IMAGING PERFORMED BY

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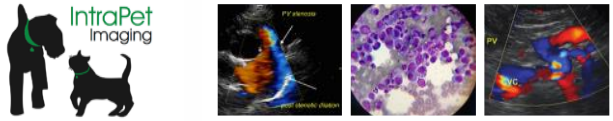

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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PATIENT
Jellybeans Lenhart

SPECIES
Feline

BREED
DMH

SEX
Male Neutered

AGE
5.2.13

WEIGHT
9.85lbs

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

HOSPITAL NAME
Fullerton Animal Hosptial

REFERRING VET
Dr. Unger

INVOICE
25665

DATE
8.9.22

PRESENTING CLINICAL SIGNS

History: Presented for exam for itching. On exam grade 2-3/6 murmur auscultated. Also significant dental disease and patchy alopecia with irritation around the ears and eyes.
-Pertinent abnormal PE/Chem/CBC/UA Results: None.
-Current medications: Zyrtec 5 mg SID.
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Not requested
-Imaging performed by: Stephanie Warga RDCS, RVT.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is largely normal in dimension with regions of irregularity. There is a diffusely hyperechoic endocardium consistent with fibrosis and remodeling. The endocardium also appears remodeled. The MV appears normal. A mildly elevated LVOT velocity is noted on color flow and Spectral doppler. No MR. The left atrium is normal in size. The right atrium is normal. The right ventricle appears normal. Blood flow through the RVOT is normal in velocity. 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) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	4.5	200	0.45	1.38	0.44	64	94
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	1.2	1.0		1.8	1.4	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

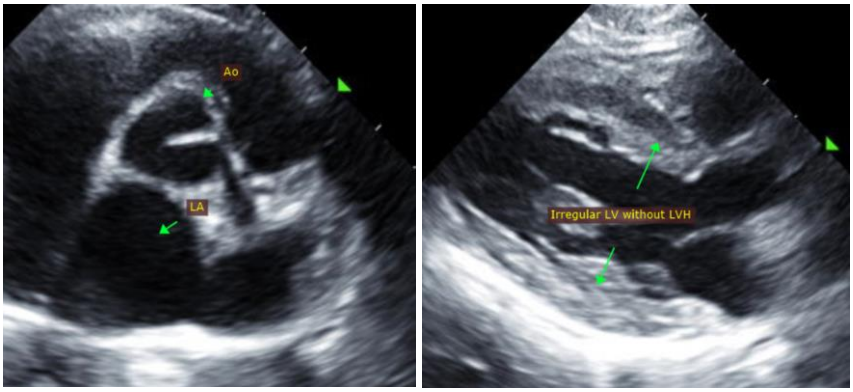
Overtly normal cardiac structure and function. The murmur is likely due to an intermittent LVOT obstruction, secondary to abnormal valve movement at elevated heart rates. There are also irregular LV wall dimensions, in addition to mild remodeling and fibrosis of the left ventricular wall. These changes 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. No additional issues are identified.

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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