



PATIENT
Oliver Pennington

SPECIES
Canine

BREED
Cavalier

SEX
Male Neutered

AGE
11 years

WEIGHT
29.2lbs

INTERPRETED BY
Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan,
RDCS

HOSPITAL NAME
Mass Veterinary
Services

REFERRING VET
Dr. Masloski

INVOICE
25046

DATE
6/29/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease - Stage B2. Current presentation: Oliver has been coughing daily, primarily when he gets up from lying down or is excited. He also has been having some labored breathing while sleeping. Oliver was seen on an emergent basis ~ 1 month ago after a collapse episode. He had another collapse episode last night---pupils dilated, head started to tilt, unable to move, shaking, panting, but did not fall over. Oliver is a bit disorientated post episode but it lasts for a very short time. The episodes are not associated with coughing or exercise. On exam: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 120-130 mmHg. Current medications: 1) Gabapentin 60mg 1/2 tab as needed 2) Chlorpheniramine 4mg 1 tab twice a day 3) Pimobendan/vetmedin 7.5mg 1/2 tab twice a day 4) Snip tips 5) Hydrocodone 10mg/ml 0.5 mls twice a day as needed for cough---not giving *No sedation for study. -Pertinent previous echo findings (11/10/21 Maggie Machen Lamy, DVM, DACVIM-Cardiology): LA 3.3 cm; LA:Ao 1.8; LV 4.3 cm; moderate LAE; mild LVE; moderate-severe MR; mild TR (2.2 m/s)

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is increased with hyperdynamic myocardial function. LV wall thicknesses are normal.
Left atrium: The left atrium is severely dilated.
Mitral valve: The mitral valve is diffusely thickened with mild prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with a 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: Mild right ventricular enlargement.
Right atrium: Mild RA enlargement.
Tricuspid valve: The tricuspid valve appears mildly thickened with septal prolapse and mild double jet of tricuspid regurgitation. Velocity consistent with early pulmonary hypertension.
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.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 160bpm.

2-Dimensional Measurements

Ao diam (cm)	1.9
LA diam (cm)	3.9
LA:Ao (Swe)	2.1
IVS thickness (cm)	0.7
LVID diastole (cm)	4.5
PW thickness (cm)	0.7
LVID systole (cm)	2.5
FS (%)	44

Doppler Measurements

PV Vmax (m/s)	0.8
AoV Vmax (m/s)	1.4
MR Vmax (m/s)	5.1
TR Vmax (m/s)	3.2
TR PG (mmHg)	41

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists with evidence of progression. Severe mitral and mild tricuspid regurgitation are identified with progressive left heart dimensions. Mild pulmonary hypertension has developed; however, this is not enough to explain syncopal



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episodes. Significant LA and LV enlargement indicates there is an elevated risk for spontaneous congestive heart failure. No additional issues are identified.

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Recurrent syncopal episodes in this patient are most likely cardiogenic in origin, albeit atypical to not be associated with activity. Possible causes of syncope include poor forward blood flow leading to hypoxia with excitement, early CHF, pulmonary hypertension (not seen), an arrhythmia (not seen), and/or blood pressure swings/vasovagal events. Insufficient cardiac output, imminent CHF and/or hypotension may all be contributing. Given what is seen here, recommended institution of full cardiac support as below. If the episodes persist despite this approach, further evaluation may be indicated such as a holter monitor. Long term prognosis is poor; however, most dogs are able to maintain a good QOL on medications for an average of 8-12 months from diagnosis of CHF.

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RECOMMENDATIONS

- Institute low-dose Lasix 1mg/kg PO q12h.
- Continue Pimobendan as prescribed.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Institute ACE-I (low-dose) 0.5mg/kg PO q24h.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Activity/stress limitation advised while maintaining QOL.
- Elective anesthesia is not advised.
- 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.

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

PLAN

- Monitor renal values/BP in 1-2 weeks, then 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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Pamela Harrigan,
RDCS

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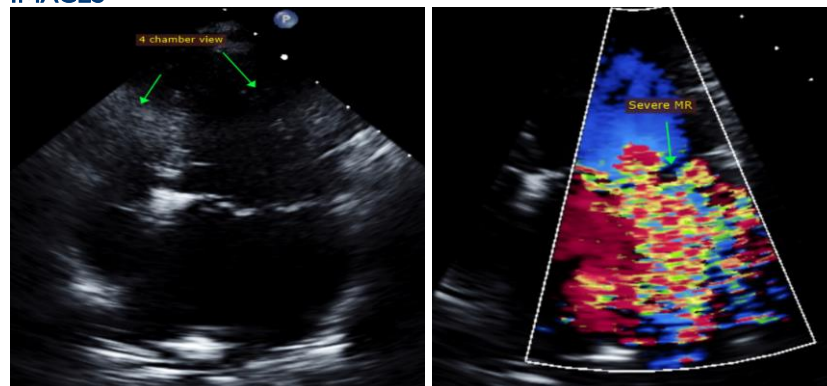
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IMAGES





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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.

BREED

Cavalier

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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

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