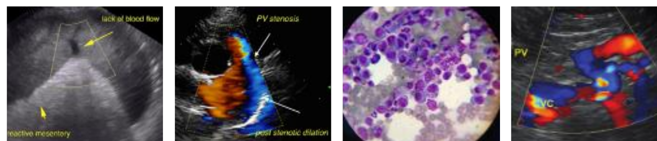


SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT
Bella Bernard

SPECIES
Feline

BREED
DMH

SEX
FS

AGE
7 years

WEIGHT
6 lbs. 8 oz.

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Jessica Miller

HOSPITAL NAME
Brenda King VMD

REFERRING VET
Dr. King

INVOICE
13834

DATE
5/10/22

PRESENTING CLINICAL SIGNS

Cardiac work up to see if patient has murmur and if patient can safely be placed on steroids. No current meds.
Abnormal PE/Chem/CBC/UA Results: Leukocytosis w/ absolute eosinophilia and monocytosis

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		159	0.48	1.37	0.43	31.4	61.9
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	3.0	2.97	2.18		1.1	0.7	NM

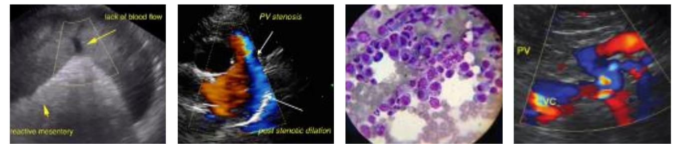
Adapted from June Boon,Veterinary Echocardiography,1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

Cardiac Presentation

The left ventricular wall exhibited normal subjective thickness with myocardial remodeling and regions of asymmetry. Mild diffuse hyperechoic endocardium consistent with fibrosis was present. Prominent to remodeled papillary muscles were present. LV systolic dysfunction is decreased. The LV and RV are both borderline dilated. Similar-appearing myocardial changes associated with the RV free wall were present. The left atrium is significantly dilated and bulbous in appearance. Suspicion for Indistinct disorganized spontaneous contrast or smoke was noted In the left atrial lumen. The right atrium appeared to be mild to moderately dilated. The mitral valve exhibited mild thickening with evidence of systolic anterior motion (SAM), of the mitral valve with secondary turbulent to dynamic LV outflow and mild to moderate, primarily central MR. Concurrent minor TR was present. Subjective normal RVOT laminar flow and velocity was present. Mild volume pericardial effusion is seen. No obvious evidence of pleural effusion yet cannot be definitively excluded. No obvious cardiac tumors were noted.

ULTRASONOGRAPHIC FINDINGS

- LV myocardial remodeling with decreased systolic function
- Severe LA enlargement with evidence of indistinct spontaneous contrast / smoke
- Mild to moderate RA enlargement



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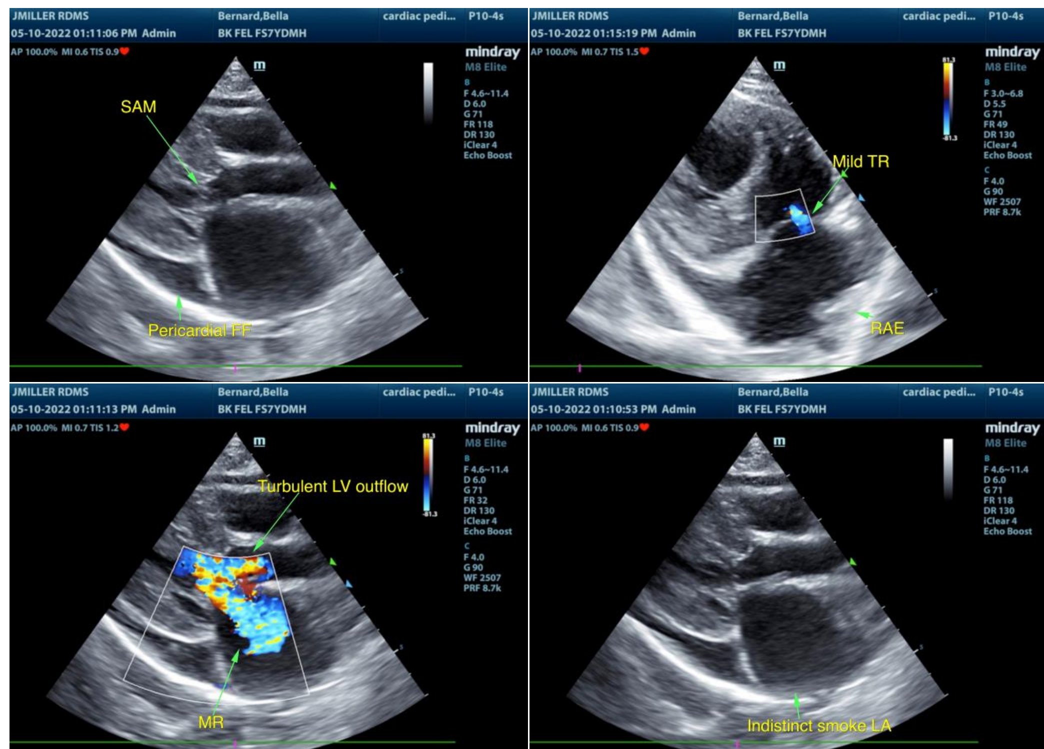
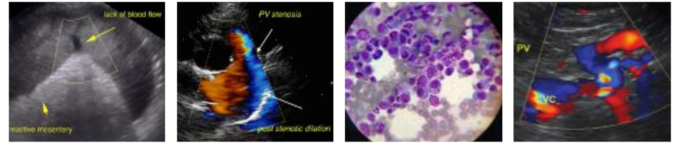
- Systolic anterior motion of the mitral valve with secondary turbulent to dynamic LV outflow and central MR
- Mild volume pericardial free fluid

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The overall cardiac presentation is consistent with significant cardiomyopathy with considerations including burnout or end-stage HCM/HOCM or potential unclassified cardiomyopathy, given the presence of biatrial enlargement. LV remodeling and fibrosis, which indicates diastolic dysfunction in addition to systolic dysfunction as evidenced by the fractional shortening measurement, was present. Finally, there is evidence of LA spontaneous contrast, putting this patient at exceedingly high risk for aortic thromboembolism going forward.

Regardless of classification, the degree of atrial enlargement indicates the diagnosis of congestive heart failure as a likely cause of the pericardial free fluid. Long-term prognosis is likely poor. However, medical therapy is recommended. Consider hospitalization with Injectable Lasix until the patient is stabilized if clinically indicated. Lasix 1.0-2.0 mg/kg PO BID, Clopidogrel 75 mg tablet (1/4 tab) PO SID, along with off label Pimobendan 1.25 mg PO BID is recommended. Atenolol is not recommended owing to LV systolic dysfunction and decreased inotropic effects of Atenolol. Likewise, corticosteroids are not advised. Monitoring of BP and renal values is recommended. This patient is at significantly elevated risk for continued episodes of CHF, development of malignant arrhythmias and blood clots and/or sudden death. Recheck echocardiogram is recommended as needed or in 6 months, sooner if continued episodes of CHF or progressive clinical signs are noted.





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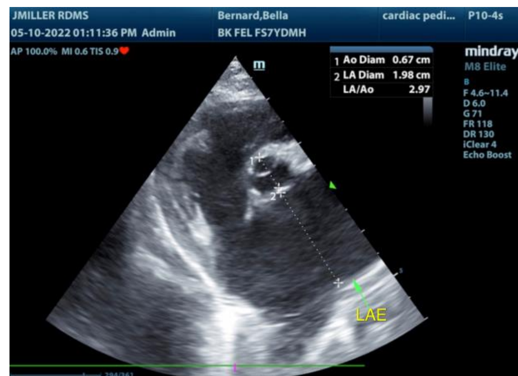

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com