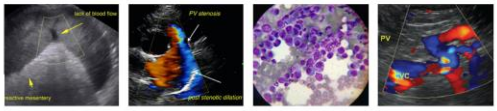
Mass Veterinary Specialty Services
1-413-734-1292



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
TJ Le

SPECIES
Canine

BREED
Shih Tzu Mix

SEX
Male Neutered

AGE
13 years

WEIGHT
17.1lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Specialty Services

REFERRING VET
Dr. Masloski

INVOICE
20838

DATE
9/1/21

PRESENTING CLINICAL SIGNS

History: TJ has a history of heart murmur since January, 2020. Seen in early July for coughing with chest films revealing a cardiomegaly, mainstem bronchus compression and alveolar pattern in the perihilar area as well as the cranial aspect of his caudal lung fields. Started on lasix and pimobendan. Coughing at home with a poor appetite noted the past 5 days. His activity level remains normal. No respiratory issues. CV/RESP: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS lung fields clear. BP: 160mmHg x 3.
-Current medications: 1) Pimobendan/vetmedin 5g 1/2 tab twice a day 2) Lasix/furosemide 50mg 1/2 tab twice a day (6.5mg/kg/day) *No sedation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is increased with hyperdynamic function. LV wall thicknesses are normal.
Left atrium: The left atrium is severely dilated.
Mitral valve: Diffuse mitral valve leaflet thickening with a suspect ruptured chordae tendinae visualized. Severe mitral regurgitation with a borderline elevated velocity.
Aortic valve/Aorta: The aortic valve appears normal with normal outflow velocity; laminar flow. No aortic insufficiency.
Right ventricle: Mild RV enlargement.
Right atrium: Mild RA enlargement.
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 110bpm.

2-Dimensional Measurements

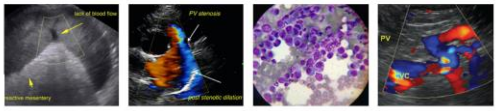
Ao diam (cm)	1.6
LA diam (cm)	3.6
LA:Ao (Swe)	2.3
IVS thickness (cm)	0.7
LVID diastole (cm)	3.9
PW thickness (cm)	0.7
LVID systole (cm)	1.8
FS (%)	54

Doppler Measurements

PV Vmax (m/s)	0.66
AoV Vmax (m/s)	1.2
MR Vmax (m/s)	6.0
TR Vmax (m/s)	2.6
TR PG (mmHg)	27

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. Severe LA dilation is present, with what appears to be a ruptured chord. This likely explains recent decompensation into CHF. The right heart is mildly dilated, although pulmonary pressures appear normal. No additional concurrent issues such as systolic dysfunction are identified.



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Given these findings, full lifelong cardiac supportive medications are indicated as below. The finding of a ruptured chord while potentially causing rapid progression initially, doesn't necessarily change long-term prognosis. That being said once a patient is on Lasix therapy prognosis is guarded to poor long term, with an average survival time of 8-12 months. Unfortunately, the patient will always be at risk for recurrent CHF, development of arrhythmias/left atrial tear, syncope and/or sudden death in the future.

Recent inappetence and coughing is highly concerning for recurrent CHF; however, other possibilities should be considered and screening chest radiographs are highly recommended. The patient is on quite a high dose of Lasix already and azotemia should be ruled out as a contributing factor. Given the high dose I would certainly not increase the Lasix unless there is radiographic evidence of recurrent edema in the future. If the cough is deemed to be due to mechanical or respiratory causes, a cautious Lasix dose decrease is recommended with institution of spironolactone. Follow-up visit advised based upon further diagnostics.

RECOMMENDATIONS

- Screening chest radiographs are highly recommended. If recurrent CHF is identified a further Lasix dose increase must be instituted. If no CHF is present consider hydrocodone for quality of life.
- If the patient is significantly azotemic Lasix should be decreased considerably.
- If azotemia is mild or not present and no CHF is suspected, decrease Lasix to 12.5 mg by mouth every 12 hours.
- Continue Pimobendan as prescribed.
- Once patient is feeling well at home and renal values are deemed reasonable, institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.
- Once patient is feeling well at home and renal values are deemed reasonable, institute Spironolactone 1-2mg/kg PO q12h.
- Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.
- If collapse episodes persist, consider an extended ECG and/or holter monitor.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Mild activity restriction is advised.
- Elective anesthesia is not advised.

PLAN

- A renal panel is recommended every 3-4 months lifelong.
- Recommend recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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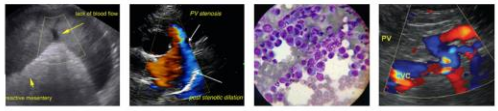

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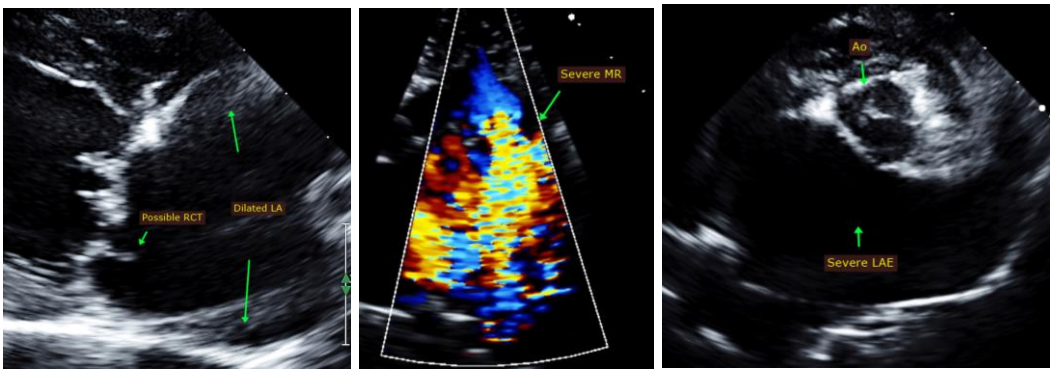
IMAGES



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)