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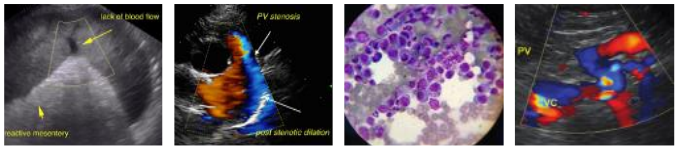


PATIENT
Trouby Styers

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
14 years

WEIGHT
9lbs

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

IMAGING PERFORMED BY
Dana Alterman, RDCS, LVT

HOSPITAL NAME
Eubank Animal Clinic

REFERRING VET
Dr. Russman

INVOICE
28348

DATE
1/16/23

PRESENTING CLINICAL SIGNS

History: Recheck echo.
-Pertinent previous echo findings (10/2020 Idexx): VSd 0.55cm, LVPW 0.5 cm. (6/2021 MML) : IVSd 0.5 cm, LVPW 0.61 cm. 1/9/2022 Normal T4 and HW negative

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; 50mm/s, 20mm/mV. The average heart rate is 125bpm with a largely regular rhythm. The rhythm is suspected to be sinus in origin, although p waves cannot be visualized due to device insensitivity. The QRS morphologies are positive and low voltage. No ectopic beats, pauses or other dysrhythmias observed.
ECG diagnosis: Suspect sinus bradycardia.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is borderline in dimension. There is a diffusely hyperechoic endocardium consistent with fibrosis. Mild symmetric papillary muscle hypertrophy and remodeling. The right ventricle is subjectively normal in size and morphology. There is no left atrial enlargement present. No right atrial enlargement present. Normal RVOT velocity. No TR. There is no obvious systolic anterior motion (SAM) of the mitral valve present. No MR. There is no pericardial effusion noted. No pleural effusion appreciated. No obvious cardiac tumors.

CARDIAC CHART

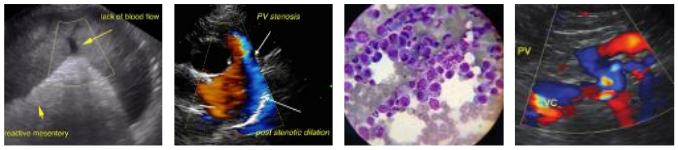
FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	4.1		0.56	1.4	0.55	52	90
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO 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	1.4	1.1	1.1		NM	1.1	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

Compared to the prior 2 studies, findings are similar. The LV wall dimensions are borderline increased, with no progression from the prior evaluations. Most importantly, there is no evidence of elevated left atrial pressure. There is mild remodeling and fibrosis of the left ventricular wall, which is likely a normal variant. No additional issues are identified.

The ECG does show a bradycardia, without identifiable P waves. While senior cats can develop complete heart block with this appearance (and often asymptomatic), a simple sinus bradycardia



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would be a more common explanation. Unfortunately P waves can be masked by device insensitivity in single lead tracings which is suspected to be the case here. Assuming the patient was not sedated, this is most consistent with high vagal tone which often suggest systemic illness in cats. IF the HR stimulates adequately with stress or exertion this is the presumed diagnosis and systemic evaluation may be reasonable. If no HR simulation is noted, a 6 lead tracing or potentially an atropine challenge may be warranted.

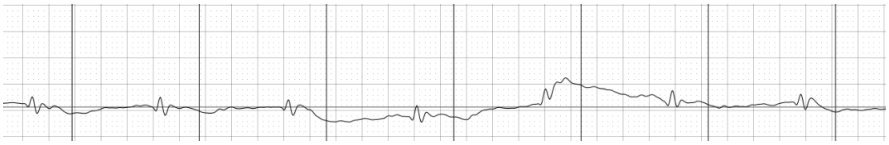
Given these findings, no medications are indicated.

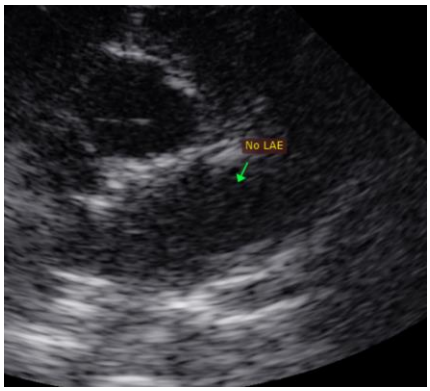
No cardiac contraindication for general anesthesia pending confirmation of high vagal tone. Mild IV fluid restriction is advised. Risk for complication with steroid use typically follows LA dilation, which in this case is low. That being said, any cat can experience unexpected signs of intolerance and monitoring of RR/RE is advised particularly in the initiation phase.

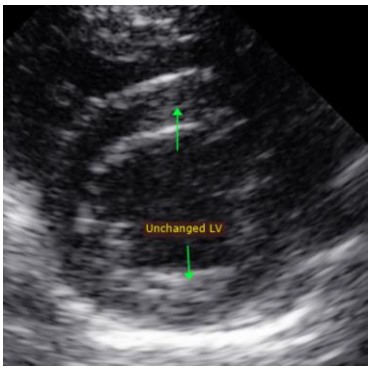
Plan: Ensure HR stimulates adequately. If response is poor or questionable, consider an atropine challenge, 6 lead tracing, etc. If high vagal tone is confirmed, systemic evaluation may be warranted.

Recommend recheck echocardiogram in 1 year to screen for progressive changes.

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)
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