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Pet Animal Ultrasound Service
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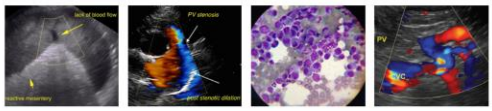

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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PATIENT
Weezy Landry

SPECIES
Canine

BREED
Mix

SEX
Female Spayed

AGE
8 years

WEIGHT
14.1lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Wignall Animal Hospital

REFERRING VET
Dr. Dietrich

INVOICE
29033

DATE
2/16/23

PRESENTING CLINICAL SIGNS
History: Grade V/VI heart murmur. No clinical signs. BP: 137, 244mmHg.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.
A single lead ECG is available; 25mm/s, 20mm/mV. The average heart rate is 130bpm (range 100-166bpm). The rhythm is sinus in origin, with a p for every QRS complex. P and QRS morphologies are positive. Frequent single block P waves are appreciated throughout; singles only, consistent with low-grade block. A slight prolongation in the PR interval prior to the block is suspected, although the finding is inconsistent, No premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: 2nd degree AV block; low-grade, suspect type I.

ECHOCARDIOGRAM FINDINGS
2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is normal with adequate myocardial function. LV wall thicknesses are normal.
Left atrium: The left atrium is mildly dilated,
Mitral valve: The mitral valve is diffusely thickened with prolapse into the left atrial lumen. Mild to moderate eccentric mitral regurgitation. Normal velocity
Aortic valve/aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.
Right ventricle: Normal right ventricular diameter and morphology.
Right atrium: Mild RA dilation.
Tricuspid valve: The tricuspid valve appears thickened with septal prolapse and moderate tricuspid regurgitation. Velocity consistent with early pulmonary hypertension.
Pulmonic valve/pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

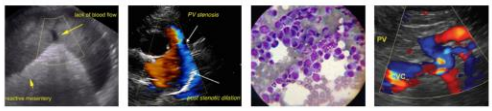
2-Dimensional Measurements

Ao diam (cm)	1.6
LA diam (cm)	2.3
LA:Ao (Swe)	1.4
IVS thickness (cm)	0.7
LVID diastole (cm)	2.3
PW thickness (cm)	0.7
LVID systole (cm)	1.4
FS (%)	40

Doppler Measurements

PV Vmax (m/s)	0.7
AoV Vmax (m/s)	1.4
MR Vmax (m/s)	5.7
TR Vmax (m/s)	2.9
TR PG (mmHg)	33

INTERPRETATION OF THE FINDINGS
Chronic degenerative valve disease causing mild to moderate mitral and tricuspid regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. Mild pulmonary hypertension is noted, which is of unknown significance in a dog without respiratory disease. No concurrent issues are noted in this study.



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Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1).

The ECG does show an arrhythmia, with a highly variable sinus rate and low grade 2nd degree AV block. This implies that there is a non-conducted P wave; however, never more than one in a row. Type I versus type II cannot be definitively determined on a single-lead tracing; however, there is slight prolongation of the PR interval.

Further evaluation is advised through an atropine challenge (administer 0.04mg/kg atropine IV or IM and assess response); pending a normal response (heart rate doubles and maintains for 10-15 minutes) high vagal tone is diagnosed which is a benign cause. High vagal tone can be a normal variant or be secondary to a variety of systemic issues such as neurologic or respiratory disease. If the atropine challenge is normal, consider further evaluation for causes of high vagal tone. An abnormal response would indicate electrical dysfunction, and a holter monitor and/or referral should be considered.

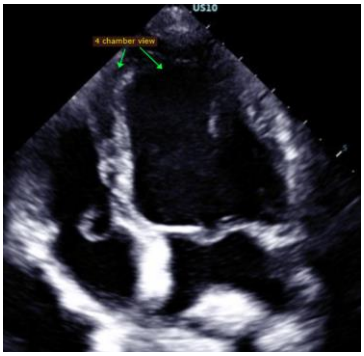
RECOMMENDATIONS

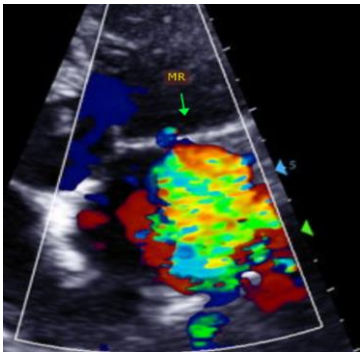
- Atropine challenge and follow up as discussed.
- No cardiac medications are clearly indicated.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Pending a normal atropine challenge, anesthetic risk is low; however, premedicating with atropine is clearing recommended. An atypical atropine response would confer a high risk for anesthesia and is not recommended.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

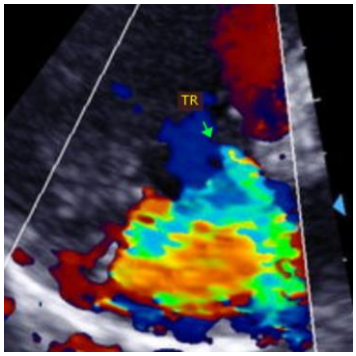
PLAN

- Recommend conservative monitoring with a recheck echocardiogram in 6-12 months, sooner if any development of clinical signs.

IMAGES







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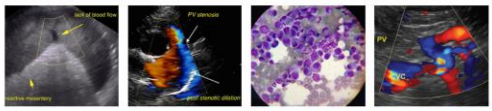

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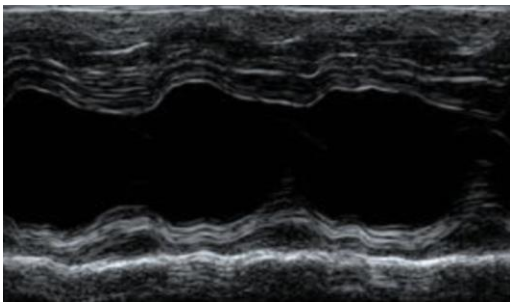

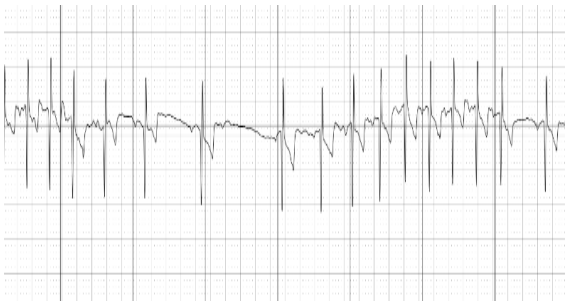

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)