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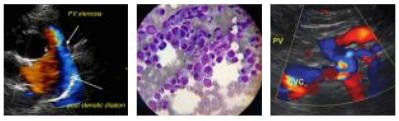

SonoPath
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PATIENT

Smokey Dohahue

SPECIES

Feline

BREED

Maine Coon Mix

SEX

Male Neutered

AGE

11 years

WEIGHT

9lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME

Everhart Veterinary Cetner

REFERRING VET

Not provided

INVOICE

20989

DATE

9/13/21

PRESENTING CLINICAL SIGNS

History: History of hypertrophic obstructive cardiomyopathy with previous echocardiogram from prior vet earlier that month. Previously prescribed Plavix and Atenolol but owner was not able to give. 3/6 systolic murmur, PMI L apex. Has mass at entrance of R nasal cavity, plan sedated biopsy.
-Current medications: Previously on Dexamethasone nose drops; Convenia injection 8/21/21.
-Sedation used: Not needed.
-STAT: Not requested.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at both 25 and 50mm/s; 2mm/mV. The average heart rate is 175bpm (range 166-188bpm). 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 shifted left. Two isolated VPCs are identified. 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 yet highly irregular. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Papillary muscle hypertrophy. The right ventricle is subjectively normal in size and morphology. There is mild left atrial enlargement present. No right atrial enlargement present. Borderline RVOT velocity with a dynamic profile. 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. Trace TR. 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	4.1	180	0.66	1.4	0.71	42	77

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	1.34	1.3	2.5	2.0	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 diagnosis is hypertrophic obstructive cardiomyopathy. This indicates LV hypertrophy (moderate in this case) with a dynamic LVOT obstruction (SAM) and secondary MR. 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.

The ECG is largely normal although 2 isolated VPCs are seen. VPCs are likely due to a combination of stress and structural disease in this patient and do not warrant further therapy at this time. Patient may be at risk for sustained arrythmias going forward and monitoring for related symptoms is advised (i.e., acute collapse or lethargy).

While no medications have been shown to definitively alter long term outcome at this stage of disease, atenolol is often initiated to decrease the outflow obstruction. Given the degree of hypertrophy and mild LA dilation, recommend initiate at this time as below. My hope is that the difficulty previously was due to Plavix which is not yet indicated in this case. Atenolol can also be compounded for easier administration into a liquid or other form. An alternative approach would be to continue to monitor for progression over the next 6 months.

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. Risk for complication with steroid use typically follows LA dilation, which in this case is mildly elevated. If needed, monitoring of RR/RE is advised particularly in the initiation phase.

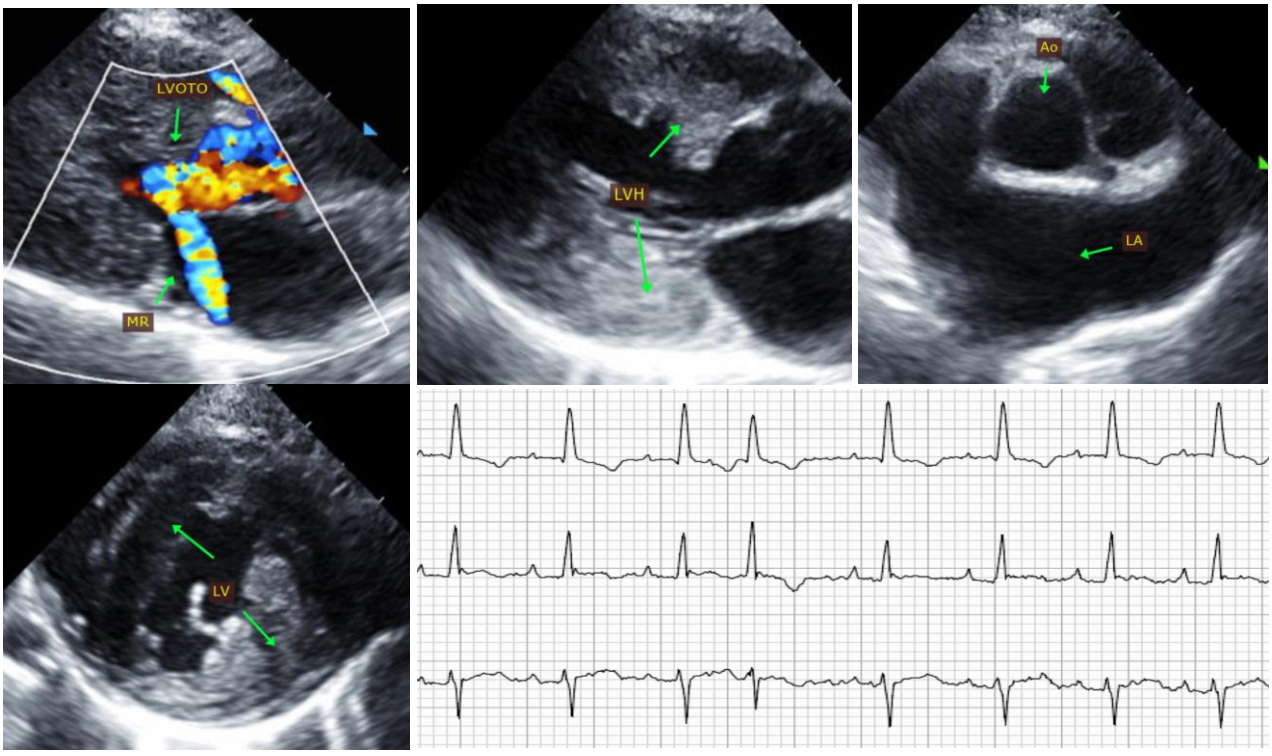
Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.) in the future.

PLAN

Screening BP/T4. 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.

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.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
Email: info@sonopath.com