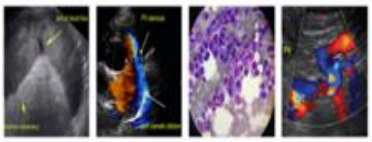
Mass Veterinary Services



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PATIENT
Max Madru

SPECIES
Canine

BREED
Dachshund

SEX
Male Neutered

AGE
8 years

WEIGHT
20lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
23778

DATE
4/20/22

PRESENTING CLINICAL SIGNS

History: Max saw rDVM earlier this month for coughing. Chest films revealed cardiomegaly. He was started on Lasix. He had rechecked labs 2 weeks later and was then started on pimobendan and enalapril. He continues to cough a few times a day with some occasional labored breathing noted. He has been PU/PD with some urinary accidents noted while he is sleeping. Max is eating well with normal activity level. On exam today: NSR, grade III/VI murmur with PMI left apical area, PSS, lung fields clear. BP: 90mmHg x 5. Medications: 1) Lasix/furosemide 12.5mg 2 tabs twice a day 2) Pimobendan/vetmedin 5mg 1/2 tab twice a day 3) Enalapril 5mg 1-tab daily Plan: 1) echocardiogram 2) discontinue enalapril for now *Sedated with propofol for study.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: Mild LV dilation with hyperdynamic function. LV wall thicknesses are normal.
Left atrium: The left atrium is severely enlarged.
Mitral valve: Diffuse thickening of mitral valve leaflets (anterior> posterior) with no prolapse into the lumen. 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.
Right ventricle: Normal RV.
Right atrium: Normal right atrium.
Tricuspid valve: The tricuspid valve appears mildly thickened, with mild tricuspid regurgitation. Normal velocity.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal with normal pulmonic outflow velocity. No pulmonic insufficiency.
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)	1.5
LA diam (cm)	3.8
LA:Ao (Swe)	2.5
IVS thickness (cm)	0.7
LVID diastole (cm)	3.9
PW thickness (cm)	0.7
LVID systole (cm)	2.5
FS (%)	36

Doppler Measurements

PV Vmax (m/s)	0.6
AoV Vmax (m/s)	1.1
MR Vmax (m/s)	5.2
TR Vmax (m/s)	2.2
TR PG (mmHg)	20

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. Severe LA dilation is noted, and there is certainly risk for spontaneous congestive heart failure going forward. Mild TR is also noted, without evidence of pulmonary hypertension. No additional issues such as systolic dysfunction is identified.

A cough in this patient is concerning for CHF; however, the CXR results do not mention an infiltrate and it is noted that the patient is coughing despite diuretic therapy. This likely indicates a mechanical or respiratory origin; however, continuing low dose Lasix is reasonable as below. Additional cardiac support is recommended independent of

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symptoms as below and Hydrocodone can be used if needed for quality of life in the face of normal breathing rates. Careful discussion with the owner on monitoring of breathing rates is the best way to determine a mechanical cough from recurrent CHF in the future.

The average survival of canine patients with diagnosed with active pulmonary edema is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future. Monitoring of renal values is recommended lifelong.

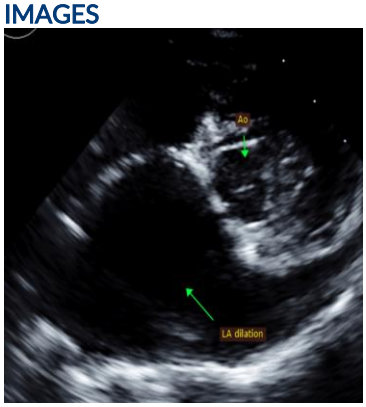
RECOMMENDATIONS

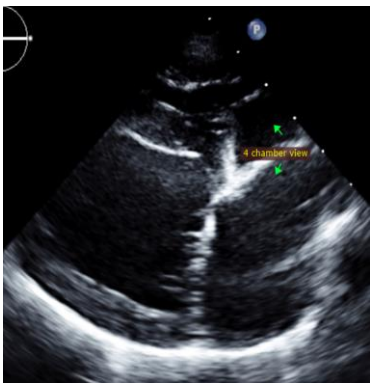
- Continue low dose Lasix lifelong (6.25mg PO q12h).
- Institute Spironolactone, 1-2mg/kg PO q12h.
- Institute Pimobendan 0.2-0.3mg/kg PO q12h.
- Discontinue ACE-I
- Utilize Hydrocodone if needed, 0.2 – 0.4 mg/kg PO up to q4-6 hours PRN for cough (available in 5/1.5mg tablets or 5mg/5ml solution). Start with q6 hours and wean to lowest effective dosage.
- Elective anesthesia is not advised.
- Monitor for development of a cough, collapse episodes, significant lethargy in the future.
- Monitoring of sleeping breathing rates is recommended best way to screen for CHF in the future.

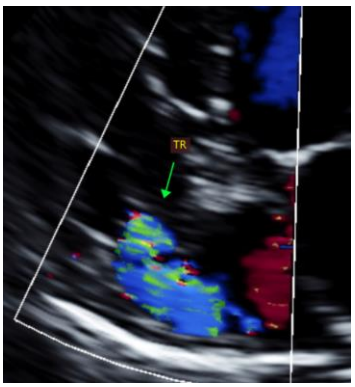
PLAN

- Monitor renal values/BP in 1-2 weeks and then every 3-4 months on medications. If BP is >130mmHg, reinstitute ACE-I 0.5mg/kg PO q12h.
- A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise/persist.

IMAGES







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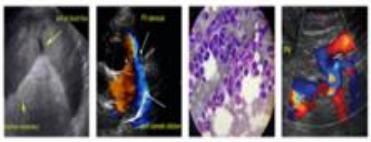

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)