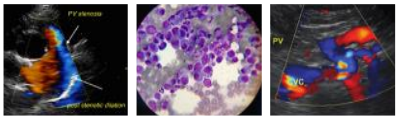
IMAGING PERFORMED BY

IntraPet.com



SonoPath
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PATIENT

Oliver Hurn

SPECIES

Feline

BREED

DMH

SEX

Male Neutered

AGE

8 years

WEIGHT

8.86lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME

Northwind Animal Hospital

REFERRING VET

Dr. Wilson

INVOICE

21899

DATE

10/5/21

PRESENTING CLINICAL SIGNS

History: Patient presented on 11/4/2021 for coughing that started 3 weeks prior, and severity was increasing day by day. Patient had previously been diagnosed with a 3/6hm. the grade of the heart murmur had increased to 5/6 @ presentation. A course of Clavamox was sent home two weeks prior as owner's other cat had a URI. Owner did not note any improvement.
-Current medications: Clavamox 62.5mg/ml: 1cc PO BID 10/27/2021
-Sedation used: Not required to complete a diagnostic ultrasound.
-STAT: Not requested.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension with regions of irregularity. There is a diffusely hyperechoic endocardium consistent with fibrosis. The MV appears normal. Blood flow through the LVOT and RVOT are mildly elevated in velocity with a dynamic profile. Trace MR, secondary to SAM. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. Trace 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	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	4.0	220	0.45	1.3	0.40	65	95
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	1.1	1.0		1.5	1.9	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

Largely normal cardiac structure and function. The murmur is secondary to both an LVOT and RVOT obstruction, secondary to tachycardia. While an LVOTO can be the first sign of hypertrophic obstruction disease, no hypertrophy is seen in this animal making it likely stress induced (as compared to pathologic). An RVOTO is largely benign and is the cause of physiologic murmurs in cats. Most importantly the left atrium and LV wall thickness are normal indicating low risk for complication at this time. No additional issues are identified.

Given these findings, the cough is unlikely to be cardiac related and primary respiratory issues should be considered. A course of Azithromycin is often a good starting point for empiric therapy. Further diagnostics such as chest radiographs should also be considered.

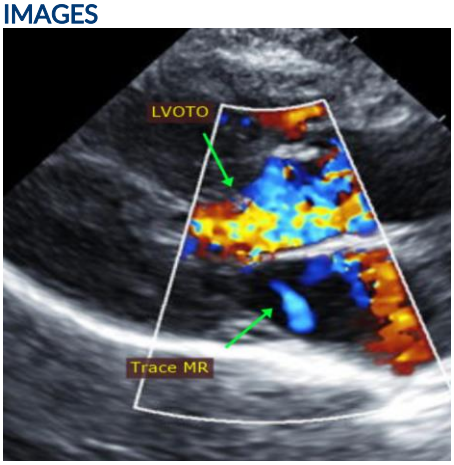
In patients with persistent LVOT obstruction and an elevated pressure gradient, a beta blocker is often prescribed to lower heart rate and decrease the gradient. In this patient with a mild obstruction and a normal left atrial dimension/no LVH, no medications are clearly indicated.

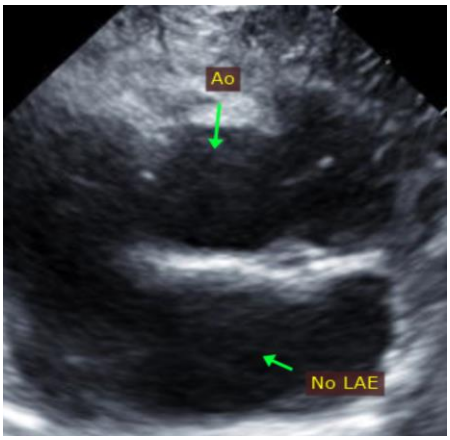
Anesthetic risk is low. Avoid heart rate stimulating drugs (atropine, glycopyrrolate) unless clinically necessary. Avoid vasodilators such as acepromazine as this can worsen obstruction. Judicious IV fluid rates are recommended to avoid fluid overload in this patient with diastolic dysfunction.

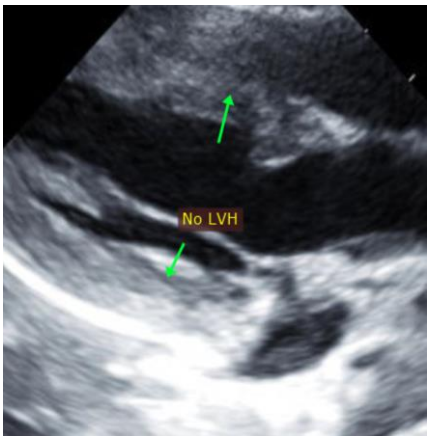
Risk for complication with steroid use typically follows LA dilation, which in this case is low. That being said, any cat can experience unexpected signs of intolerance steroids and monitoring of RR/RE is advised particularly in the initiation phase.

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. 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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