SonoPath
Clinical Sonography & Telecytology
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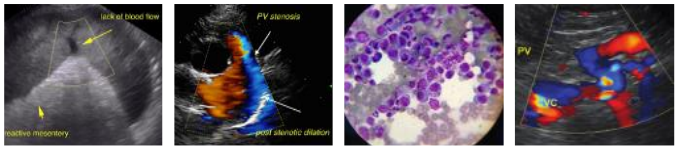


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Stella Nordmann

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
14 years

WEIGHT
6.9lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Kelly Romero, DVM

HOSPITAL NAME
FC Veterinary Emergency Hospital

REFERRING VET
Dr. Romero

INVOICE
25510

DATE
7/24/22

PRESENTING CLINICAL SIGNS

History: Was in litter box shortly before presentation. Fell over, limping on RF paw and could not walk. Trembling. Vomited in car on way to ER. No prior health concerns.
-Abnormal PE/Chem/CBC/UA Results: No murmur, but tachycardia and gallop rhythm suspected. HR300 at presentation. Increased respiratory rate too, but no sign of respiratory distress. RF - no abnormalities palpated and not cool to touch. Able to bear weight on limb now. Some coughing heard occasionally while in the hospital Blood pressure 140 systolic on doppler T4>8!! CBC unremarkable ALT 869, ALP 243 Thoracic radiographs: Valentine shaped heart and moderate peribronchiolar pattern throughout , rad review pending. Planning to start treatment with clopidogrel and methimazole

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mildly increased in dimension with remodeling of the endocardium. There is a diffusely hyperechoic endocardium consistent with fibrosis. There is mild papillary muscle remodeling. The left atrium is moderately enlarged. The right atrium is mild to moderately enlarged. The mitral valve is normal with normal mobility. Mild mitral regurgitation. The right ventricle appears normal. No evidence of systolic anterior motion. Blood flow through both the LVOT and RVOT is normal in velocity. Trace aortic insufficiency. Mild tricuspid regurgitation. Normal TR velocity. The pulmonary artery is normal. No pericardial or pleural effusions are visualized. No cardiac tumors seen.

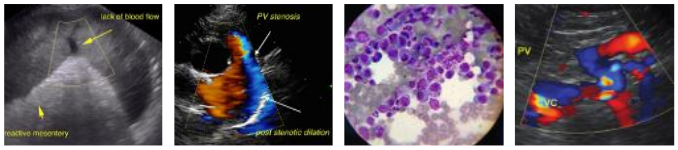
CARDIAC CHART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	3.12	NM	0.63	1.56	0.65	55	89
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE (Swe)** (Abbott)	**LA** 2D short axis Base view (cm) (Abbott)		**LVOT VEL** (m/s)	**RVOT VEL** (m/s)	**E max** (m/s)
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	>2.0	1.9	1.6		1.5	1.2	NM

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*
Adapted from June Boon, Veterinary Echocardiography,1998
Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Hypertrophic cardiomyopathy (HCM) is a rule out diagnosis once a patient is deemed normotensive and euthyroid. In this markedly hyperthyroid and tachycardiac cat, the finding of mild LV hypertrophy is likely secondary. Mild MR and TR also noted. Serial echocardiography will be necessary to determine progression and clinical relevance in the future once the thyroid/HR are controlled.



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The most concerning finding is biatrial dilation. This is likely due to chronic tachycardia (tachycardia-induced cardiomyopathy causing right-sided congestive signs); however, monitoring is advised. If this is the case, T4 control may resolve atrial dilation. Given these findings, consider atenolol in this case until the thyroid is well controlled, if the heart rate remains significant elevated (reassessment is advised). Prognosis is guarded until the situation is stabilized.

An exact cause of 4 limb issues is not clearly identified here. A thrombus is possible; however, the patient's thyroid status may also be to blame in light of the physical exam findings. If the patient is easily medicated, consider institution of Plavix at least until follow up is obtained. No obvious indication for diuretics at this time pending CXR review. Additionally assuming CHF is ruled out as a cause of the cough, a course of broad spectrum antibiotic therapy may be warranted (azithromycin or similar).

The risk for general anesthesia is elevated with atrial dilation, and heart rate stimulating drugs such as atropine, glycopyrrolate or ketamine should be avoided unless medically necessary. With this degree of remodeling and diastolic stiffening there is a significantly elevated risk for fluid overload in this patient if needed.

Monitor at home for any change in RR/RE, exercise intolerance, and/or signs of a blood clot going forward.

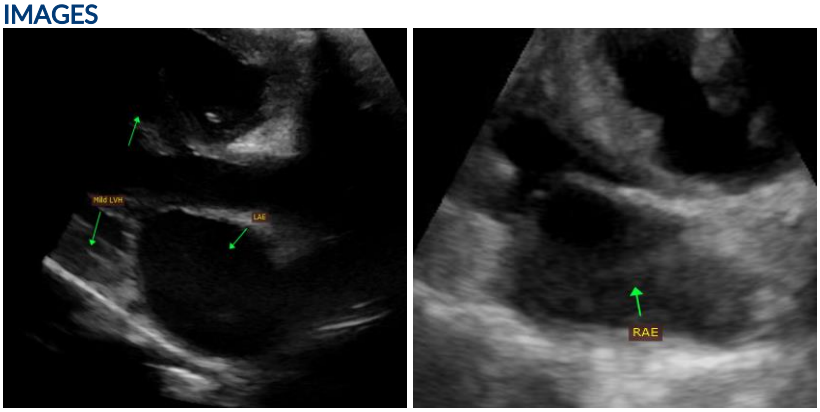
PLAN

Administer anti-coagulant Plavix/Clopidogrel 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety). Reassess heart rate, if persistently >200bpm, consider institute Atenolol until controlled. Give 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached. Pending CXR review, consider Lasix v azithromycin v other therapy.

Once thyroid is deemed well controlled, a brief screening of atrial dimensions is recommended if possible. If normalized, discontinue Plavix at that time. Additionally, wean atenolol and discontinue with careful monitoring of HR once thyroid is controlled.

Recommend recheck echocardiogram 6 months post-euthyroid status to assess for progression/regression.

IMAGES



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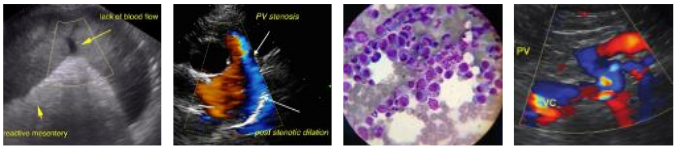

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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