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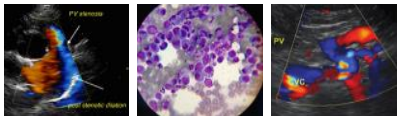

SonoPath
Clinical Sonography & Telecytology
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PATIENT
Max Gabinet

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
6.12.07

WEIGHT
12.6lbs

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

HOSPITAL NAME
Banfield Towson

REFERRING VET
Dr. Washington

INVOICE
30150

DATE
4.10.23

PRESENTING CLINICAL SIGNS

History: Patient is hyperthyroid. Heart murmur.
-Pertinent abnormal PE/Chem/CBC/UA Results: All labs WNL.
-Current medications: Felimazole 2.5mg BID.
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Declined at this time.
-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 190bpm 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. No ectopic beats, pauses or dysrhythmias observed.
ECG diagnosis: Normal sinus tachycardia.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is moderate to severely hypertrophied with regions of irregularity. There is a diffusely hyperechoic endocardium consistent with fibrosis. There is moderate papillary muscle hypertrophy and remodeling. Adequate systolic function. The left atrium is severely enlarged with auricular involvement. No obvious smoke, no thrombi seen. The right atrium is normal. The right ventricle appears normal. The mitral valve is normal, with normal mobility. No evidence of systolic anterior motion. Mild central mitral regurgitation present. There is no obvious tricuspid regurgitation. Blood flow through both the LVOT and RVOT is normal in velocity. Small volume pericardial effusion. No obvious pleural effusion seen. No obvious cardiac masses.

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	5.7	NM	0.86	1.5	0.85	40	74
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	2.8	2.6		0.9	0.6	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 cardiomyopathy (HCM) is a rule out diagnosis for LV hypertrophy once a patient is confirmed euthyroid and normotensive. Assuming the thyroid is well controlled, hypertension should certainly be considered. This is likely end-stage disease given significant hypertrophy and development of effusion. The left atrium is severely enlarged, indicating high risk for spontaneous CHF and/or blood clot events. These findings confirm the origin of pericardial effusion is likely to be early CHF. The ECG is unremarkable with a normal sinus rhythm.

Immediate full lifelong cardiac supportive medications are recommended as below. If the patient is or becomes tachypneic, a dose of injectable Lasix may be helpful (2mg/kg) +/- recommend referral for overnight supportive care/oxygen therapy.

The mean survival time for cats with CHF is 8-12 months, however most cats are able to maintain a good quality of life on medications. Patient will always be at high risk for recurrent episodes of CHF and development of blood clots in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.

Avoid anesthesia, steroids and fluid therapy unless absolutely necessary in the future.

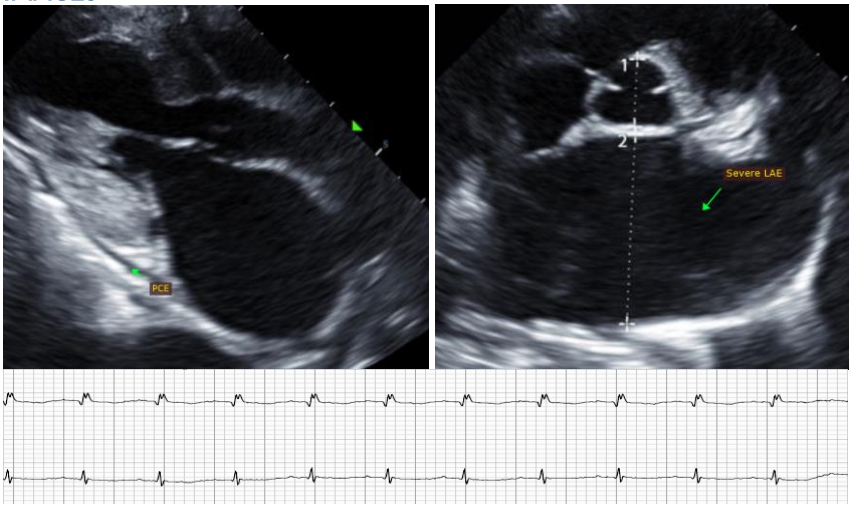
PLAN

Screening BP. Consider injectable Lasix dose/hospitalization if indicated. Administer Lasix 1-2mg/kg PO q12h. Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges and should be coated in entirety or administer in a gel cap). Institute Pimobendan 1.25mg PO q12h.

Monitor renal values, BP and effusion status in 1-2 weeks. If normotensive and doing well at that time, reinstitute vasodilator ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h. Monitor BP and renal values every 3-4 months lifelong.

A recheck echocardiogram is recommended in 4-6 months to assess progression.

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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