



PATIENT

Thor Pac

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Male Neutered

AGE

10 years

WEIGHT

15.5lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING

PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Mass Veterinary
Services

REFERRING VET

Dr. Masloski

INVOICE

25950

DATE

8/23/22

PRESENTING CLINICAL SIGNS

History: Thor was noted to have a heart murmur in October. Chest films taken at that time revealed cardiomegaly, compression of the main stem bronchus as well as some perihilar edema. Started on pimobendan, Lasix and enalapril. His signs improved - He is eating well with normal activity. Coughs when excited. On exam: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 140-150mmHg. Current medications: 1) Pimobendan/vetmedin 1.25mg 1.5 tabs twice a day 2) Enalapril 5mg 1 tab daily 3) Lasix/furosemide 20mg 3/4 tab twice a day 4) Spironolactone 25mg 1/2 tab twice a day 5) Apoquel 5.4mg 1/2 tab daily---not at this time *Sedated with propofol for study.

ECHOCARDIOGRAM FINDINGS

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

Left ventricle: Significant LV dilation with hyperdynamic myocardial function.

Left atrium: The left atrium is severely dilated.

Mitral valve: Diffuse thickening of mitral valve leaflets with 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: Mild RV dilation.

Right atrium: Mild right atrial dilation.

Tricuspid valve: The tricuspid valve appears thickened, with mild tricuspid regurgitation. Normal velocity.

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 160bpm.

2-Dimensional Measurements

Ao diam (cm)	1.3
LA diam (cm)	3.4
LA:Ao (Swe)	2.6
IVS thickness (cm)	0.6
LVID diastole (cm)	3.4
PW thickness (cm)	0.6
LVID systole (cm)	1.6
FS (%)	53

Doppler Measurements

PV Vmax (m/s)	0.7
AoV Vmax (m/s)	1.7
MR Vmax (m/s)	4.8
TR Vmax (m/s)	2.5
TR PG (mmHg)	25

INTERPRETATION OF THE FINDINGS

The cause of the murmur is chronic degenerative valve disease causing severe mitral and mild 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 clinical signs, chest radiographs and severity of disease on echocardiogram, the diagnosis of congestive heart failure is supported, and continued medications are warranted lifelong as below. Note medication changes below.

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.

RECOMMENDATIONS

- SPECIES** Canine
- Administer Lasix/furosemide 1-2mg/kg PO q12h.
 - Administer Spironolactone 1-2 mg/kg PO q 12h.
 - Administer Pimobendan 0.25-0.3 mg/kg PO q12h.
 - Administer ACE-I 0.5mg/kg PO q12h.
- BREED** Chihuahua Mix
- 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.
- SEX** Male Neutered
- 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.
- AGE** 10 years
- Elective anesthesia is not advised.
 - Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.

PLAN

- WEIGHT** 15.5lbs
- Monitor renal values and BP every 3-4 months lifelong.
 - 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.

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Pet Animal Ultrasound Service (4paus.com)