



**PATIENT**

Nugget Coughlan

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Female Spayed

**AGE**

12 years

**WEIGHT**

13lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDMS

**HOSPITAL NAME**

Barnstable Veterinary  
Hospital

**REFERRING VET**

Dr. Ware

**INVOICE**

26921

**DATE**

10/17/22

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. History chronic valvular disease- Stage B1. Currently has developed an intermittent cough. BP: 160mmHg.

-Pertinent previous echo findings (4-25-22 MML): LA 2.2 cm, LA:Ao 1.5, LV 2.8 cm, mild LAE, mild LVE, moderate MR, mild-moderate TR(3.0m/s, 36 mmHg), mild pulmonary hypertension.

**ECHOCARDIOGRAM FINDINGS**

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

**Left ventricle:** The LV diameter is mildly increased with adequate myocardial function. LV wall thicknesses are normal.

**Left atrium:** The left atrium is moderately enlarged.

**Mitral valve:** The mitral valve is diffusely thickened with significant prolapse into the left atrial lumen. Moderate to severe 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 thickened with septal prolapse and mild to moderate 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.

**Heart rhythm:** ECG reveals a sinus rhythm with an average HR of 140bpm.

**2-Dimensional Measurements**

Ao diam (cm)	1.4
LA diam (cm)	2.5
LA:Ao (Swe)	1.65
IVS thickness (cm)	0.7
LVID diastole (cm)	3.1
PW thickness (cm)	0.7
LVID systole (cm)	1.3
FS (%)	54

**Doppler Measurements**

PV Vmax (m/s)	0.63
AoV Vmax (m/s)	0.94
MR Vmax (m/s)	6.0
TR Vmax (m/s)	3.0
TR PG (mmHg)	36

**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease persists with evidence continued progression. Quantitatively the MR is increased with increasing left heart dimensions. The right heart disease appears stable with unchanged mild pulmonary hypertension. No additional issues are noted in this study.

Given these findings, recommend Pimobendan at this time as below. Prognosis is guarded long-term with risk for progression in the future.



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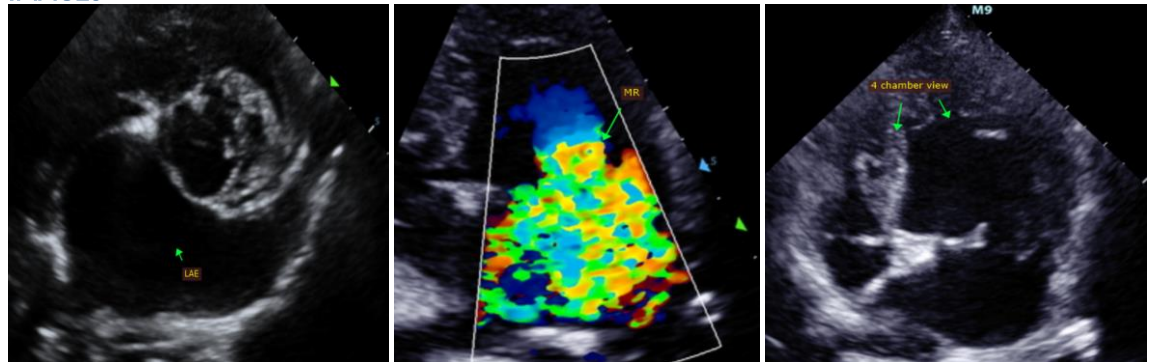
**RECOMMENDATIONS**

- Institute Pimobendan 0.3mg/kg PO q12h.
- Consider CXR and/or Hydrocodone for reported cough.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Once on the medication for 3-5 days, anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are 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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