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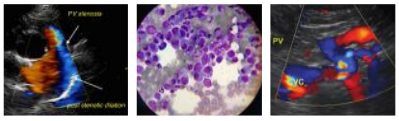

SonoPath
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PATIENT
Pickles Ortega

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
7.12.14

WEIGHT
10.2lbs

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

HOSPITAL NAME
Cat Hospital at Towson

REFERRING VET
Dr. Brunt

INVOICE
24792

DATE
6.15.22

PRESENTING CLINICAL SIGNS

History: Heart murmur, grade 3. Weight loss. Normotensive.
-Pertinent abnormal PE/Chem/CBC/UA Results: ProBNP: 1500, T4: 2.8, remainder NSF.
-Current medications: None. Will be on Gabapentin for scan.
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Approved.
-Imaging performed by: Stephanie Pearce RDCS, RVT.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at both 25 and 20mm/s; 5mm/mV. The average heart rate is 230bpm 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. The QRS is inverted. Normal PR. The MEA is shifted left. No ectopic beats, pauses or dysrhythmias observed.
ECG diagnosis: Normal sinus tachycardia. Left axis deviation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. **T**he left ventricular wall is asymmetric with significant septal thickening and a normal/irregular free wall. Sigmoid septum. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Mild papillary muscle hypertrophy. The LV function is depressed with hypokinetic free wall. Moderate LA dilation with no evidence of smoke. The right ventricle is subjectively normal in size and morphology. No right atrial enlargement present. Elevated RVOT velocity with a dynamic profile. There is severe systolic anterior motion (SAM) of the mitral valve seen on multimodal imaging. 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	4.6	NM	0.76	1.4	0.45	25	55
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	2.0	1.6		4.5	2.3	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 thickening (asymmetric in this case) with a dynamic LVOT obstruction (SAM). There is moderate left atrial dilation, which unfortunately carries a high risk going forward for spontaneous CHF, blood clot events and/or sudden death going forward. The LV function is depressed with a hypokinetic free wall, suspicion for an infarct. This likely suggest end-stage disease. The ECG is unremarkable with a normal sinus tachycardia.

Even with significant left atrial enlargement, use of medications is of debatable benefit prior to CHF/clinical signs. Given the degree of disease however, I would consider institution of full medications due to high risk for complication. This includes Plavix as an anti-coagulant, Atenolol to help decrease the obstructive portion of disease, low dose Lasix given the degree of left atrial enlargement and finally Pimobendan. This is somewhat controversial with a significant obstruction; however, the degree of LV dysfunction is concerning. Close monitoring of sleeping breathing rates is recommended going forward.

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

Anesthesia is not advised due to high risk for fluid overload, spontaneous CHF, hypotension, etc. If elected, medications should be initiated for at least 2-3 days prior. Referral to a specialty hospital with an Anesthesiologist may be beneficial. Judicious IV fluid rates are advised to avoid fluid overload. Drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid ketamine, telazol, acepromazine and Dexdomitor.

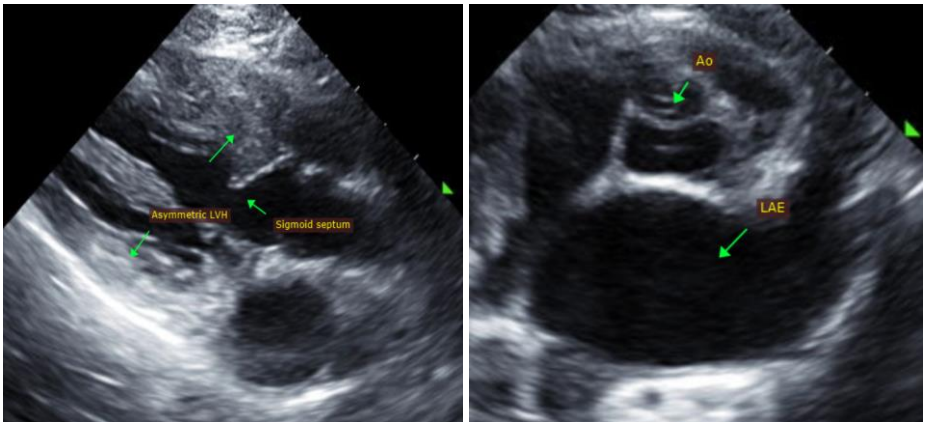
PLAN

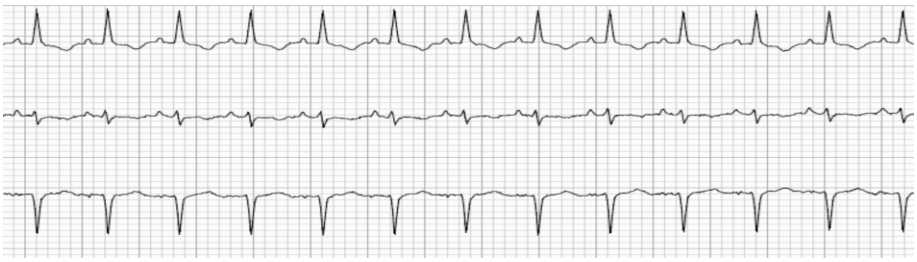
Baseline BP recommended. Administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily at night. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached. Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges). Institute Lasix 1mg/kg PO q12h. Institute Pimobendan 1.25mg PO q12h.

Screening blood pressure and T4 are recommended every 6 months. Monitor renal values and BP in 1-2 weeks, then every 6 months lifelong. If BP is >130mmHg and patient is able to be medicated, consider addition of an ACEI at this time 0.5mg/kg PO q12h.
*NOTE: if the patient is difficult to medicate, Plavix, atenolol and Lasix are considered most important.

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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