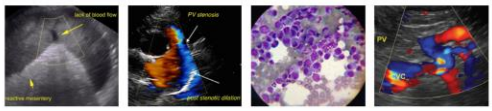
PAUS
Pet Animal Ultrasound Service
4paus.com 781-635-5677



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

PATIENT
Molly Taylor

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
20 years

WEIGHT
8.2lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Wignall Animal Hospital

REFERRING VET
Dr. Fischer

INVOICE
24563

DATE
6/3/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. History of HCM with marked LAE noted on prior echocardiogram 7/19/21 (MML). S/P radioactive iodine early 2021 for hyperthyroidism. She should be on clopidogrel and Pimobendan, but owner is unable to give - causes vomiting despite trying compounded combination options (chew treat, transdermal, etc.). Presented this week for acute onset dyspnea that quickly resolved. Full body rads unremarkable. Gallop rhythm noted. History kidney disease. Having bi-cavity ultrasound exams. BP: 110mmHg. Scant ascites noted on exam.

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, 20mm/mV. The average heart rate is 300bpm with a regular rhythm. P waves cannot be visualized due to tachycardia. The QRS morphology is most consistent with supraventricular origin. No VPCs or other issues are observed.
ECG diagnosis: Rapid SVT; suspect atrial tachycardia.

ECHOCARDIOGRAM FINDINGS *limited exam due to instability/tachycardia.

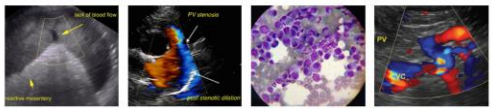
2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is decreased with mild myocardial dysfunction. The LV wall thicknesses are asymmetric with regions of moderate hypertrophy and regions of thinning. There is a diffusely hyperechoic endocardium consistent with mild fibrosis. The papillary muscles are mildly remodeled and significantly hypertrophied. The endocardium appears mildly remodeled. False tendons.
Left atrium: The left atrium is markedly dilated with a horizontal component. Spontaneous contrast seen within the left auricle.
Mitral valve: The mitral valve is normal in structure and mobility. No obvious systolic anterior motion is seen. Mild eccentric mitral regurgitation.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. No aortic insufficiency.
Right ventricle: Mild RV enlargement.
Right atrium: The right atrium is severely dilated.
Tricuspid valve: The tricuspid valve appears normal with moderate tricuspid regurgitation. Normal velocity.
Pulmonary valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency.
Pericardium/other: Scant pericardial and no obvious pleural effusion noted. No obvious cardiac masses.

2-Dimensional Measurements

Ao diam (cm)	0.9
LA diam (cm)	2.1
LA:Ao (Swe)	2.3
IVS thickness (cm)	0.69
LVID diastole (cm)	0.91
PW thickness (cm)	0.75
LVID systole (cm)	0.63
FS (%)	33

Doppler Measurements

PV Vmax (m/s)	NM
AoV Vmax (m/s)	NM
MR Vmax (m/s)	NA
TR Vmax (m/s)	2.3
TR PG (mmHg)	23



PATIENT
Molly Taylor

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
20 years

WEIGHT
8.2lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Wignall Animal Hospital

REFERRING VET
Dr. Fischer

INVOICE
24563

DATE
6/3/22

INTERPRETATION OF THE FINDINGS

Compared to the prior study, there is progression in both left atrial and right atrial enlargement. Both atria are markedly dilated, likely secondary to active marked tachycardia. The LV is similar to previous. The finding of scant pericardial and abdominal effusion are most consistent with tachycardia-induced cardiomyopathy secondary to the arrythmia.

The ECG confirms development of a rapid arrhythmia, which is most consistent with a paroxysmal supraventricular tachycardia (SVT). SVT implies a malignant foci within the dilated atrial tissue has begun to fire inappropriately, resulting in a HR of 300bpm. With a rapid arrhythmia, the patient will develop hypotension and active CHF, as is seen in this case. Hospitalization for conversion (IV diltiazem) and overnight supportive care/ECG monitoring is considered the gold standard as this patient is considered unstable. If this is declined, cautious use of oral anti-arrhythmics and supportive medications can be considered, however risk with this approach should be relayed to the owner. Rapid arrhythmias confer risk for fibrillation and sudden death, and even on medications this remains a possibility. Initiation of full cardiac supportive medications for CHF is recommended as below. If Pimobendan and Plavix were poorly tolerated, simple use of Lasix and rate control is recommended. It should be noted this is not ideal, as this patient is at high risk for a blood clot event.

The long-term prognosis is grave even with medications; however, our goal is to stabilize the patient and maintain a good quality of life for some time (weeks to months). If the patient cannot tolerate medical management of heart disease and/or QOL is suffering, humane euthanasia may have to be considered. There will always remain risk for episodes of CHF and development of blood clots in the future.

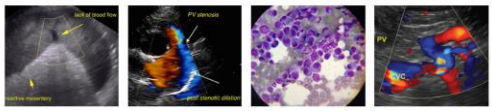
RECOMMENDATIONS

- Consider hospitalization for conversion (IV diltiazem), IV Lasix and overnight ECG monitoring. Once SVT is converted and the patient stabilized, discharge on Diltiazem 30mg tablets, give ¼ tab PO q8h, Lasix 1-2 mg/kg PO q12h.
- If hospitalization is declined, oral medications can be attempted as above. If patient is doing well after 3 days, recheck ECG/HR at that time. If patient further declines in the interim, hospitalization or euthanasia should be sought.
- Ideally Pimobendan and Clopidogrel would be utilized as previously recommended, once the situation is stabilized.
- Do not use an ACEI in this patient.

PLAN

- Recheck renal panel, HR, BP and clinical response in 1-2 weeks.
- Once stabilized, monitoring of sleeping breathing rates at home is recommended as the best way to screen for progression to CHF at home.
- Recheck echocardiogram/ECG in 4-6 months to assess for progressive issues.

PAUS
Pet Animal Ultrasound Service
4paus.com 781-635-5677



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

PATIENT
Molly Taylor

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
20 years

WEIGHT
8.2lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

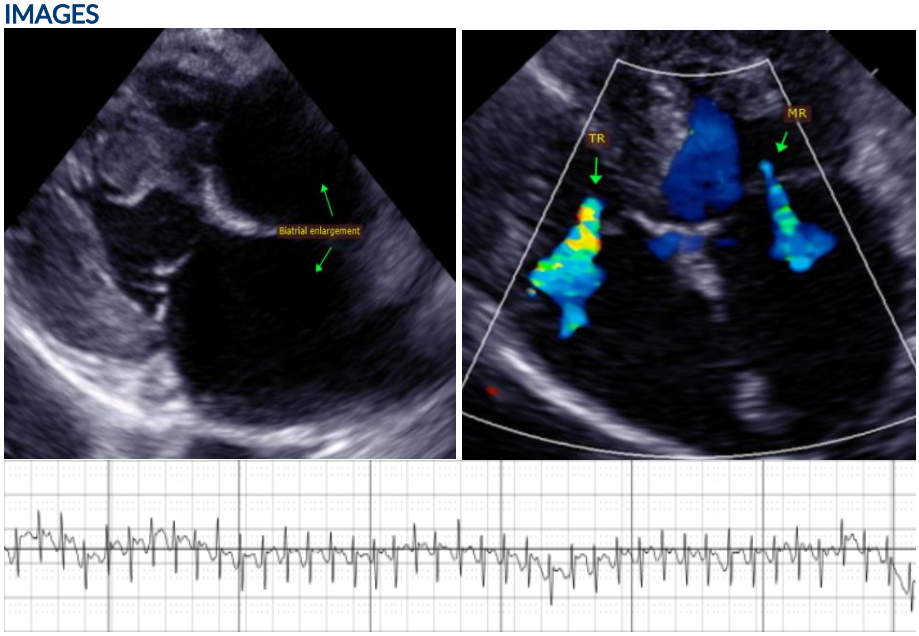
HOSPITAL NAME
Wignall Animal Hospital

REFERRING VET
Dr. Fischer

INVOICE
24563

DATE
6/3/22

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