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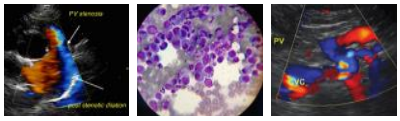

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PATIENT
Legend Eeckhout

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
5.1.07

WEIGHT
9lbs

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

HOSPITAL NAME
Healing Paws Veterinary Wellness Center

REFERRING VET
Dr. Kickman

INVOICE
32123

DATE
8.3.23

PRESENTING CLINICAL SIGNS

History: History of IBD with evidence of intestinal inflammation and LN enlargement, being treated with budesonide. Appetite has been hit or miss, losing weight, presented 07/18 for first occurrence of hematemesis. PE overall NSF other than pronounced gallop rhythm and arrhythmia.
-Pertinent abnormal PE/Chem/CBC/UA Results: 02/2023- Chem WNL; CBC mild neutrophilia with monocytosis and eosinophilia.
-Current medications: Budesonide 1mg BID (unsure duration), B12 250 ug when possible (owner has difficulty with injections), buprenorphine (unsure dose and frequency).
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Not requested
-Imaging performed by: Andi Parkinson, BS, RDMS.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 50mm/s; 10 and 20mm/mV. aVF cannot be seen. What is suspected to be the sinus beat has a HR of 188bpm, although sequential sinus beats is rare. Frequent premature beats throughout with periods of sustained tachycardia at 300bpm identified. A ventricular origin is suspected although SVT is not ruled out.
ECG diagnosis: Underlying sinus rhythm with multiform tachyarrhythmias; suspect VT.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is irregular without significant hypertrophy. The LV chamber is mildly increased. Mild systolic dysfunction. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are asymmetric and irregular. The endocardium also appears remodeled. The left atrium is mildly dilated. The mitral valve is normal in structure and mobility. No MR. The right atrium is normal. The right ventricle is normal. No TR. Blood flow through the LVOT and RVOT are normal in velocity. No pleural or pericardial effusion seen. No obvious cardiac tumors. Irregular tachycardia throughout.

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	256	0.55	1.8	0.55	33	65
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	1.6	1.6		0.8	1.0	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

Restrictive/unclassified cardiomyopathy (R/UCM) is suspected. This diagnosis is based upon left atrial and ventricular dilation with remodeling and fibrosis of the endocardium and LV dysfunction. Fortunately, with only mild left atrial dilation the risk for complication is relatively low; however, there is high risk for progression going forward. No additional structural issues are identified.

Of great concern, malignant arrhythmias are noted on the ECG with sustained tachycardia at 300bpm. Unfortunately multiform arrhythmias are extremely difficult to diagnose definitively; however, there is suspicion for ventricular tachycardia in this case. This alone can lead to the above echo findings (ie tachycardia-induced cardiomyopathy), and treating the arrhythmia is of the utmost importance. Use of atenolol is suggested as this has both ventricular and supraventricular properties in cats. Reassessing once stabilized may help shed light on the definitive underlying arrhythmic issue (ie when rates are lower).

Given mild atrial dilation, no medications are indicated at this time. With any further atrial dilation, Pimoendan, Plavix and potentially an ACEI can be considered. Many cats with cardiomyopathy will remain occult/asymptomatic for extended periods of time, however there is a subset that will experience more rapid progression to clinical signs in the first few years after diagnosis. Prognosis is guarded.

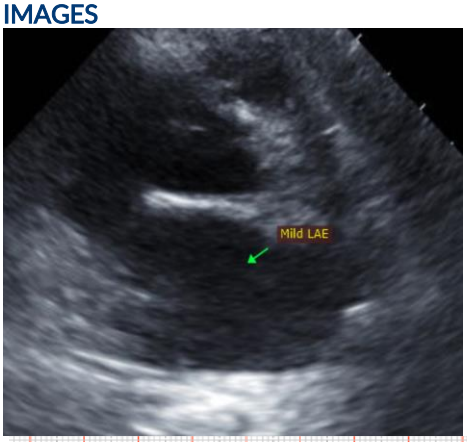
Anesthetic risk is considered moderately elevated, with risk for fluid overload, spontaneous CHF, hypotension, etc. Judicious IV fluid rates are advised to avoid fluid overload. Drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid ketamine, telazol, acepromazine and Dexdomitor. A reasonable protocol would include opioid/benzodiazepine pre-medication, propofol induction, isoflurane gas. Avoid steroids if possible.

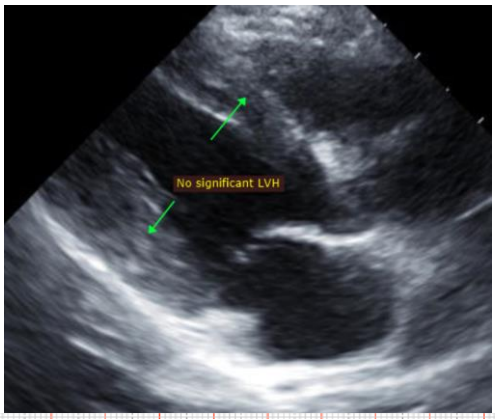
PLAN

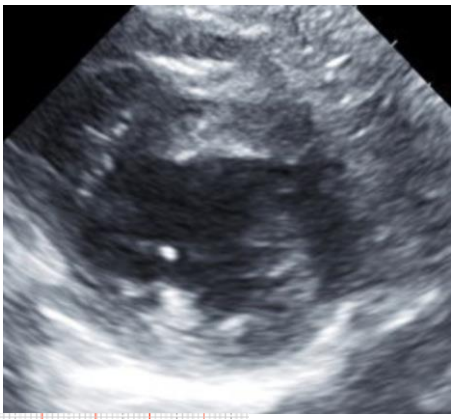
Institute atenolol 6.25mg PO q12h. Reassess ECG in 5-7 days, sooner if any decline in the interim. Baseline BP recommended.

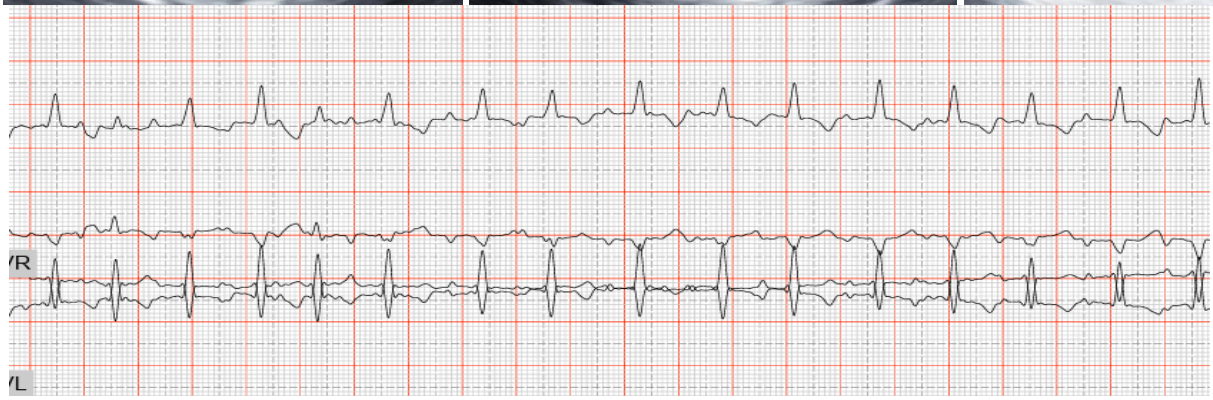
Recommend recheck echocardiogram in 6 months to assess for progression and need for medications, sooner if clinical signs arise.

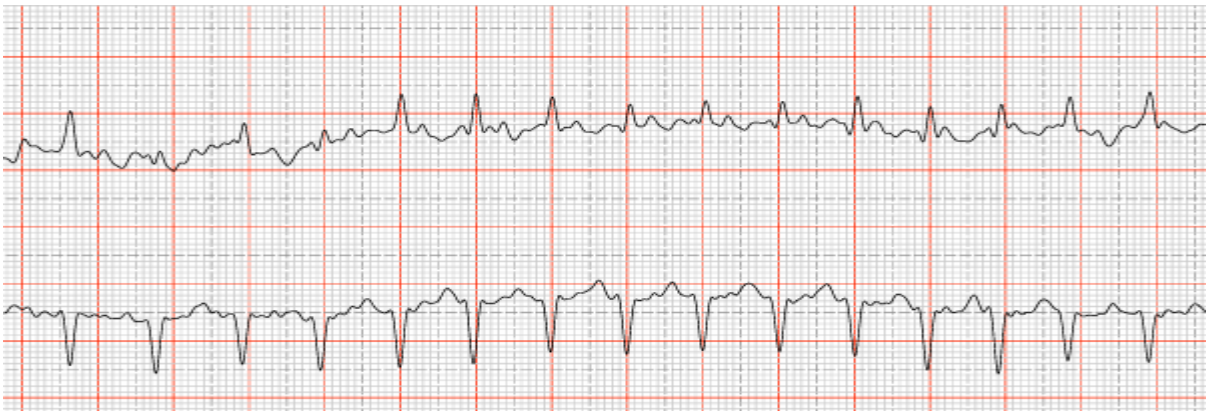
IMAGES











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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