



PATIENT

Panzer Smith

SPECIES

Canine

BREED

Mix

SEX

Male Neutered

AGE

13 years

WEIGHT

14.8lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

VCA Palmer

REFERRING VET

Dr. Haroules

INVOICE

30409

DATE

4/24/23

PRESENTING CLINICAL SIGNS

History: Grade IV/VI cardiac murmur. History elevated liver value. WBC 20,400, AST 69, ALT 912, ALP 8449, GGTP 234. Radiographs: mild left cardiomegaly. No evidence of CHF. On 1) Pimobendan 1.6mg/ml, 0.64mls BID, 2) Enalapril 2.5mg, 1.5t BID, 3) Prednisone 5mg/ml, 0.25mls SID, 4) Metronidazole 250mg, 1/4t BID. BP: 120, 118, 118mmHg.
-Previous echocardiogram (8-11-22 LA:Ao 2.20, LV 4.01cm, TR (2.62m/s).

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 moderately dilated.

Mitral valve: The mitral valve is diffusely thickened with evidence of a ruptured chord and flail anterior leaflet. Marked eccentric mitral regurgitation with a normal velocity.

Aortic valve/Aorta: The aortic valve appears thickened with borderline increased outflow velocity; laminar flow. No aortic insufficiency.

Right ventricle: Normal right ventricular diameter and morphology.

Right atrium: Normal RA dimension.

Tricuspid valve: The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Velocity consistent with early pulmonary hypertension.

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 140bpm.

2-Dimensional Measurements

Ao diam (cm)	1.6
LA diam (cm)	3.1
LA:Ao (Swe)	1.9
IVS thickness (cm)	0.7
LVID diastole (cm)	3.5
PW thickness (cm)	0.7
LVID systole (cm)	1.4
FS (%)	60

Doppler Measurements

PV Vmax (m/s)	0.6
AoV Vmax (m/s)	1.0
MR Vmax (m/s)	5.0
TR Vmax (m/s)	2.8
TR PG (mmHg)	32

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing marked mitral and mild tricuspid regurgitation. The LA is moderately dilated indicating relatively low risk for complication. That being said, a flail leaflet with a ruptured chord is visualized and the degree of MR is marked. This is not mentioned in the previous report description and may be a chronic or acute finding. The former is suspected given a stable asymptomatic patient. Mild pulmonary hypertension has develop; however, no other issues are identified.

Given these findings, consider addition of Spironolactone at this time as below, even without reported clinical sings. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (late B2). Unfortunately, the patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.



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RECOMMENDATIONS

- Continue Pimobendan 0.3mg/kg PO q12h.
- Continue ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.
- 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.
- 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, as there is high risk for complication. If necessary, cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, iso or sevoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 cage. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Moderate IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

PLAN

- A renal panel is recommended in 1-2 weeks, then 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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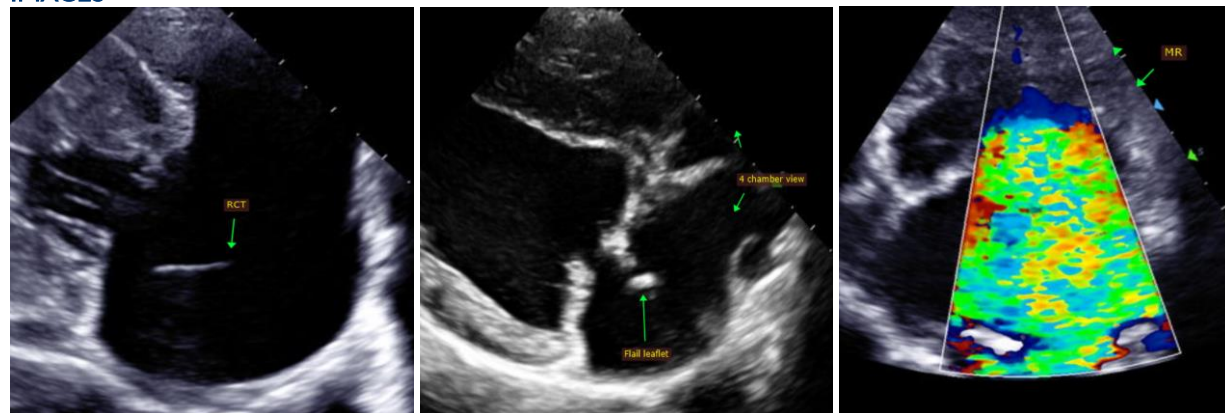
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IMAGES



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