



**PATIENT**

Benny Arnold

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Male Neutered

**AGE**

12 years

**WEIGHT**

9lbs

**PRESENTING CLINICAL SIGNS**

History: New patient. Came for 2nd opinion on grade IV/VI heart murmur and to have echocardiogram done before anesthesia for dental procedure. BP: 120, 125, 127mmHg.

**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 normal.

**Mitral valve:** The mitral valve is diffusely thickened with minimal 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.

**Right atrium:** Normal RA dimension.

**Tricuspid valve:** The tricuspid valve appears normal with mild tricuspid regurgitation. Velocity consistent with early 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 130bpm.

**2-Dimensional Measurements**

Ao diam (cm)	1.3
LA diam (cm)	1.4
LA:Ao (Swe)	1.1
IVS thickness (cm)	0.6
LVID diastole (cm)	2.0
PW thickness (cm)	0.6
LVID systole (cm)	0.8
FS (%)	60

**Doppler Measurements**

PV Vmax (m/s)	0.74
AoV Vmax (m/s)	1.3
MR Vmax (m/s)	6.0
TR Vmax (m/s)	3.1
TR PG (mmHg)	38

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING**

**PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Nolfok County  
Veterinary Service

**REFERRING VET**

Dr. McCabe

**INVOICE**

27786

**DATE**

12/2/22

**INTERPRETATION OF THE FINDINGS**

The cause of the murmur is chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. Early pulmonary hypertension is noted, which should be monitored in this predisposed breed. No additional issues are identified.

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

**RECOMMENDATIONS**

- In an asymptomatic dog without significant left atrial enlargement, no cardiac medications are clearly 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



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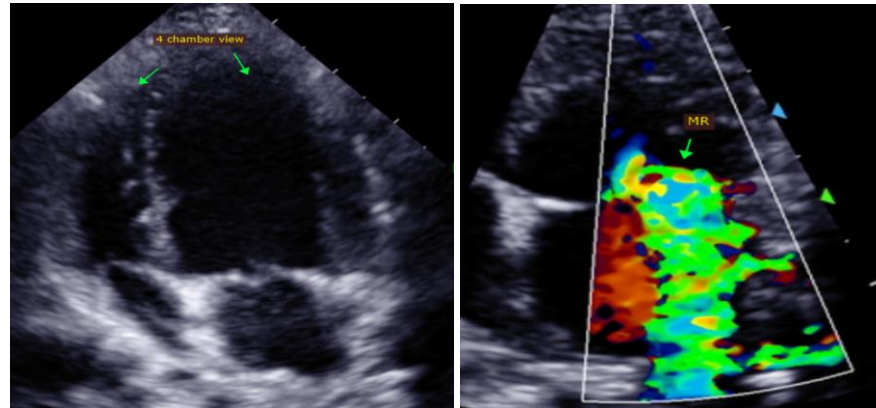
gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine 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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