



PATIENT

Pearl Giannone

SPECIES

Canine

BREED

Mix

SEX

Female Spayed

AGE

8 years

WEIGHT

12lbs

INTERPRETED BY

Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

22232

DATE

12/1/21

PRESENTING CLINICAL SIGNS

History: Pearl was seen in August for dyspnea and was noted to be in heart failure. Started on Lasix, benazepril, spironolactone and pimobendan. She is still coughing but the cough has improved with the addition of medications. Had been on grain free food - now switched. Her activity level remains normal for her. CV/RESP: NSR, grade III/VI murmur with PMI left apical area, PSS, lung fields clear. BP: 100mmHg x 5.

-Current medications: 1) Pimobendan/vetmedin 1.25mg 1 tab three times a day 2) Benazepril 5mg 1 tab twice a day 3) Lasix/furosemide 12.5mg 1 tab twice a day 4) Spironolactone 25mg 1/2 tab twice a day *No sedation for study.

ECHOCARDIOGRAM FINDINGS

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

Left ventricle: Significant LV dilation with adequate myocardial function.

Left atrium: The left atrium is severely dilated.

Mitral valve: Mildly thickening of mitral valve leaflets 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. Trace aortic insufficiency.

Right ventricle: Mild RV dilation.

Right atrium: Mild right atrial dilation.

Tricuspid valve: The tricuspid valve appears mildly thickened, with trace tricuspid regurgitation.

Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. The MPA appears normal. Normal pulmonic outflow velocities with laminar flow. No PI.

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

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 90bpm.

2-Dimensional Measurements

Ao diam (cm)	1.2
LA diam (cm)	3.0
LA:Ao (Swe)	2.5
IVS thickness (cm)	0.64
LVID diastole (cm)	2.8
PW thickness (cm)	0.62
LVID systole (cm)	1.3
FS (%)	54

Doppler Measurements

PV Vmax (m/s)	0.9
AoV Vmax (m/s)	1.8
MR Vmax (m/s)	5.0
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

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

In light of the prior clinical signs and severity of disease on echocardiogram, the diagnosis of congestive heart failure is supported, and continued medications are warranted lifelong as below. It is worth mentioning that the patient's resting heart rate is relatively slow for a patient with severe disease. Causes of high vagal tone should be considered and it may be worth a brief exercise challenge to ensure the rate stimulates appropriately. Finally, the patient is mildly hypotensive, and the Benazepril dose should be decreased.

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



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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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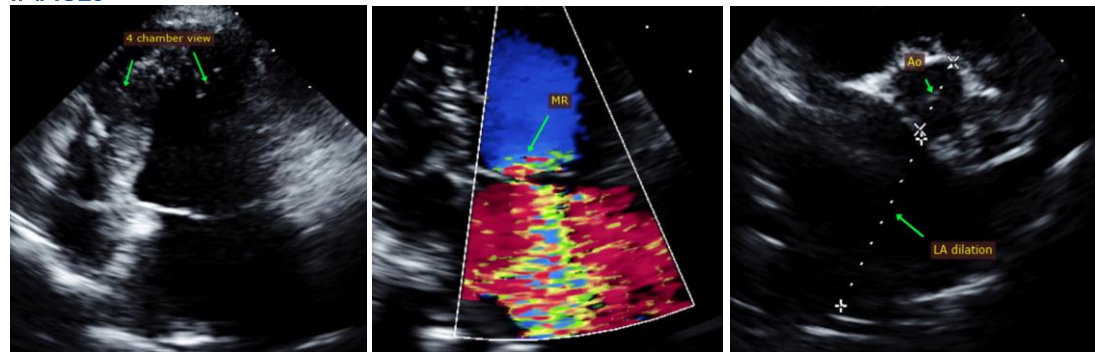
RECOMMENDATIONS

- Administer Lasix 1-2mg/kg PO q12h.
- Administer Spironolactone 1-2 mg/kg PO q 12h.
- Administer Pimobendan 0.25-0.3 mg/kg PO q12h.
- Decrease Benazepril to 2.5mg PO q12h
- Consider a brief exercise challenge to ensure the heart rate stimulates appropriately.
- 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.

PLAN

- Monitor renal values and BP every 3-4 months.
- 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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Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)