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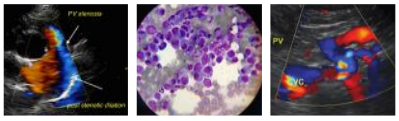

SonoPath
Clinical Sonography & Telecytology
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PATIENT
Pumpkin McCartney

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
6.12.14

WEIGHT
9lbs

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

HOSPITAL NAME
Perry Hall Animal Hospital

REFERRING VET
Dr. Miller

INVOICE
26702

DATE
10.4.22

PRESENTING CLINICAL SIGNS

History: Presents for evaluation today, no historical health concerns. On PE today: cardiac murmur, grade 2-3/6 PMI sternal, holosystolic with a rhythm that is "irregularly irregular". No clinical signs.
-Current medications: None listed.
-Blood pressure: 170, 165 175mmHg.
-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.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at both 25 and 50mm/s; 2mm/mV. The average heart rate is 210bpm with a largely regular rhythm. 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 VPCs are seen throughout; singles only and monomorphic. No supraventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus tachycardia with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is irregular without significant hypertrophy. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Papillary muscle is mildly remodeled. The right ventricle is subjectively normal in size and morphology. There is mild left atrial enlargement present. No right atrial enlargement present. Normal RVOT velocity. There is systolic anterior motion (SAM) of the mitral valve present, with an elevated LVOT velocity (dynamic profile). There is mild eccentric mitral regurgitation present secondary to SAM. No other obvious valvular regurgitation is present. There is no pericardial effusion noted. No pleural effusion appreciated.

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	4.0	NM	0.47	1.3	0.42	68	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	1.5	1.4		2.4	1.5	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

The cause of the murmur is an LVOT obstruction with secondary MR. What is unusual is there is no significant LV hypertrophy present, which may suggest a primarily heart rate/stress dependent phenomenon. There is mild left atrial dilation, indicating the risk of spontaneous CHF and/or a thrombotic event, while currently low, may be elevated in the future. A screening BP and T4 are recommended every 6 months, as both can exacerbate disease. No additional issues are identified.

The ECG does show relatively frequent single VPC's, which is concerning. VPC's can develop secondary to structural disease (mild seen here); however, full systemic evaluation can be considered to rule out ancillary issues. While no anti-arrhythmic therapy is specifically indicated with only single VPC's, Atenolol may be useful in this case to both decrease the outflow tract obstruction and decrease frequency of VPC's in this patient. If there is difficulty medicating at home, an alternative approach would be closely monitoring for progression in the next 6 months.

Anesthetic risk is considered moderately elevated. Avoid ketamine, telazol, Dexdomitor (or other alpha-2 agonists) and acepromazine. Recommend having lidocaine CRI available for use in the event of worsening ventricular arrhythmias under anesthesia (CRI 50—75mcg/kg/min).

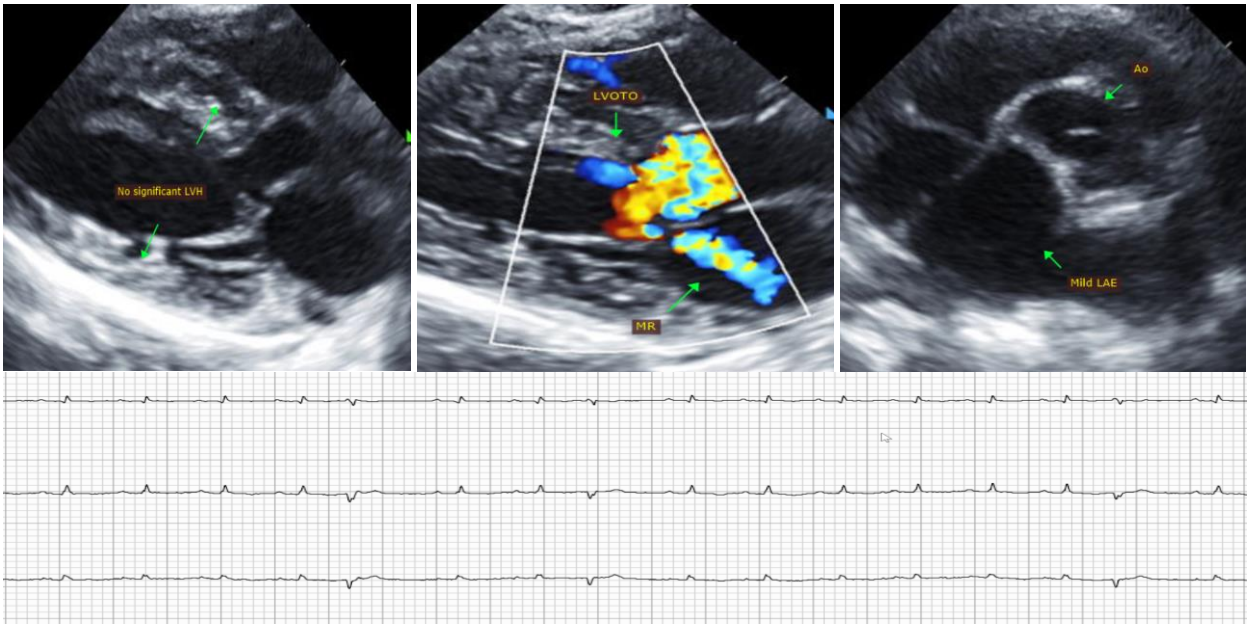
Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.) in the future.

PLAN

Screening BP/T4 q6mo. If able, administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached. Full systemic screening recommended.

Recommend recheck echocardiogram in 6 months to assess for progression, sooner if clinical issues 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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