



PATIENT

Tucker Cicco

SPECIES

Canine

BREED

Havanese

SEX

Male Neutered

AGE

15 years

WEIGHT

15.7lbs

PRESENTING CLINICAL SIGNS

History: Presents for worsening, non-productive, cough. New grade III-IV/VI heart murmur. No cough elicited on tracheal palpation. BP: 140mmHg.

ECHOCARDIOGRAM FINDINGS

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

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

Left atrium: The left atrium is severely dilated.

Mitral valve: The mitral valve is diffusely thickened 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. Mild to moderate aortic insufficiency.

Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.

Right atrium: Mildly dilated RA.

Tricuspid valve: The tricuspid valve appears mildly thickened with mild tricuspid regurgitation; normal velocity.

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 160bpm.

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING

PERFORMED BY

Eduardo Rodriguez
III, RCS

HOSPITAL NAME

Norfolk County
Veterinary Service

REFERRING VET

Dr. Ragon

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DATE

9/1/22

2-Dimensional Measurements

Ao diam (cm)	1.4
LA diam (cm)	2.7
LA:Ao (Swe)	1.95
IVS thickness (cm)	0.6
LVID diastole (cm)	3.6
PW thickness (cm)	0.6
LVID systole (cm)	2.1
FS (%)	43

Doppler Measurements

PV Vmax (m/s)	0.63
AoV Vmax (m/s)	1.5
MR Vmax (m/s)	5.2
TR Vmax (m/s)	2.4
TR PG (mmHg)	23

INTERPRETATION OF THE FINDINGS

The murmur is due to chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. Severe left atrial and ventricular enlargement indicate the risk for spontaneous congestive heart failure is elevated. A significant aortic leak is noted; however, the reported BP is reasonable. No obvious additional issues such as systolic dysfunction is noted.

A cough in this patient with severe heart disease is likely multi-factorial in origin, including mainstem bronchi compression and/or potentially some degree of upper or lower airway disease. Early CHF/pulmonary edema should also be considered; however, this is less likely, given the chronic history. This breed is highly predisposed to primary airway disease, and this should also be considered. Regardless of symptom, recommend institute cardiac supportive medications including a weak diuretic (spironolactone) and advise close monitoring at home for need for Lasix therapy. Pending response, cough suppression (up



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to q4-6 hours) may also be helpful for mechanical cough. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.

SPECIES

Canine

Long term prognosis is guarded with risk for progression to CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

RECOMMENDATIONS

BREED

Havanese

- Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.
- Institute Pimobendan 0.3mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Consider hydrocodone with homatropine for QOL (0.2-0.4mg/kg PO up to q4-6 hours PRN for cough; available in 5/1.5mg tabs and 5mg/5ml liquid suspension).
- A renal panel is recommended in 1-2 weeks, then every 3-4 months lifelong.
- 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.
- Monitor for development of a worsening cough, labored breathing, exercise intolerance or collapse episodes.

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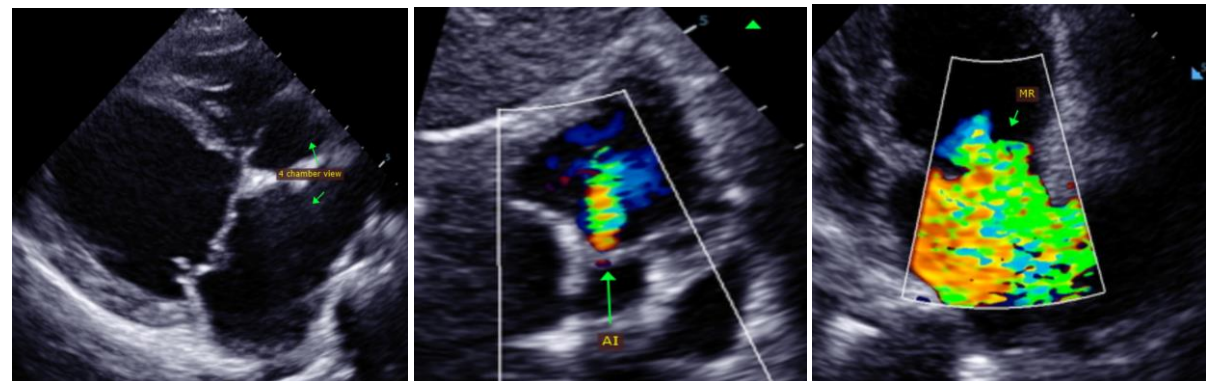
PLAN

- A recheck echocardiogram is recommended in 4-6 months to screen for progression, sooner if clinical signs arise.

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IMAGES



IMAGING PERFORMED BY

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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.

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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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