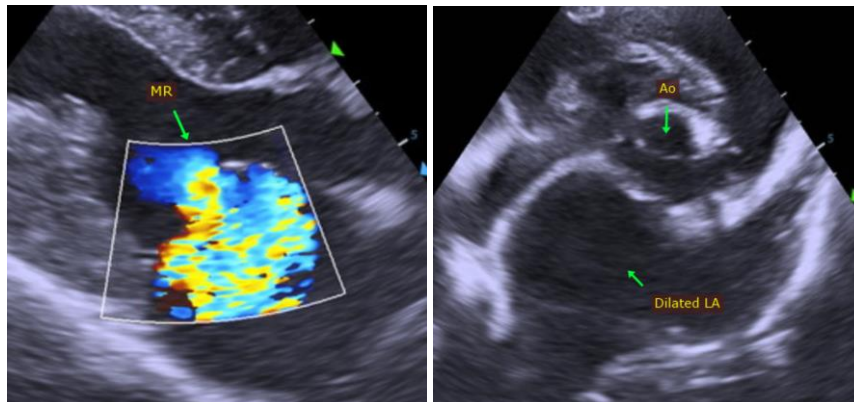
Anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

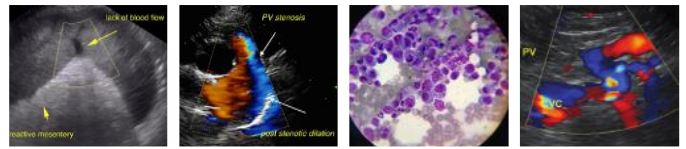
## PLAN

Continue Pimobendan as prescribed. Consider hydrocodone as previously discussed.

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

## IMAGES





**PATIENT**

Shelby Torquato

**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**

Cockapoo

**Maggie Machen Lamy, DVM**

**Diplomate of the American College of Veterinary Internal Medicine (Cardiology)**

info@sonopath.com

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