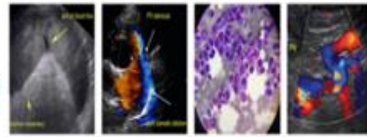
Mass Veterinary Services



SonoPath
Clinical Sonography & Telecytology
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1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Binny Rosario

SPECIES
Canine

BREED
Dachshund

SEX
Male Intact

AGE
13 years

WEIGHT
23.38lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
25293

DATE
7/13/22

PRESENTING CLINICAL SIGNS

History: Binny was seen for hyporexia with some pitting edema in May at primary vet. Noted to be in congestive heart failure with bicavity effusion (modified transudate). He was started on pimobendan, Lasix, sildenafil, Plavix at that time. Today's presentation: He continues to have labored breathing and will cough after eating. His appetite has improved since starting medications. No collapse episodes but does have exercise intolerance. On exam: NSR, grade V/VI murmur radiating to right with palpable thrill, PSS, lung fields clear. BP: 170 mmHg x 4. Current medications: 1) Pimobendan/vetmedin 2.5mg 1 tab three times a day 2) Lasix/furosemide 50mg 1/2 tab three times a day 3) Sildenafil 20mg 1 tab three times a day 4) Plavix/clopidogrel 1/2 tab daily ****has been getting Pimobendan, Lasix, sildenafil twice a day Today's Plan: 1) echocardiogram 2) blood for CBC, chem, TT4 3) abdominocentesis---removed 400mls fluid 4) give Lasix 30mg IV 5) EKG 6) stop the Plavix/clopidogrel.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 160bpm with a largely regular rhythm. P for every QRS complex and vice versa. P and QRS morphologies are positive. Isolated APCs throughout; 2 in a one-minute tracing. No ventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with isolated APCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is 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 **no** prolapse into the left atrial lumen. Severe anterior-directed mitral regurgitation with a normal velocity.
Aortic valve/Aorta: The aortic valve is normal. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.
Right ventricle: The right ventricle is mildly enlarged.
Right atrium: Moderate RA dilation.
Tricuspid valve: The tricuspid valve appears mildly thickened with moderate tricuspid regurgitation; velocity consistent with mild to moderate pulmonary arterial hypertension.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow. The MPA and branches are minimally dilated.
Pericardium/other: Small volume pericardial effusion noted. No pleural effusion. Ascites seen on subcostal imaging without significant hepatic congestion. No obvious cardiac masses.

2-Dimensional Measurements

Ao diam (cm)	1.8
LA diam (cm)	4.4
LA:Ao (Swe)	2.4
IVS thickness (cm)	0.82
LVID diastole (cm)	4.0
PW thickness (cm)	0.82
LVID systole (cm)	2.0
FS (%)	50

Doppler Measurements

PV Vmax (m/s)	0.74
AoV Vmax (m/s)	1.6
MR Vmax (m/s)	5.7
TR Vmax (m/s)	3.5
TR PG (mmHg)	50

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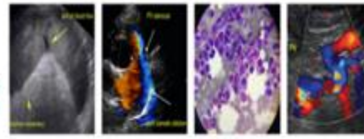

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INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing severe mitral and moderate tricuspid regurgitation. Significant left heart enlargement indicates the risk for congestive heart failure is elevated. There is mild to moderate pulmonary hypertension present, which puts the patient at risk for right-sided issues as well. No additional issues are identified.

Pericardial and peritoneal effusion persists in this study. What is unusual in this case is the hepatic vasculature does not appear particularly congested. An ancillary contributing issue should also be considered. Cytology of the effusion may be beneficial, simply to ensure no obvious additional pathology is present. Additionally, advanced imaging such as a thoracic CT scan and/or abdominal ultrasound may be warranted. All that being said, there is certainly enough disease seen here to explain right-sided CHF and simple monitoring is a reasonable approach.

Given these findings, continued cardiac support is recommended as below with returning the dosages to TID as was previously recommended. Plavix is of little known use in these cases and is likely unnecessary. Finally, Spironolactone should certainly be added for long-term benefit going forward.

The ECG shows occasional APCs. These are no doubt due to significant structural disease and stress in this case. Isolated APCs are of little clinical concern and no therapy is warranted.

Mild activity restriction is advised.

The prognosis is poor long term, with a predicted survival time of <6 months. Patient will always be at high risk for recurrent biventricular CHF, LA tear, progressive cough and/or malignant arrhythmias/sudden death in the future.

RECOMMENDATIONS

- Return Lasix, Sildenafil and Pimobendan to q8h dosing.
- Institute Spironolactone to 1-2mg/kg PO q12h.
- No indication for Plavix from a cardiac standpoint.
- Consider advanced imaging and evaluation if desired as discussed.
- Consider Hydrocodone for quality of life.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Elective anesthesia is not advised.
- Strict activity restriction.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

- Recheck renal values in 1-2 weeks, then every 3-4 months on diuretic therapy.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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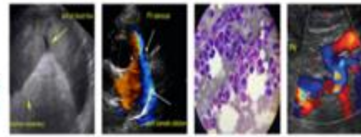

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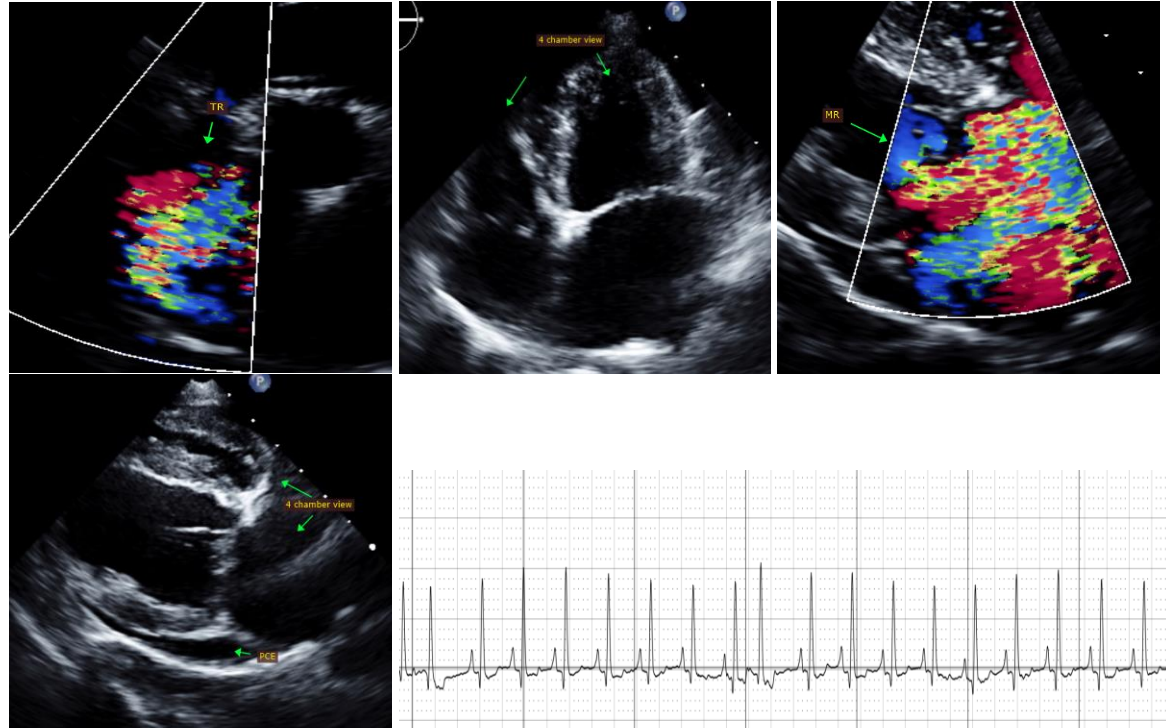
IMAGES



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.

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)