

**PATIENT**

**PRESENTING CLINICAL SIGNS**

Sadie Colwell

History: Pet was in on 8/23/21 for annual exam/vax/labs under sedation, very nervous in the hospital. O gives Trazodone/Gabapentin, and we give Dex/Midaz/Torb to perform complete exam and procedures. Grade III/VI systolic murmur under sedation but was normal prior to anesthesia with Dexdomitor. Auscultation WNL: no murmur ausculted, NSR, femoral pulses WNL, MM pink and moist, capillary refill <2 sec.

**SPECIES**

Canine

-Pertinent abnormal PE/Chem/CBC/UA Results: NSF.  
-Sedation used: Alfaxalone/ Midazolam/ Butorphanol given prior to scan.  
-STAT: Not requested.

**BREED**

German Shepherd Mix

**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 to severe eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Mildly increased LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Normal velocity. 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 trivial pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

**SEX**

Female Spayed

**CARDIAC CHART**

**AGE**

9 years

**WEIGHT**

58lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

Docside Veterinary  
Medical Center

**REFERRING VET**

Dr. Tierney

**INVOICE**

20758

**DATE**

8/26/21

<b>CANINE CARDIAC PARAMETERS</b>	<b>MR VMAX (m/s)</b>	<b>TR VMAX (m/s)</b>	<b>LA/AO (Boon method)</b>	<b>LA/AO (Heart Base; Swe)</b>	<b>FS (%)</b>	<b>EF (%)</b>	<b>EPSS (cm)</b>
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	5.0	2.1	NM	1.88	36	66	NM
<b>CANINE CARDIAC PARAMETERS</b>	<b>HR (BPM)</b>	<b>AV VMAX (m/s)</b>	<b>PV MAX (m/s)</b>	<b>BODY WEIGHT (kg)</b>	<b>LA 2D short axis Base view (cm)</b>	<b>LVIDd Avg; 2D and m-mode short axis (cm)</b>	<b>LVIDs Avg; 2D and m-mode short axis (cm)</b>
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	106	0.94	0.7	26.3	3.0	4.7	3.0
<i>*Normal chamber parameters expressed as a mean value</i>				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

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic degenerative valve disease causing moderate to severe mitral and mild tricuspid regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication, however risk for progression to spontaneous congestive heart failure in the future is elevated. No additional issues are identified.

Given the risk for progression and results of the EPIC trial, Pimobendan is indicated in this patient as below. Assessment of progression in the future will help predict long term outcome, however prognosis is 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.

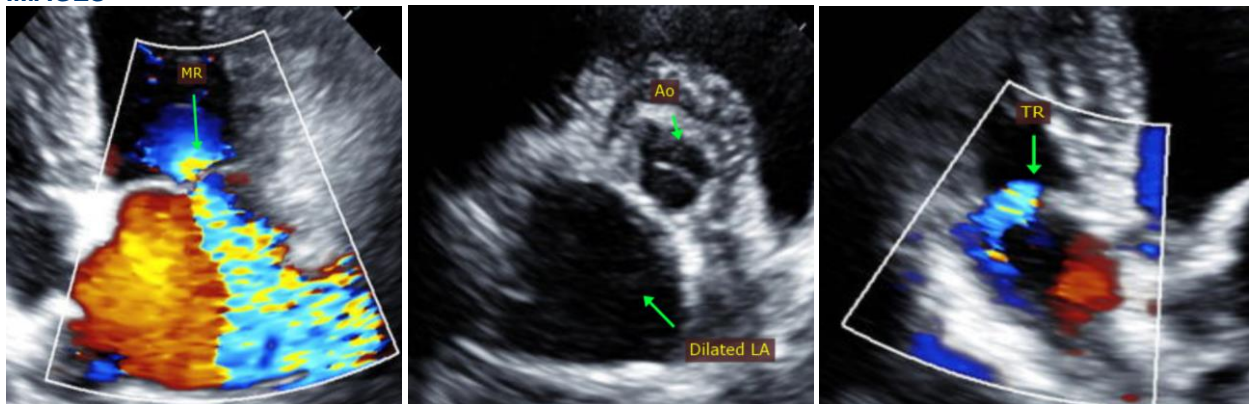
Once on the medication for 3-5 days, anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively 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. **Ideally, I would avoid Dexdomitor in this patient going forward. Alfaxalone can be utilized as a more cardiac protective alternative.**

## **PLAN**

Baseline BP recommended. Institute heart muscle support Pimobendan 0.25-0.3mg/kg PO q12h.

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

## **IMAGES**



**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.**

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.

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