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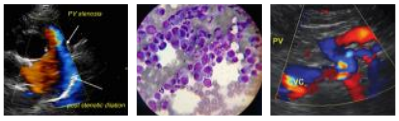

SonoPath
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PATIENT
Dexter Charnuault

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
3.10.14

WEIGHT
10.8lbs

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

HOSPITAL NAME
White Marsh Animal Hospital

REFERRING VET
Dr. Danna

INVOICE
23048

DATE
3.11.22

PRESENTING CLINICAL SIGNS

History: Grade 3/6 murmur. Hx HCM. L side- decreased lung sound. R side- no air noises noted.
-Current medications: Furosemide 12.5mg ¼ SID, Gabapentin 250mg/5ml 1mL night prior to vet visit and 2 mL prior to vet visit. Clopidogrel 18.75mg SID, Benazepril 1.25mg SID.
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Requested/Approved.
-Imaging performed by: Stephanie Pearce RDCS, RVT.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is markedly hypertrophied with extensive remodeling of the endocardium. Obliteration of the LV chamber. There is a diffusely hyperechoic endocardium consistent with fibrosis. There is severe papillary muscle hypertrophy and remodeling. Decreased systolic function. The left atrium is severely enlarged with a horizontal component and auricular involvement. Significant intraatrial smoke. The right atrium is moderately dilated. The right ventricle appears affected as well, with diffuse mild hypertrophy. The mitral valve is normal, with normal mobility. No evidence of systolic anterior motion. There is no obvious mitral regurgitation present. There is no obvious tricuspid regurgitation. Blood flow through both the LVOT and RVOT are normal in velocity. Small volume pericardial effusion. No 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	4.9	NM	0.8	1.0	0.84	29	50
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	2.4		1.0	0.7	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. Given the degree of thickening with RV involvement however, primary disease is suspected. Hypertension and hyperthyroidism should still be ruled out as complicating factors. The left atrium is significantly enlarged with evidence of smoke, indicating high risk for spontaneous CHF and/or blood clot events. The right heart is also affected with moderately right atrial enlargement. Significant systolic dysfunction has developed, indicated end-stage disease. Finally, there is significant pericardial effusion noted which is most likely cardiogenic in origin and is supportive of recurrent decompensation in light of clinical history. PCE in cats with CHF rarely requires removal; however, if the patient experiences signs of further decompensation the volume should be reassessed as pericardiocentesis may become necessary to improve stability.

Immediate full lifelong cardiac supportive medications are recommended as below. If the patient is significantly tachypneic in hospital, a dose of injectable Lasix may be helpful (2mg/kg) +/- recommend referral for overnight supportive care/oxygen therapy. Finally baseline chest radiographs and blood pressure are highly recommended if not recently performed.

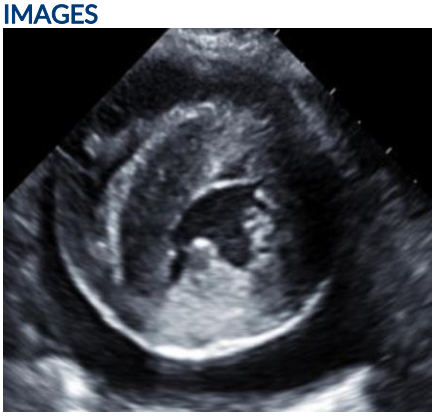
The mean survival time for cats with CHF is 8-12 months, however most cats are able to maintain a good quality of life on medications. Patient will always be at high risk for recurrent episodes of CHF and development of blood clots in the future. Monitoring of sleeping breathing rates at home is recommended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

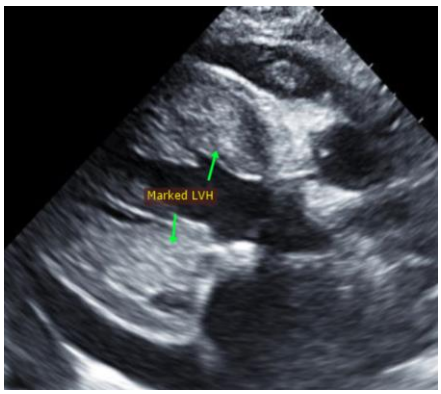
Avoid anesthesia, steroids and fluid therapy unless absolutely necessary in the future.

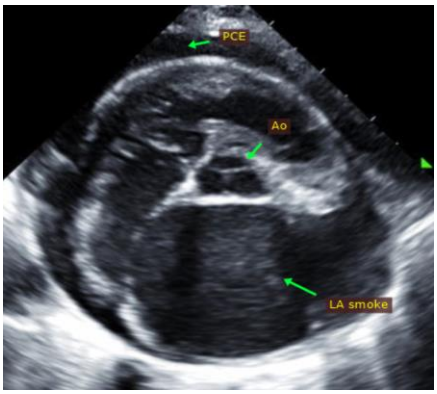
PLAN

Screening BP/T4. Baseline CXR is recommended. Consider injectable Lasix dose/hospitalization if indicated. Administer Lasix 1-2mg/kg PO q12h. Continue Plavix as prescribed. Discontinue Benazepril in this case. Institute Pimobendan 1.25mg PO q12h. If any decline, immediate reevaluation of PCE is recommended to determine if a tap is necessary.
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.

Maggie Machen Lamy, DVM
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