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Pet Animal Ultrasound Service
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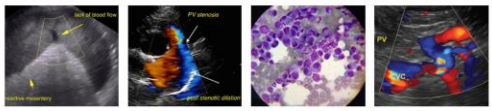

SonoPath
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PATIENT
Dizzy Picard

SPECIES
Canine

BREED
Poodle Mix

SEX
Female Spayed

AGE
13 years

WEIGHT
16lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Compassionate Care Veterinary Clinic

REFERRING VET
Dr. Farrington

INVOICE
29243

DATE
2/24/23

PRESENTING CLINICAL SIGNS

History: Past history heart murmur and tracheal cough, untreated until recently. Feb 8: presented after falling downstairs. Owner was concerned she had a seizure. On presentation: neurologic deficits all limbs, unable to stand or walk. Had serious nasal discharge, rasps and crackles left lung fields and pronounced jugular pulse. Moderately hypertensive, had stress hyperglycemia, moderately elevated ALT, ALP and BUN (previously normal). Has history of pancreatitis/cholangitis, with supportive care, neuro signs improved and were normal within 2 days. Cough continues, but more energetic. Hyperglycemia resolved; liver enzymes remain mildly elevated. Concern for thromboembolic event or syncopal event. Started Cerenia 16 mg, 1/4 SID. . Today crackles still heard; pulmonary edema on radiographs. Lasix was bolused. Current meds: 1) Pimobendan 1.25mg, 1/2-tab BID, 2) Clopidogrel 75mg, 1/4-tab SID. BP: 182, 184, 175mmHg, 3) Enalapril 2.5mg, 1/2-tab SID. Looking through the patient's record, the blood pressure in August 2021, was 228, 230,232mmHg.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is normal with mild symmetrical hypertrophy and adequate function.
Left atrium: The left atrium is mild to moderately dilated.
Mitral valve: The mitral valve is mildly thickened with prolapse into the left atrial lumen. Mild eccentric mitral regurgitation**.** Normal velocity.
Aortic valve/aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. Mild to moderate aortic insufficiency.
Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.
Right atrium: Normal RA dimension.
Tricuspid valve: The tricuspid valve appears mildly thickened with septal prolapse and mild to moderate tricuspid regurgitation. Normal velocity.
Pulmonic valve/pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 100bpm.

2-Dimensional Measurements

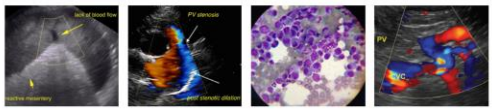
Ao diam (cm)	1.6
LA diam (cm)	2.6
LA:Ao (Swe)	1.6
IVS thickness (cm)	0.7
LVID diastole (cm)	2.9
PW thickness (cm)	0.7
LVID systole (cm)	0.9
FS (%)	67

Doppler Measurements

PV Vmax (m/s)	0.8
AoV Vmax (m/s)	2.0
MR Vmax (m/s)	5.5
TR Vmax (m/s)	2.5
TR PG (mmHg)	25

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing mild to moderate mitral and tricuspid regurgitation is identified. Mild to moderate left atrial enlargement indicates the current risk for complication is low. The patient does have markers of systemic hypertension, which is supported by the history, with an aortic insufficiency and mild LV hypertrophy. No additional concurrent issues such as systolic dysfunction or pulmonary hypertension are noted in this study.



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Systemic hypertension is of concern in this case, which is supported by these findings. A reported BP of over a year ago was significantly elevated; however, the exam today is considered mildly elevated. Regardless, given the atypical history and echo findings recommend amlodipine to effect (target BP <160mmHg). Screening for underlying causes of high blood pressure is highly recommended (renal disease, adrenal tumor, etc.). Screening for proteinuria is recommended as an increased ACE-I dose may also be needed. Highly recommend consultation with an IM specialist in this unusual case.

Given these findings, a cardiac cause for the episodes is considered unlikely. Additionally, the length of the episodes is atypical of syncope. A neurologic issue and/or a vascular event is considered most likely. Reasonable to continue Plavix based upon this suspicion; however, further blood pressure evaluation and treatment is of the upmost importance.

No cardiac specific medications are indicated. That being said, given the atypical presentation, reasonable to continue Pimobendan for the short-term. Assessment of progression in the future will help predict long term prognosis, which is guarded at this stage (B1/B2).

RECOMMENDATIONS

- Reasonable to continue Pimobendan 0.3mg/kg PO q12h.
- Consider institution of Amlodipine if >180mmHg. Reassess BP in 1-2 weeks; target <160mmHg.
- Screen for underlying causes for SHT, including proteinuria. IM consultation.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Anesthetic risk is considered mild if needed. 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. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

- Recheck BP every 4-6 months once controlled.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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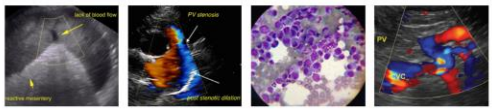

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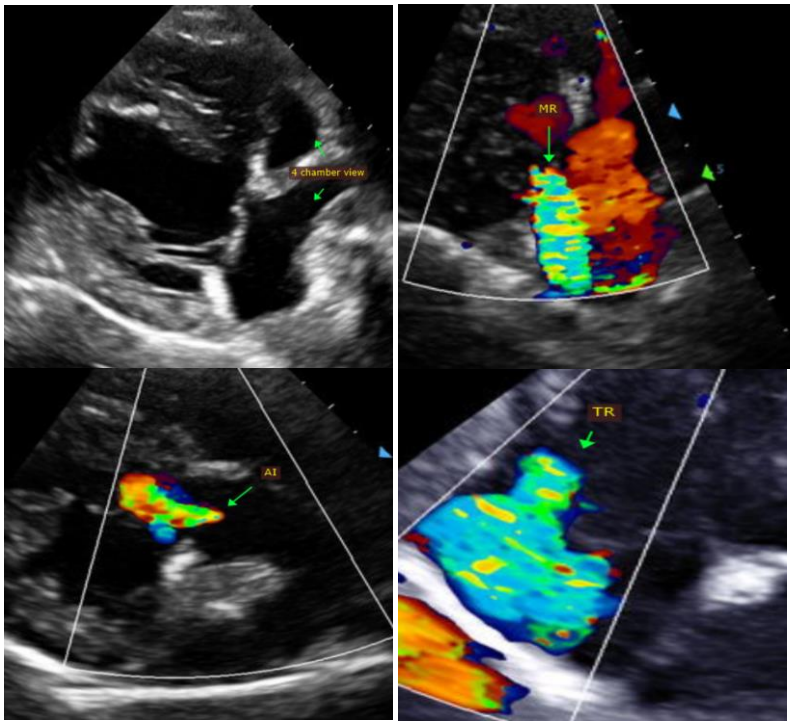
IMAGES



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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)