



PATIENT
Grayson 2nd Chance
Brookfield

SPECIES
Canine

BREED
Mix

SEX
Male Neutered

AGE
11 years

WEIGHT
26.5lbs

INTERPRETED BY
Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan,
RDCS

HOSPITAL NAME
Mass Veterinary
Services

REFERRING VET
Dr. Masloski

INVOICE
22564

DATE
2/15/22

PRESENTING CLINICAL SIGNS

History: Grayson was noted to have a heart murmur in August 2021. His appetite is off, and he has been lethargic for the past 4-5 days. Constant coughing and labored breathing. His previous caretaker has entered a nursing home. Dental disease, occasional diarrhea. No S/V/PU/PD. On auscultation, NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 160mmHg x 4.
-Current medications (started by rescue veterinarian): 1) Enalapril 10mg 1/2 tab twice a day 2) Lasix/furosemide 12.5mg 1 tab twice a day.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: Significant LV dilation with hyperdynamic myocardial function.
Left atrium: The left atrium is severely dilated.
Mitral valve: Diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Suspect ruptured chordae tendineae Severe eccentric 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 RV dilation.
Right atrium: Moderate right atrial dilation.
Tricuspid valve: The tricuspid valve appears mildly thickened, with mild septal prolapse and mild tricuspid regurgitation.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. The MPA appears mildly dilated. Normal pulmonic outflow velocities with laminar flow. No PI.
Pericardium/other: Scant pericardial effusion. Ascites seen on subcostal views. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 160bpm.

2-Dimensional Measurements

Ao diam (cm)	1.3
LA diam (cm)	4.6
LA:Ao (Swe)	3.5
IVS thickness (cm)	0.72
LVID diastole (cm)	4.2
PW thickness (cm)	0.75
LVID systole (cm)	2.1
FS (%)	50

Doppler Measurements

PV Vmax (m/s)	0.82
AoV Vmax (m/s)	NM
MR Vmax (m/s)	NM
TR Vmax (m/s)	NM
TR PG (mmHg)	NM

INTERPRETATION OF THE FINDINGS

The cause of the murmur is chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. Severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is elevated. The right heart is also affected with four chamber enlargement. No additional issues are identified.

In light of the clinical signs, severity of disease and effusions seen on ultrasound, the likely diagnosis is biventricular congestive heart failure and immediate lifelong medications are warranted lifelong as below. Consider hospitalization if needed for patient stabilization. Additionally, abdominocentesis can be considered if the patient appears distended and uncomfortable. Baseline chest radiographs may be helpful.



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The average survival time of canine patients with active pulmonary edema is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

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RECOMMENDATIONS

- Continue hospitalization, abdominocentesis, CXR, etc.
- Institute Lasix/furosemide 1-2mg/kg PO q8h for 3-5 days. If doing well at that time, decrease to q12h.
- Institute Spironolactone 1-2 mg/kg PO q 12h.
- Institute Pimobendan 0.25-0.3 mg/kg PO q12h.
- Temporarily discontinue ACE-I.
- Cough suppression to improve QOL can also be considered (hydrocodone, 0.2-0.4mg/kg up to q4-6h PRN) for any residual mechanical cough in the face of normal sleeping respiratory rates.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.
- Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home.
- Elective anesthesia is not advised.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.

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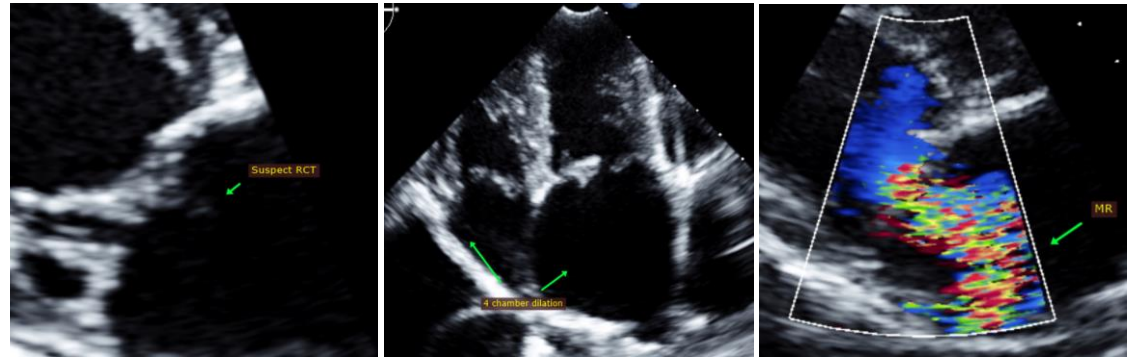
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PLAN

- Monitor renal values and BP in 1-2 weeks, then every 3-4 months lifelong. If doing well and BP >130mmHg, institute ACEI 0.5mg/kg PO q12h.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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DACVIM (Cardiology)

IMAGES



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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.

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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.

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Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
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Male Neutered

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

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