



PATIENT

Madeline Serra

SPECIES

Canine

BREED

Golden Retriever

SEX

Female

AGE

11 months

WEIGHT

66.2lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

22602

DATE

2/16/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History valvular pulmonic stenosis, mild-moderate. Currently, Madeline is presently doing well. Good appetite and activity level. On auscultation: NSR, grade IV/VI murmur with PMI left apical area, PSS, lung fields clear. BP: 120-130mmHg.

*Sedated with propofol for study.

-Pertinent previous echo findings (5/18/21 MML): LA 2.1 cm; LA:Ao 1.2; LV 2.7 cm; RVOT 3.0 m/s - valvular PS, mild post-stenotic dilation of MPA, RA/RV prominence; MV/TV dysplasia; systolic ventricular septal flattening.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV diameter is normal with borderline function. LV wall thicknesses are normal.

Left atrium: The left atrium is normal.

Mitral valve: The mitral valve appears mildly thickened with abnormal closure consistent with mild dysplasia. Trivial 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: The RV is prominent with mild hypertrophy. Subtle septal bounce.

Right atrium: Mild RA prominence.

Tricuspid valve: The tricuspid valve appears mildly thickened. No obvious stenosis. Trace tricuspid regurgitation.

Pulmonic valve/Pulmonary artery: Pulmonic outflow velocities are elevated at the level of the valve. The max velocity is consistent with a mild stenosis, which is suspected to be an under-estimation (PG: 36mmHg). The pulmonic valve appears thickened and tethered. Trace pulmonic insufficiency. Mild post-stenotic dilation of the MPA and branches.

Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 120bpm.

2-Dimensional Measurements

Ao diam (cm)	2.3
LA diam (cm)	3.1
LA:Ao (Swe)	1.3
IVS thickness (cm)	1.1
LVID diastole (cm)	3.5
PW thickness (cm)	1.1
LVID systole (cm)	2.6
FS (%)	26

Doppler Measurements

PV Vmax (m/s)	3.2
AoV Vmax (m/s)	1.7
MR Vmax (m/s)	NA
TR Vmax (m/s)	3.4
TR PG (mmHg)	46

INTERPRETATION OF THE FINDINGS

Valvular pulmonic stenosis persists with evidence of stability. The right heart is largely unremarkable, although a mild septal bounce is appreciated. The flow through the valve is similar to the previous study with only slight progression. Trivial mitral and tricuspid leaks remain unchanged. The LV function is borderline depressed; however, this is likely due to Propofol sedation. No additional issues are identified.

Given that this patient is borderline mild to moderate without any progression in right heart dimensions, there is not a clear indication for Atenolol at this time. Serial follow up remains advised to ensure this does not change in the future.

Monitor for development of associated clinical signs (collapse, abdominal distention, cough, labored breathing). Mild exercise restriction is advised. Omega fatty acid



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supplementation may have some long-term benefit, given these cases are predisposed to development of arrhythmias going forward.

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Breeding this animal is not advised due to the genetic link of this disease.

BREED
Golden Retriever

RECOMMENDATIONS

- Referral for Cardiology consultation if desired (recommended).
- No obvious indication for Atenolol due to lack of right heart changes.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Anesthetic risk is mild to moderate at this time. Avoid heart rate stimulating drugs such as atropine or glycopyrrolate unless absolutely necessary. Avoid vasodilators such as acepromazine. Mild IV fluid restriction is advised. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 if possible.
- Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary.
- Mild activity restriction is advised.

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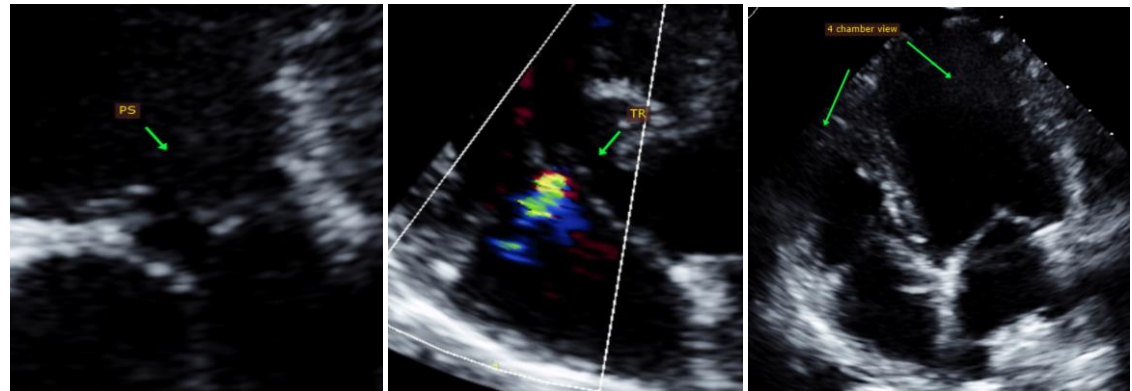
PLAN

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

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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.

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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Echocardiogram performed by:

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Pet Animal Ultrasound Service (4paus.com)