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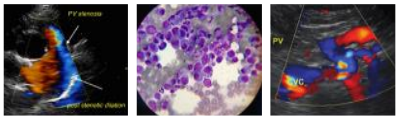

SonoPath
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PATIENT
Tiger Mena

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
4.30 10

WEIGHT
15.3lbs

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

HOSPITAL NAME
Banfield Columbia

REFERRING VET
Dr. Hirsch

INVOICE
28895

DATE
2.9.23

PRESENTING CLINICAL SIGNS

History: Recheck echo. History of a grade 2/6 left systolic murmur. Assess prior to anesthesia.
-Current medications: Atenolol 25mg 1/4 tablet PO SID since 5/2019
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: MML 5/1/2019: mod LVH, borderline LAE, mild/mod SAM, trace MR; IVSd 0.71, LVPWd 0.70, LA 1.3, LVOTO 2.8m/s
-STAT: Not requested
-Imaging performed by: Stephanie Warga RDCS, RVT.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at both 25 and 50mm/s; 5mm/mV. The average heart rate is 160bpm (range 150-166bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. Isolated monorphic VPCs throughout. No supraventricular ectopic beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is moderately hypertrophied with regions of irregularity. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Papillary muscle hypertrophy (mild). The right ventricle is subjectively normal in size and morphology. Borderline left atrial dimension. No right atrial enlargement present. Normal RVOT velocity. There is mild systolic anterior motion (SAM) of the mitral valve present on 2D imaging; normal LVOT velocity. There is no mitral regurgitation present. No other obvious valvular regurgitation is present. There is no pericardial effusion noted. No pleural effusion appreciated. No cardiac tumors observed.

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	6.9	NM	0.74	1.47	0.68	59	91
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	1.3		1.8	0.7	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

Hypertrophic obstructive cardiomyopathy persists with evidence of stability. The LV wall thickness is unchanged to mildly improved, and the LVOTO appears well controlled on atenolol. The LA is normal indicating low risk for complication and no additional issues are identified. Continue atenolol going forward with no additional medications needed.

The ECG does confirm ventricular premature contractions (VPCs) are present. VPCs can certainly be cardiac in origin with significant structural disease; however, only mild disease is identified here and no progression is seen. Extra-cardiac causes should be considered in this senior cat, including systemic disease, neoplasia, etc. Full systemic work-up is advised if not recently performed. No obvious indication for anti-arrhythmic therapy at this time with only single VPCs seen. Atenolol is often used for ventricular arrhythmias in cats, and is already being administered as well. Close monitoring for any associated clinical signs including collapse or significant lethargy is advised with immediate re-evaluation in these instances. Prognosis is guarded, as in any arrhythmic patient sudden death is certainly a possibility even on medications.

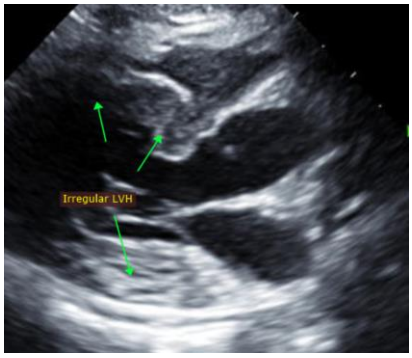
Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc) in the future.

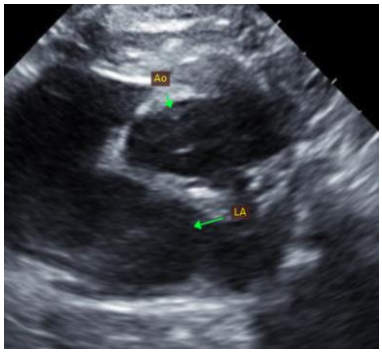
Anesthetic risk is considered moderately elevated with VPCs and structural disease. Judicious IV fluid rates are advised to avoid fluid overload. Additionally drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Avoid ketamine, telazol, dexdomitor (or other alpha-2 agonists) and acepromazine.

Plan: Continue atenolol as prescribed. Consider systemic screening. Screening blood pressure and T4 are recommended every 6 months.

Recommend a recheck echocardiogram and ECG in 6-12 months to assess for progression, sooner if clinical issues arise.

IMAGES





VPCs

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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