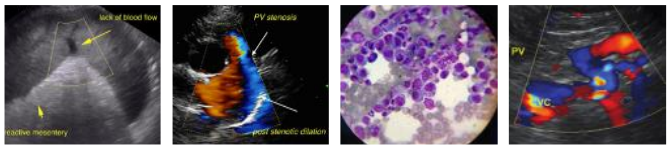
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Blackie Munn

SPECIES

Feline

BREED

DSH

SEX

Female

AGE

13 Years

WEIGHT

6.2 Pounds

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Bill McGee, DVM, DABVP

HOSPITAL NAME

Bridgeport AH, PLLC

REFERRING VET

Bill McGee, DVM, DABVP

INVOICE

17808

DATE

10/18/22

PRESENTING CLINICAL SIGNS

History: History of a recent hyperthyroid diagnosis and methimazole treatment beginning 2 months ago. Last night was in an e-clinic for dyspnea and dehydration. Radiographs at the e-clinic showed cardiomegaly (radiologist diagnosis). There is an elevated WBC and Blackie was started on ampicillin and iv fluids. Rapid respiratory rate and in distress upon presentation.

Abnormal PE/Chem/CBC/UA Results: Elevated WBC, T4- 7.6 ug/dl (0.8-4.7)

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	**BODY WEIGHT** (kg)	**HR** (BPM)	**IVSd** (cm)	**LVIDd** (cm)	**LVWd** (cm)	**FS** (%)	**EF** (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	--	NM	0.63	1.2	0.84	48	84
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE** (Sisson)	**LA** 2D 4-chamber long axis AS to FW (Sisson) (cm)		**LVOT VEL.** (m/s)	**RVOT VEL.** (m/s)	**IVRT** (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.45	1.25	--		--	--	NM

Adapted from June Boon,Veterinary Echocardiography,1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size. Smoke was noted in the left atrium in this patient, this is considered a prethrombotic state. If the patient is not in left sided congestive heart failure, even though concentric hypertrophy is present (it is fairly mild to moderate) with myocardial remodeling, this is likely secondary to the chronic hyperthyroid diagnosis. There is some systolic anterior motion of the mitral valve noted. Mitral insufficiency was noted. The **left ventricle** presented excessive free wall and septal thicknesses with hypertrophic thicknesses compared to normal for this species. Myocardial remodeling was noted in this patient. **Contractility** of the ventricular walls was considered excessive for this patient evidenced by the elevated fractional shortening measurement. The **left ventricular outflow** turbulence was noted in this patient. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated linear morphology. The **right ventricle** was of normal size with normal chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter. No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The **mediastinum** was free of masses in the visible window. The patient was significant tachycardic, which may be owing to uncontrolled hyperthyroidism. However, no evidence of volume overload was present.

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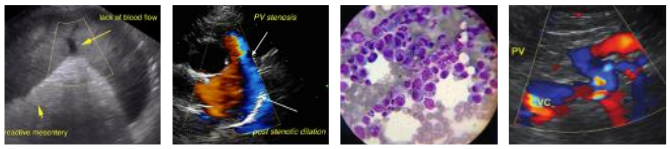

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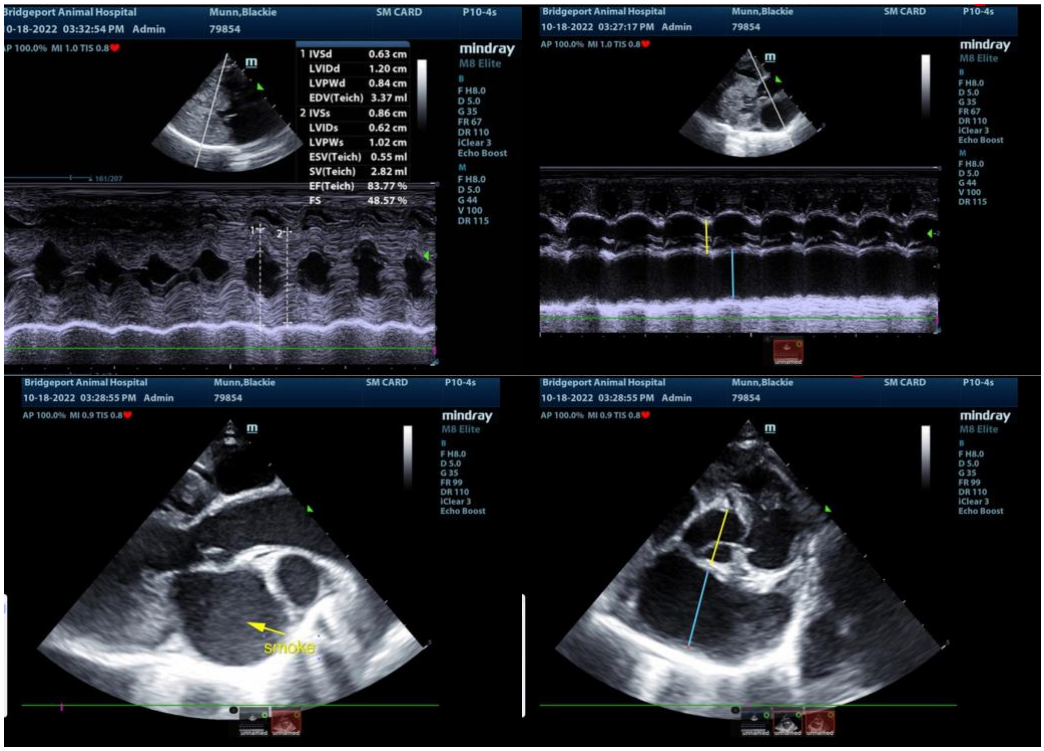
ULTRASONOGRAPHIC FINDINGS

- Compensated left ventricular hypertrophy phenotype, however thyrotoxic cardiomyopathy is most likely with smoke in the left atrium.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Thromboembolic events may be causing respiratory distress; however this patient is not in left sided heart failure. Tachycardia should be controlled with atenolol therapy, Torbutrol utilized for light sedation and treatment for anxiety. Plavix therapy is indicated.

I recommend atenolol at 6.25 mg- 12.5 mg BID to reach a target heart rate of <180. Reassessment of the thyroid is warranted. Abdominal sonogram is recommended to assess for causes of pain, such as pancreatitis or other comorbidity. Other causes of hypercoagulable state, including hyperthyroidism, such as infectious disease or other inflammatory events may be contributing in this patient. EKG and blood pressures are indicated. Recheck echocardiogram, ideally, in 3-5 days to assess primarily if a formal clot is forming from the left atrial smoke, as well as the cardiac response to therapy and further doppler evaluation at a more calm state.



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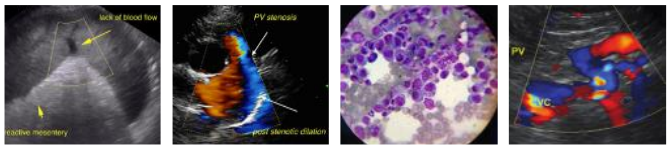

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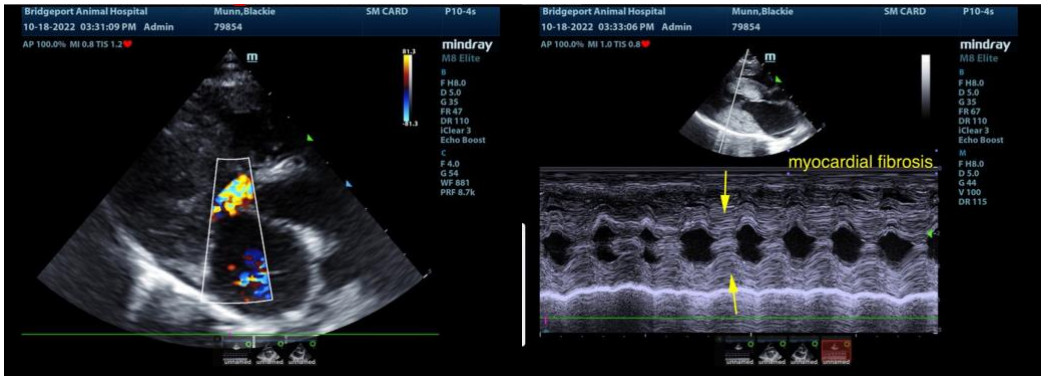

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com