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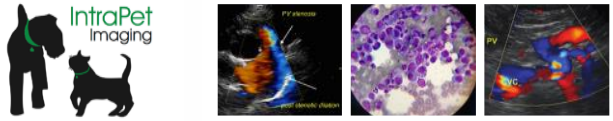

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PATIENT
Joker Scherer

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
7.27.07

WEIGHT
7.69lbs

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

IMAGING PERFORMED BY
Stephanie Pearce, RDCS, RVT

HOSPITAL NAME
Everhart Veterinary Hospital

REFERRING VET
Dr. Hays

INVOICE
22719

DATE
2.21.22

PRESENTING CLINICAL SIGNS

History: Chronically managed hyperthyroid patient presents for lethargy and inappetence, 2–3-day duration. Labs for Methimazole submitted last week showed ALT of 136 (ref 100), T4 of 5.9 while receiving 7.5mg Methimazole BID. Owner instructed to increase to 8.75mg BID but due to illness has not adjusted yet. Labs repeated on 2/19 showed ALT of 118 (ref 130). Patient is underweight with abnormal consolidated cranial left lung lobe or mass/mass effect, distended gallbladder. Patient was febrile on intake at 103, received single inj Onsior, has since been normothermic. Heart murmur grade 2-3/6.
-Pertinent abnormal PE/Chem/CBC/UA Results: Rads- consolidated left cranial lung lobe vs mass/mass effect.
-Current medications: Methimazole 7.5mg BID chronic, Convenia given 2/20/22, LRS 2x maint started 3 days ago, Cerenia 3.5mg started 3 days ago.
-Blood pressure: 183/131 MAP 143mmHg.
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Not requested.

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 mildly hyperechoic endocardium consistent with fibrosis. Mild papillary muscle remodeling. The left atrium is normal in size. The right atrium is normal in size. Trace MR. No TR. The right ventricle appears normal. The mitral valve is normal in structure and mobility. Blood flow through the RVOT is normal in velocity. Blood flow through the LVOT is mildly elevated (depending on heart rate), with a dynamic profile. No cardiac tumors are seen. No pleural or pericardial effusion.

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	3.5	210	0.4	1.56	0.52	36	69

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	1.4	1.2	1.4	0.91	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

Essentially normal cardiac structure and function. The murmur is due to an LVOT obstruction with secondary MR, which is secondary to tachycardia. The valve itself appears normal, and no LVH is seen making this likely a stress/tachycardia-induced phenomenon. That being said, this may be the first sign of early HOCM, and serial monitoring is advised. The left atrium is normal indicating low risk for complication. No additional issues are identified.

No cardiac contribution to the current clinical issues is suspected. Historical hyperthyroid disease can lead to mild cardiac changes, as is seen here. Follow up is advised.

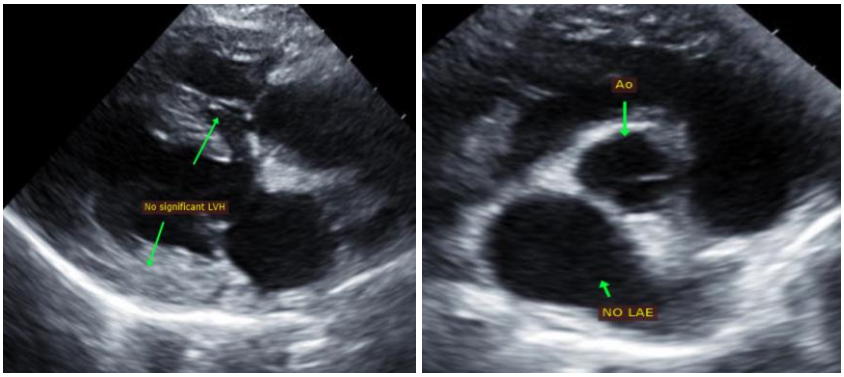
In patients with persistent LVOT obstruction and development of hypertrophy, a beta blocker is often prescribed to lower heart rate and decrease the gradient. In this patient with a normal left atrium and no LVH, no medications are clearly indicated.

The reported blood pressure is elevated and should be reassessed for accuracy particularly given no reported clinical signs of severe hypertension (retinal changes, etc.) or evidence of LVH on echo. Ideally obtain serial measurements in a controlled, low stress environment and continue until 3 consecutive readings plateau within 5mmHg of variability. If persistently >180mmHg despite a relatively calm demeanor, recommend institution of amlodipine to effect. Additionally, if deemed accurate, screening for predisposing underlying causes of SHT is recommended (Cushings, PLN, adrenal tumor, etc.), as primary disease is relatively uncommon and a rule out diagnosis.

Anesthetic risk and/or steroid 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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