



PATIENT

Oscar Velazquez

SPECIES

Canine

BREED

Toy Poodle

SEX

Male Neutered

AGE

16 years

WEIGHT

10.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

G. Ferrer, DVM

HOSPITAL NAME

Paseos Veterinary
Center

REFERRING VET

Dr. Davila Morales

INVOICE

21267

DATE

9/29/21

PRESENTING CLINICAL SIGNS

History: Patient presented as a referral for an echocardiogram. Patient first presented on August 24, 2021, after the patient experienced a syncopal episode and chronic coughing. Improved with cardiac medications that were sent, but now patient is coughing again. PE showed grade 5/6 systolic heart murmur.

-Current medications: Vetmedin 2.5mg: 1/2 tab PO BID, Furosemide 12.5mg: 1/2 tab PO BID, Enalapril 2.5mg: 1 tab PO BID (discontinued).

-Radiographs: Showed enlarged heart silhouette and dorsal displacement of trachea. Slight pulmonary edema.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with significant anterior leaflet prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with mild to moderate left atrial dilation. Mild LV dilation with adequate myocardial function. The tricuspid valve appears normal with no tricuspid regurgitation. 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 with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	5.0	NA	NM	1.5	62	91	0.26
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	100	1.1	1.0	48.1	2.0	3.0	1.2
*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 causing moderate mitral regurgitation. Mild to moderate left atrial enlargement indicates current relative stability with risk for progression to spontaneous congestive heart failure in the future. No additional issues are noted such as pulmonary hypertension.



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No definitive cardiac cause for syncope is noted 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. If the episodes are strictly cough-related, then **vasovagal events are likely and adequate cough control should help improve the resultant episodes.** Arrhythmias are unlikely in this signalment; however, an ECG could be considered, as well as a baseline blood pressure. Finally, atypical seizures should also be considered, pending more extensive history/situational nature of the episodes.

Given these findings, continue Pimobendan given the degree of disease and risk for progression. **Lasix should be discontinued as CHF is highly unlikely in this case.** As an alternative approach, further respiratory evaluation/treatment is advised including repeat chest radiographs (now that the cough has returned), Hydrocodone, course of Baytril or similar antibiotic, TTW/BAL, etc. A radiologist review of the films is strongly recommended.

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.

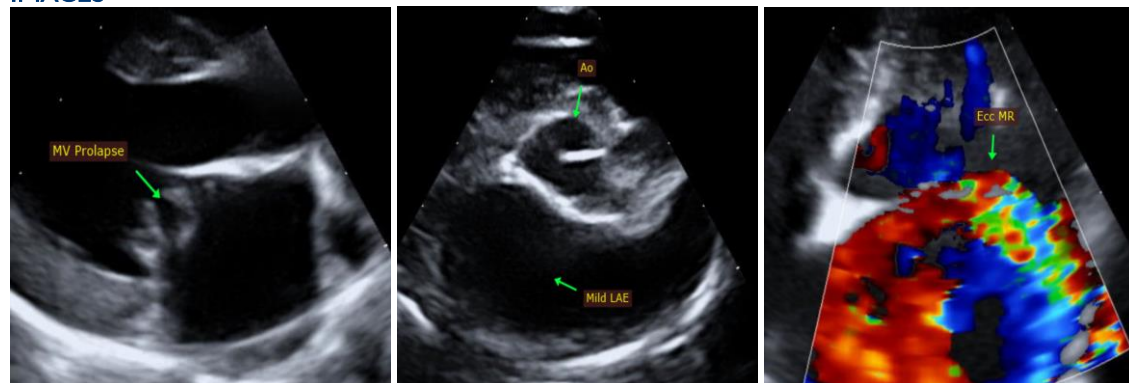
Anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious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

PLAN

Baseline BP and ECG as discussed. Continue Pimobendan 0.25-0.3mg/kg BID. Consider further evaluation as discussed, including respiratory treatment/evaluation. No obvious indication for Lasix/Enalapril in the absence of historical CHF.

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

IMAGES





PATIENT

Oscar Velazquez

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.

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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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Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
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