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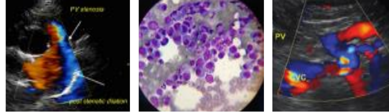

SonoPath
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PATIENT
Daisy McGlone

SPECIES
Canine

BREED
Pomeranian Mix

SEX
Female Spayed

AGE
9.15.07

WEIGHT
12.5lbs

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

HOSPITAL NAME
Perry Hall Animal Hospital

REFERRING VET
Dr. Hatzigiannakis

INVOICE
27492

DATE
11.15.22

PRESENTING CLINICAL SIGNS

History: Recheck echo. Acute, dramatic hypertension of 200-220 mmHg. Patient is showing some neurologic changes such as mild head tilt and episodes of "not acting right," that are similar to focal seizure. Brief episodes of paresis/ataxia.
-Pertinent abnormal PE/Chem/CBC/UA Results: Chronic elevation of ALP, recent increase of ALT, mild non-regenerative anemia, recent UTI and after therapy free catch showed persistent RBC (concern for renal tract bleeding).
-Current medications: Telmisartan 20mg 1/4 tab PO SID started 10/15/22, Benazepril 5mg 1 PO BID started 5/19/22, Vetmedin 1.25mg 1 PO BID started 10/21/2020, Cefpodoxime course 100mg 1/2 PO SID x 10 days, started 10/3, cosequin.
-Blood pressure: BP was in the 150-170mmHg range for a long time and with mild response to Benazepril, but in sept 220mmHg
-Sedation used: Torbugesic/Midazolam.
-Pertinent previous ultrasound results (10/2020 MML): Moderate MR, moderate LAE, mild LVE, trivial TR: 3.0m/s. LA: 2.2, LV: 2.9.
-STAT: Not requested.
-Imaging performed by: Stephanie Warga RDCS, RVT.

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. Mildly increased LV diameter with hyperdynamic myocardial function. The tricuspid valve appears subjectively normal, with trivial tricuspid regurgitation. Velocity consistent with early pulmonary hypertension. 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 or pulmonic insufficiency. No pericardial or pleural effusion noted.

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	3.0	NM	1.8	46	80	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	90	1.4	1.1	5.7	2.1	2.8	1.5
*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 stability. Moderate mitral and mild tricuspid regurgitation are unchanged, without progressive left heart enlargement. Persistently 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. Pulmonary pressures are unchanged compared to previous. No additional issues are identified. No evidence of hypertensive cardiomyopathy. Continued workup/treatment of SHT is recommended.

Reasonable to continue Pimobendan lifelong as prescribed with no obvious indication for additional medications. Continued assessment of progression is recommended, with a guarded prognosis (stage B2). Patient may be at risk for development of CHF, arrhythmias, and/or sudden death going forward.

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.

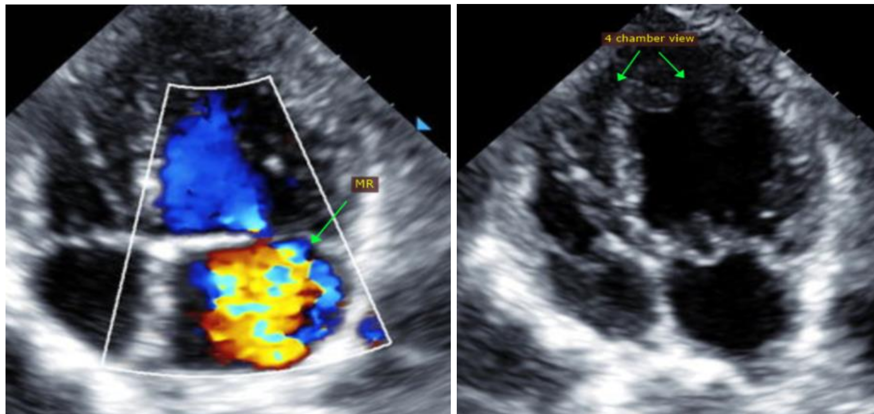
Anesthetic risk remains mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV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

PLAN

Continue treatment for SHT is recommended. If refractory, an internal medicine consultation is recommended. Continue 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.

Maggie Machen Lamy, DVM
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