



PATIENT

Leo Butler

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

11.1.09

WEIGHT

8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

HOSPITAL NAME

Chadwell Animal
Hospital

REFERRING VET

Dr. Oliveri

INVOICE

23703

DATE

4.15.22

PRESENTING CLINICAL SIGNS

History: Grade 3 murmur. 3/17/22 presented for periodic vomiting. Cat has chronic renal disease.
 -Current medications: Liquid vitamin supplement, SQ fluids for renal disease- 150mL 2x weekly.
 -Blood pressure: 160mmHg.
 -Sedation used: Not required to complete full diagnostic ultrasound.
 -Pertinent previous ultrasound results: No previous.
 -STAT: Not requested.
 -Imaging performed by: Stephanie Pearce RDCS, RVT.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is borderline normal in dimension with a septal bulge. There is a diffusely hyperechoic endocardium consistent with fibrosis and remodeling. The endocardium also appears remodeled. The MV appears normal. An obstruction is not captured on 2D or doppler; however, color flow suggests an LVOTO with trace eccentric MR. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. Blood flow through the RVOT is mildly elevated in velocity with a dynamic profile. No obvious TR. There is no pleural or pericardial effusion seen. There are no obvious cardiac tumors.

CARDIAC CHART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LWVd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	3.6	NM	0.6	1.1	0.58	47	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	NM	1.3	1.2		0.75	1.8	NM

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

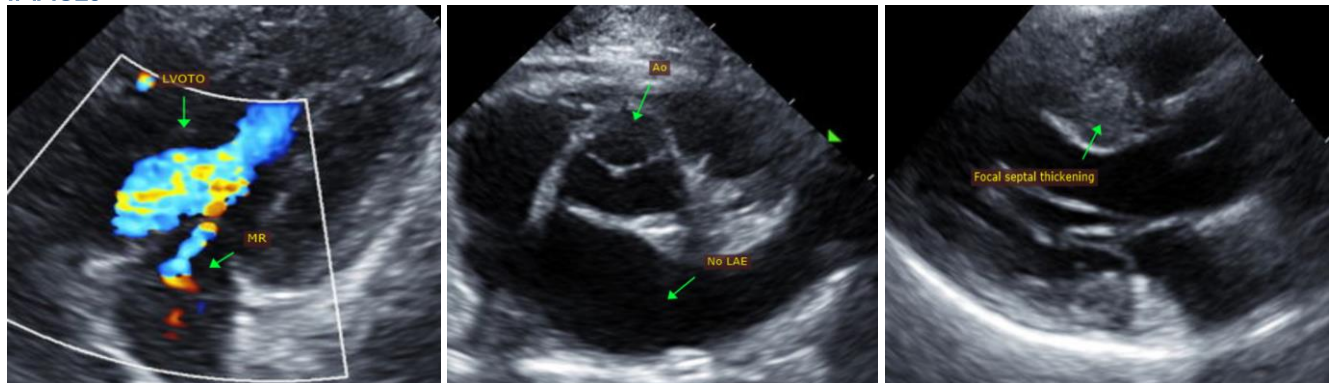
Overtly normal cardiac geriatric structure and function. The murmur is likely due to an intermittent LVOT obstruction and mitral regurgitation secondary to abnormal valve movement at elevated heart rates. This is presumptive as Doppler flows were not confirmed. There are also borderline LV wall dimensions, in addition to mild remodeling and fibrosis of the left ventricular wall. These changes may be indicative of early cardiac disease (HOCM) or may simply represent a normal variant. Serial echocardiography will be necessary to determine progression and clinical relevance of both findings. Finally, a dynamic RVOT obstruction is noted, which is a benign flow abnormality which may contribute to murmur intensity.

In patients with persistent LVOT obstruction and an elevated pressure gradient, a beta blocker is often prescribed to lower heart rate and decrease the gradient. In this patient with a mild obstruction and borderline normal LA/LV dimensions, no medications are clearly indicated.

From a structural standpoint, anesthetic risk is currently low. Avoid heart rate stimulating drugs (atropine, glycopyrrolate) unless clinically necessary. Avoid vasodilators such as acepromazine as this can worsen obstruction. Judicious IV fluid rates are recommended to avoid fluid overload in this patient with diastolic dysfunction.

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

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.

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