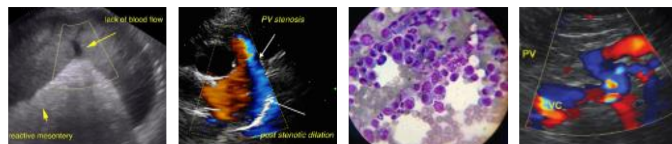

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1-800-838-4268 info@sonopath.com

PATIENT
Tigsy McDonald

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
12.5years

WEIGHT
13lbs

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

IMAGING PERFORMED BY
Jennifer Todd, DVM

HOSPITAL NAME
Lambs Gap Animal Hospital

REFERRING VET
Dr. Todd

INVOICE
23748

DATE
4/19/22

PRESENTING CLINICAL SIGNS

History: History of a gallop murmur and hypertension (which has been controlled with Enalapril 1.25 mg PO SID). His enalapril was discontinued by his owner three months ago. At Tigsy's recent wellness exam on 4/12/22, he had severe dental tartar and gingivitis and a grade II-III/VI left parasternal systolic heart murmur. Blood pressure was 129/97, 133/102 at exam without enalapril for the past 3 months. Bloodwork showed mildly increased renal enzymes (SDMA=15, Creat=1.8) and increased cardiac ProBNP (594). Blood pressure today was 176/101, 176/102, 178/102mmHg.

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; 25mm/s, 10mm/mV. The average heart rate is 150bpm with a regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P morphology is positive. The QRS is inverted. No ectopic beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is irregular with a focal septal thickening and a borderline free wall dimension. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly remodeled and hyperechoic. The endocardium also appears normal. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility with mild MR. An atypical view of the jet is suspected (see below), to be seen within the left atrium during systole. No TR. Blood flow through the RVOT is normal. The blood flow through the LVOT is normal on doppler; however, an intermittent LVOTO is suspected on color flow and 2D imaging. No pleural or pericardial effusion seen. 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	5.9	NM	0.75	1.6	0.59	49	84
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	1.3	1.23	1.26		1.0	1.0	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.

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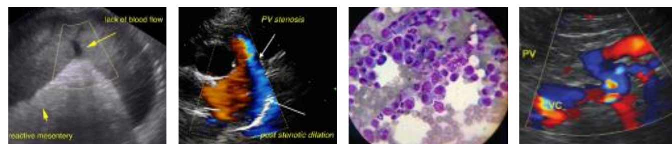

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The primary abnormality identified is focal LV hypertrophy in addition to LV remodeling, which may be indicative of early hypertrophic disease or may simply represent a normal variant. The LA is normal which would indicate clinical stability. Serial echocardiography will be necessary to determine progression and clinical significance. Additionally, the murmur is due to a mild LVOT obstruction with secondary MR, which appears intermittent and does not warrant therapy. No additional issues are identified. The ECG is unremarkable with a normal sinus rhythm.

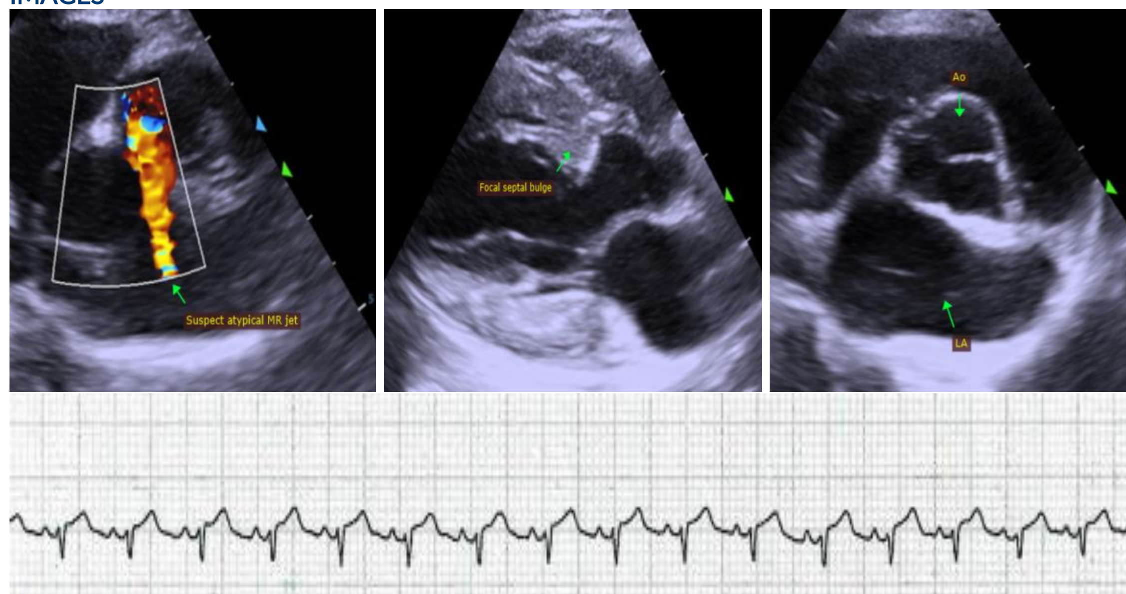
The patient has a history of systemic hypertension and the BP on exam today is mildly elevated. That being said, if the patient was stressed this is a reasonable value and does not clearly warrant therapy. Recommend continued reassessment going forward. If persistently >180mmHg, reinstitute Enalapril or Amlodipine to effect and screen for underlying causes of SHT.

Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Additionally, steroids should be used with caution on older cats, as even a ‘normal’ geriatric heart can develop evidence of intolerance and fluid retention.

Monitor for any development of clinical signs, including labored breathing or signs of a blood clot (paralysis, neurologic change).

A recheck echocardiogram is recommended in 6-12 months to screen for any evidence of progression.

IMAGES



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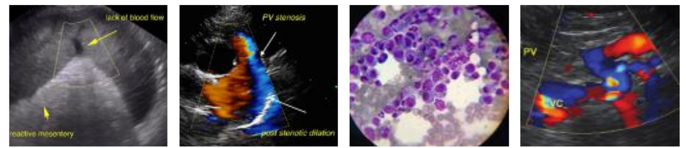

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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