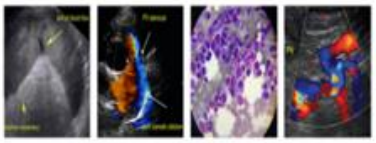
Mass Veterinary Services



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

PATIENT
Mamie Walting

SPECIES
Feline

BREED
DLH

SEX
Female Spayed

AGE
3 years

WEIGHT
5.31lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
32205

DATE
8/8/23

PRESENTING CLINICAL SIGNS

History: Mamie is referred to evaluate a heart murmur noted in May. She was adopted two weeks ago. The family reports that Mamie has been sleeping a great deal and has been a bit grumpy towards the other cat in the house. Mamie is eating well. She was vomiting when she was first adopted but that has stopped. She presently has no V/D/PU/PD. She has been coughing with some wheezing, sneezing and nasal discharge. On exam: NSR, grade IV/VI parasternal murmur, PSS, lung fields clear, compressible thorax, mm pink, moist, CRT<2. BP: 70mmHg (sedated). *Sedated with propofol for study.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: A large VSD (0.82cm) is identified with low velocity left to right flow (max: 2.8m/s). The LV diameter is normal with adequate myocardial function. Septal flattening in systole. LV wall thicknesses are borderline normal. False tendon. Hyperechoic papillary muscles.
Left atrium: The left atrium is moderately dilated. No obvious spontaneous contrast. Atypical continuous jet of flow can be seen entering the LA (see below). Suspect PFO.
Mitral valve: The mitral valve appears mildly elongated; no obvious abnormal motion. Trace mitral regurgitation.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. The aortic root is normal. Normal aortic outflow velocity. Trace aortic insufficiency.
Right ventricle: The RV is significantly enlarged with severe hypertrophy and remodeling.
Right atrium: Mild RA dilation.
Tricuspid valve: The tricuspid valve appears normal with trace tricuspid regurgitation.
Pulmonic valve/Pulmonary artery: The pulmonic valve is mildly thickened and doming, although flow through the region is essentially normal. The body of the MPA and branches are markedly dilated. Mild to moderate pulmonic insufficiency (max 3.1m/s).
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 150bpm.

2-Dimensional Measurements

Ao diam (cm)	0.9
LA diam (cm)	1.5
LA:Ao (Swe)	1.6
IVS thickness (cm)	0.56
LVID diastole (cm)	1.4
PW thickness (cm)	0.56
LVID systole (cm)	0.64
FS (%)	53

Doppler Measurements

PV Vmax (m/s)	1.8
AoV Vmax (m/s)	1.2
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

Complex congenital heart disease is present. The most significant findings include a large VSD with low velocity left to right flow and marked RV hypertrophy with MPA enlargement. No obvious cause for the right heart changes is seen and primary pulmonary hypertension is suspected. An extra-cardiac issue is not entirely ruled out. The VSD is large in dimension and shunting is low velocity due to increased RV pressures. The LA is moderately dilated, suggesting volume overload of the left heart is significant and puts the patient at risk for both right and left-sided failure. Of less concern, a small jet of flow can be seen entering the LA which is unusual, in addition to a patent foramen ovale. This

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patient would benefit from advanced imaging to confirm the abnormalities and provide a more concrete picture. Consider referral for a CT angiogram if able.

Even with the findings seen here, the benefits of medications at this juncture is unknown. Plavix would be reasonable due to biatrial enlargement, although difficult to administer. Sildenafil would be reasonable given reported respiratory signs and suspicion for elevated pulmonary pressures. CXR with a Radiologist review are strongly recommended to establish a baseline, evaluate pulmonary parenchyma and screen for additional issues.

Prognosis is guarded to poor long-term, as the patient will be at risk for right or left-sided CHF, development of malignant arrhythmias and/or sudden death in the future. Management of congenital disease (particularly with a large shunt) can be quite intensive going forward and referral to a local Cardiologist may be reasonable for continued management. Monitor blood volume lifelong to screen for hemoconcentration and need for phlebotomy.

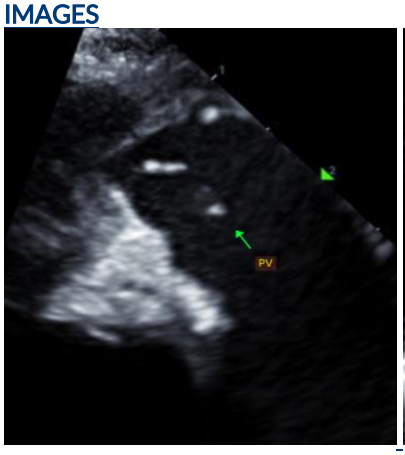
RECOMMENDATIONS

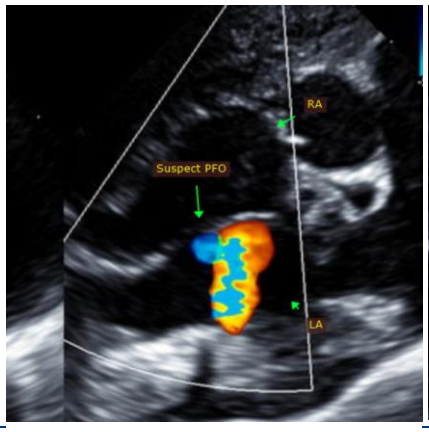
- Consider referral in this case for lifelong management, advanced imaging as discussed.
- 3 view CXR with a Radiologist review are recommended.
- If able/elected, institute Plavix 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety).
- If able, institute Sildenafil 1-2mg/kg Po q12h.
- Establish a baseline PCV and monitor q 8-12 months (sooner if clinical signs arise).
- Elective anesthesia is not advised.
- Monitor for any clinical evidence of cardiac compromise, including respiratory changes and/or signs of a blood clot event (paralysis, neurologic changes, etc.). Monitoring of sleeping breathing rates at home is recommended as the best way to screen for progression to CHF at home.
- Elective anesthesia, fluid or steroid therapy should be avoided lifelong as able.

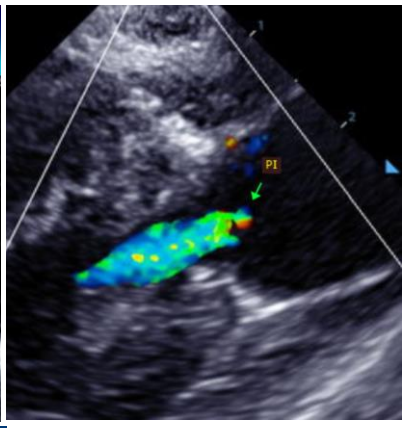
PLAN

A recheck echocardiogram is recommended in 6-12 months, sooner if clinical signs arise in the interim.

IMAGES







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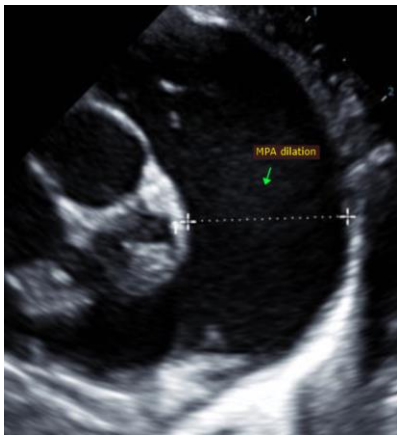

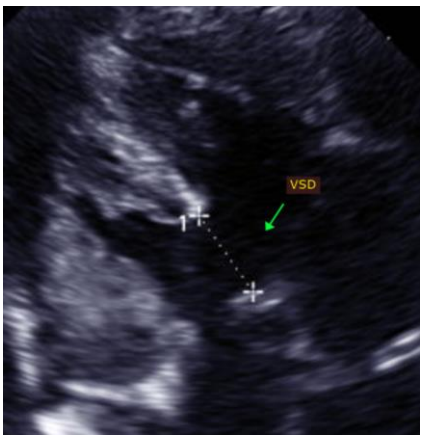

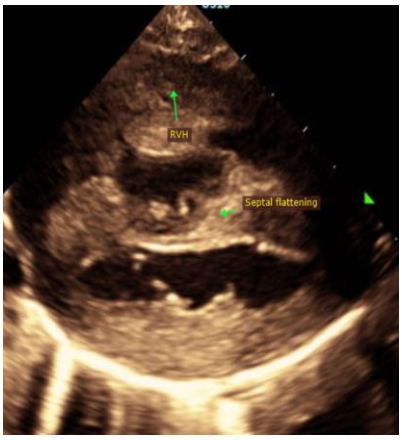

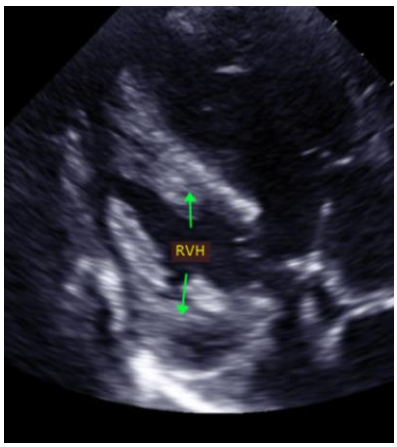

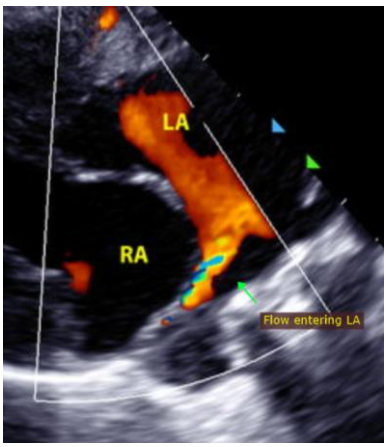

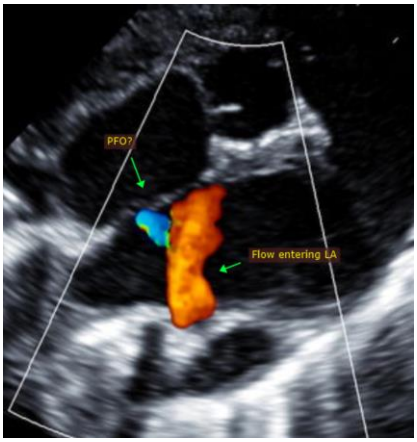

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)