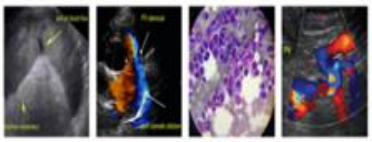
Mass Veterinary Services



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Augustus Bertrand

SPECIES
Canine

BREED
Great Dane Mix

SEX
Male Neutered

AGE
9 years

WEIGHT
110lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
25651

DATE
8/9/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History DCM; history atrial fibrillation, isolated VPCs. Current presentation: Augustus is doing well and rarely coughs. His appetite remains good. Occasional loose stool. His activity remains normal, but he is having some trouble getting around. On exam: arrhythmia, grade II/VI murmur with PMI left apical area, PSS, lung fields clear. BP: 140mmHg x 5. Current medications: 1) Pimobendan/vetmedin 10mg 1 1/4 tab twice a day 2) Enalapril 10mg 1 tab twice a day 3) Diltiazem 45mg 1 tab three times a day 4) Lasix/furosemide 50mg 2 tabs twice a day 5) Taurine 1500mg daily twice a day 6) Spironolactone 25mg 2 tabs twice a day *Sedated with propofol for study.
-Pertinent previous echo findings (1/4/22 Meghan Allen, DVM, DACVIM-Cardiology): LA 5.0 cm; LA:Ao 1.79; LV 6.38 cm; moderate-severe LAE; moderate LVE with severe systolic dysfunction; mild MR; mild TR 1.9 m/s).

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 120bpm (range 75-188bpm). No identifiable P waves most consistent with atrial fibrillation. VPCs seen throughout; singles and occasional couplets. VPCs due appear multi-form. No triplets, VT, etc. identified.
ECG diagnosis: Atrial fibrillation; rate controlled single and couplet VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is markedly increased with severe systolic dysfunction. LV wall thicknesses are decreased with increased sphericity.
Left atrium: The left atrium is severely dilated.
Mitral valve: The mitral valve is minimally thickened with no prolapse into the left atrial lumen. Mild to moderate central mitral regurgitation.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.
Right ventricle: Moderate right ventricle enlargement.
Right atrium: Moderate RA dilation.
Tricuspid valve: The tricuspid valve appears normal with mild tricuspid regurgitation. Normal velocity.
Pulmonary 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)	2.5
LA diam (cm)	4.7
LA:Ao (Swe)	1.9
IVS thickness (cm)	1.1
LVID diastole (cm)	6.0
PW thickness (cm)	1.1
LVID systole (cm)	5.4
FS (%)	10

Doppler Measurements

PV Vmax (m/s)	0.96
AoV Vmax (m/s)	1.0
MR Vmax (m/s)	4.5
TR Vmax (m/s)	2.1
TR PG (mmHg)	18

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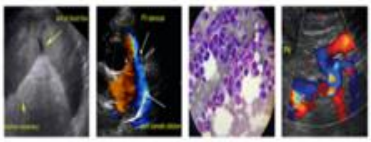

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INTERPRETATION OF THE FINDINGS

Compared to prior study, findings are similar. The left heart remains severely affected without evidence of progression or improvement. The right heart is progressively enlarged; however, no obvious pulmonary hypertension or other contributing issues are identified. No additional changes are appreciated.

The ECG shows persistently well controlled atrial fibrillation. The VPCs have been noted throughout serial exams. What is different in this study is that couplets have developed, rather than previously documented single abnormal beats. While this is somewhat concerning, this can also reflect stress. As the patient is doing well at home without any collapse episodes, simple monitoring is advised. A holter monitor can be considered for a more accurate representation.

Given a reportedly stable patient and stable findings, no change to the current medication regiment is recommended at this time.

Monitoring of sleeping respiratory rates will be paramount to screen for recurrent congestive heart failure at home in the future. Cough suppression to improve QOL can also be considered once diuretics are on board for any residual mechanical cough in the face of normal sleeping respiratory rates.

Prognosis remains poor at this stage, with risk for recurrent congestive heart failure, malignant arrhythmias (AF, VT), collapse and/or sudden death in the future. That being said, this patient has done well and exceeded expectations.

RECOMMENDATIONS

- Continue Pimobendan, Enalapril, Diltiazem, Lasix, Taurine and Spironolactone as prescribed.
- Consider a holter monitor as discussed.
- Consider hydrocodone with homatropine, 0.2 – 0.4 mg/kg PO up to q4-6 hours PRN for cough (available in 5/1.5mg tablets or 5mg/5ml solution).
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Elective anesthesia is not advised.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF going forward.
- Lifelong activity restriction is advised.

PLAN

- Monitor renal values/ECG every 3-4 months lifelong.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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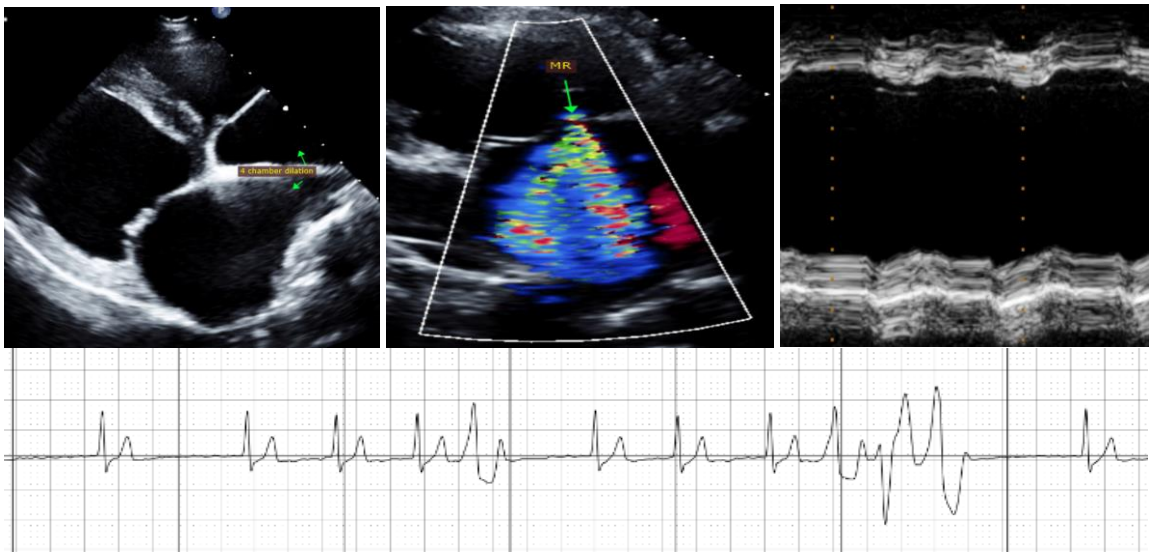
IMAGES



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)