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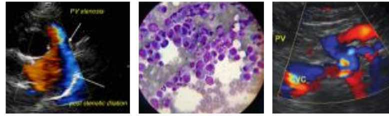

SonoPath

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PATIENT
Lexie Nash

SPECIES
Canine

BREED
Whippet

SEX
Female Spayed

AGE
6.30.09

WEIGHT
23lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME
Chadwell Animal Hospital

REFERRING VET
Dr. Gold

INVOICE
25810

DATE
8.16.22

PRESENTING CLINICAL SIGNS

History: Recheck echo. Recent collapsing episodes. Grade 5 murmur. Bradycardia.
-Current medications: None.
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results (3/2020 MML): Mild MR, minimal LAE. LA: 2.2
-STAT: Not requested
-Imaging performed by: Andi Parkinson, BS, RDMS.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with 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 velocity. 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.

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	5.5	2.0	NM	1.67	43	74	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	1.7	0.82	10.4	3.4	3.9	2.2
*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)
**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)
Adapted from June Boon, Veterinary Echocardiography, 1998				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Hansson et al, Vet Rad and Ultrasound 2002				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				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 persists with evidence of progression. Previously trivial disease is now moderate with 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 recent collapse episodes 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 be obtained. An arrythmia is certainly not ruled out and bradycardia is noted on exam. **Consider a baseline ECG** and/or holter monitor. 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.

Given these findings, it is responsible to institute Pimobendan given the degree of disease and risk for progression.

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.

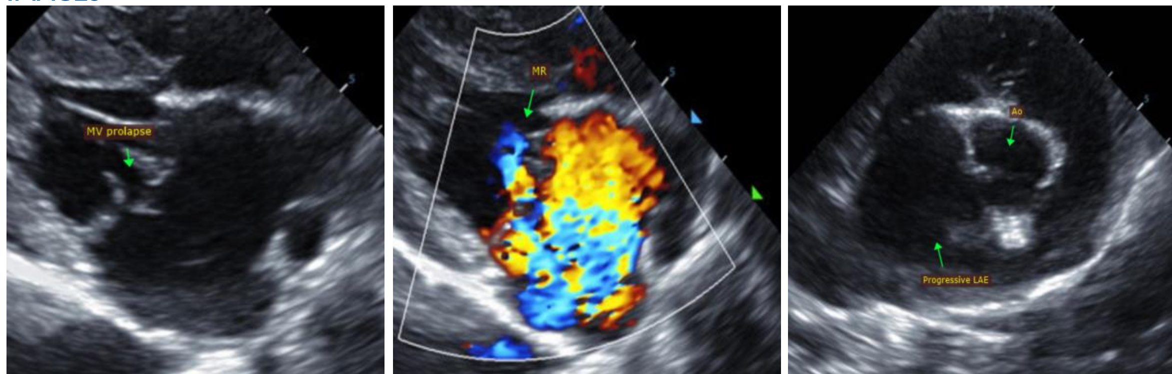
Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

Baseline BP recommended. Institute Pimobendan 0.25- 0.3mg/kg BID. Recommend ECG and further evaluation for collapse episodes.

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.

Maggie Machen Lamy, DVM
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