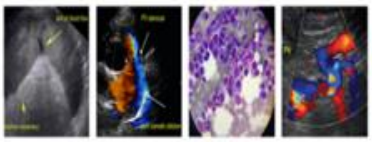
Mass Veterinary Services



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

PATIENT
Stella Kaufmann

SPECIES
Canine

BREED
Shetland Sheepdog

SEX
Female Spayed

AGE
11 years

WEIGHT
34.2lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
29001

DATE
2/15/23

PRESENTING CLINICAL SIGNS

History: Recheck echo. History 3rd degree AV block; history mild mitral regurgitation. Presently, Stella does have an occasional cough/gag. Her resting respirations have been normal. She is eating normally with normal activity. On exam: bradycardic, grade II-III/VI murmur with PMI left apical area, PSS, lung fields clear, mm pink, moist, CRT<2. BP: 220mmHg (stressed). Current medications: 1) Proin 50mg 3/4 tab am with 1/2 tab pm 2) Cosequin 1 tab twice a day 3) Vitachew twice a day 4) Pimobendan/vetmedin 15mg 1/3 tab twice a day 5) Fish oils 1/2 cap daily *No sedation for study.
-Pertinent previous echo findings (5/18/22 MML): LA 3.2 cm; LA:Ao 1.8; LV 3.6 cm; borderline LVE; moderate LAE; mild MR (diastolic MR noted); elevated RVOT (1.8 m/s) and LVOT (3.2 m/s) velocities secondary to bradycardia.

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 from an AliveCor monitor; 25mm/s, 10mm/mV. Complete AV block is present (3rd degree), with no P to QRS correlation. The sinus/P wave rate is 115bpm. The ventricular rate varies is 50bpm with a regular rhythm.
ECG diagnosis: Complete (3rd degree) AV block with a slow ventricular escape rhythm.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is borderline increased with adequate myocardial function. LV wall thicknesses are normal with increased sphericity.
Left atrium: The left atrium is moderately dilated.
Mitral valve: The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Mild eccentric mitral regurgitation**.** Diastolic MR is also appreciated.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Mildly elevated aortic outflow velocity; laminar flow. No aortic insufficiency.
Right ventricle: Mild RV dilation. No obvious RVH.
Right atrium: Mild RA dilation.
Tricuspid valve: The tricuspid valve appears normal with mild tricuspid regurgitation. Velocity consistent with mild pulmonary hypertension.
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.

2-Dimensional Measurements

Ao diam (cm)	2.0
LA diam (cm)	3.6
LA:Ao (Swe)	1.8
IVS thickness (cm)	0.9
LVID diastole (cm)	3.5
PW thickness (cm)	0.8
LVID systole (cm)	1.8
FS (%)	49

Doppler Measurements

PV Vmax (m/s)	1.3
AoV Vmax (m/s)	3.5
MR Vmax (m/s)	NM
TR Vmax (m/s)	3.3
TR PG (mmHg)	43

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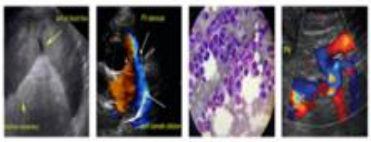

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INTERPRETATION OF THE FINDINGS

Compared to the prior study, findings are remarkable similar. The arrythmia is unchanged with no obvious deterioration in the escape rate. The sinus rate is slightly lower; however, no additional changes are identified.

The structural changes are also stable with moderate LA dilation and intact systolic function. Mild MR and trace TR are unchanged, and no additional issues have developed.

While this is certainly good news so far, we must remember that this tends to be a progressive deteriorating condition with secondary cardiac enlargement developing as the bradycardia goes on without correction. Referral is still recommended to discuss pacemaker implementation; however, if this is declined serial monitoring is advised. Continue medications as prescribed with no obvious additional medications necessary at this time.

Prognosis is guarded long-term and there is certainly risk for collapse and sudden death in this case.

The BP is severely elevated, although the patient was notably stressed. Consider reassess this reading considering that Proin may be exacerbating elevated systemic pressures, an alternative, such as Incurin may be reasonable.

RECOMMENDATIONS

- Recommend referral as discussed previously.
- Continue Pimobendan 0.25-0.3mg/kg PO q12h.
- Reassess BP as discussed.
- Consider alternative to Proin if indicated.
- Consider humane euthanasia if lethargy/syncope develops and affects QOL and/or CHF develops.
- Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.
- Activity restriction is advised.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Anesthesia should be avoided at all costs.

PLAN

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

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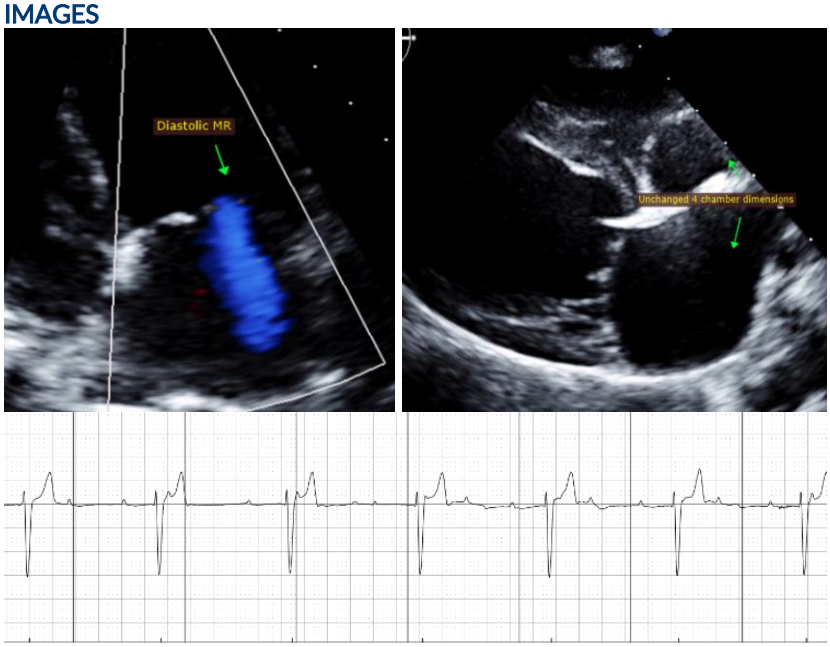
IMAGES



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