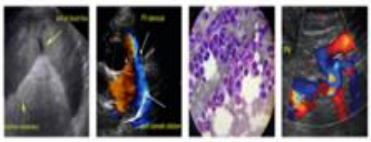
Mass Veterinary Services



SonoPath Clinical Sonography & Telecytology
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1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Indiana Macmunn

SPECIES
Canine

BREED
Cavalier King Charles

SEX
Male Neutered

AGE
7 years

WEIGHT
22.8lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
24115

DATE
5/10/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History severe chronic valvular disease. Current presentation: Indiana was noted to have a heart murmur in August of 2021. Based on echocardiographic findings, he was started on Enalapril and Pimobendan. Presently doing well but does pant more than usual. No labored breathing and no exercise intolerance. Good appetite and normal activity level. On exam today: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 180-190 mmHg. Current medications: 1) Pimobendan/vetmedin 2.5mg 1 tab twice a day 2) Enalapril 2.5mg 1.5 tabs daily 3) Apoquel 16mg 1/4 tab daily -Pertinent previous echo findings (10/7/21 Nikki Gaudette, DVM): LA 2.2 cm; LA:Ao 2.0; LV 3.1 cm; marked LAE; mild-moderate LVE; severe MR; mild-moderate TR (no measurement noted); mild pulmonary hypertension.

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 mild prolapse into the left atrial lumen. Mild 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: 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 normal with trace tricuspid regurgitation; normal velocity.
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.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 180bpm.

2-Dimensional Measurements

Ao diam (cm)	2.1
LA diam (cm)	2.3
LA:Ao (Swe)	1.2
IVS thickness (cm)	0.66
LVID diastole (cm)	2.8
PW thickness (cm)	0.68
LVID systole (cm)	1.4
FS (%)	46

Doppler Measurements

PV Vmax (m/s)	NM
AoV Vmax (m/s)	1.0
MR Vmax (m/s)	5.2
TR Vmax (m/s)	2.6
TR PG (mmHg)	27

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease persists, although only mild changes are seen here. Mild mitral and trace tricuspid regurgitation are noted without significant LA enlargement. Lack of significant left atrial enlargement indicates the current risk for complication is low. No concurrent issues such as pulmonary hypertension are noted in this study.

These findings are directly discordant with what was noted in 2021, with severe disease described. That being said, comparing the raw LA and LV dimensions suggests potentially

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a difference in interpretation is contributing, as the LA of 2.2 was previously described as marked. Regardless, what is seen here is of little concern. Reasonable to continue medications until serial exams document stability, particularly given elevated BP on exam. Discussion with the owner is advised.

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

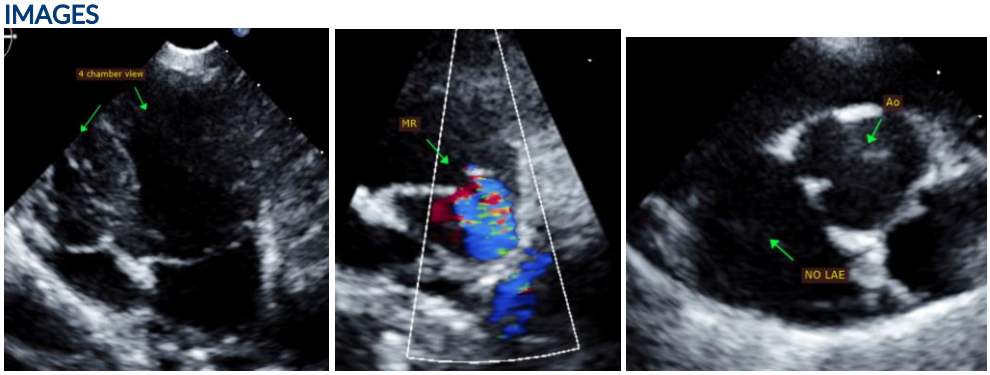
RECOMMENDATIONS

- Reasonable to continue Pimobendan/ACEI until reassessment in 6 months shows stability.
- Reassess BP for persistence; treat if indicated.
- 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

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

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.

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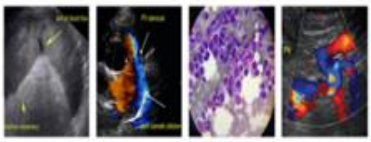

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Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
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Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)