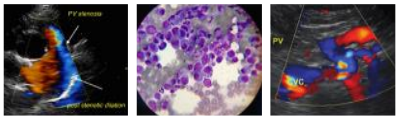
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Tyner Crain

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

13 years

WEIGHT

10.4lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Not provided

INVOICE

21082

DATE

9/17/21

PRESENTING CLINICAL SIGNS

History: Cat presented RDVM (8/30/2021) for severe corneal ulcer and weight loss. SI RR/RE elevation noted with stress. Owner reported that next day 8/31/21 cat was unusually lethargic and inactive. Physical examination: Increase respiratory rate with any type of stress and lung sounds appeared dull ventrally with quiet heart sound on right side of thorax. Pleural effusion noted. Transfer to Animal ER Hospital in Bel Air where 305 cc of chylous-like fluid removed. Cat discharged stable 24 hours later (9/2/21). Seen at Fork Vet (9/3/21) -doing well with no signs of respiratory issues, clear lungs and normal cardiac rate and rhythm with no auscultible murmur. Continue with medications from ER and topical therapy of right eye. Seen at Fork Vet (9/10/21) – again increased respiratory rate and effort. CXR - pleural effusion.
-Current medications: Amlodipine 2.5mg - 1/4 tablet (0.625mg) QD, Furosemide 12.5mg - 1/2 tablet (6.25mg) QD
-Sedation used: Sedation not required for scan.
-STAT: STAT REPORT REQUESTED

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal with regions of remodeling. There is a diffusely hyperechoic endocardium consistent with fibrosis. The systolic function is decreased with evidence of diastolic dysfunction as well. The papillary muscles are mildly remodeled. The left atrium is severely dilated. No obvious spontaneous contrast; no obvious thrombus. Mild central MR due to annular stretch. The right ventricle is also affected, with diffuse fibrosis and remodeling. Moderate RA dilation. Mild central TR. Blood flow through the LVOT is low normal velocity. Trace pericardial effusion. Large volume pleural effusion. No obvious cardiac tumors.

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	4.7	112	0.38	2.1	0.46	26	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	2.0		0.83	NM	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 finding of severe biatrial enlargement in the face of normal/decreased LV wall thickness and systolic dysfunction is most consistent with Restrictive Cardiomyopathy (RCM), however some historical infectious or inflammatory insult to the myocardium cannot be definitively ruled out. The biatrial dilation is causing insufficiency of both AV vales, and systolic dysfunction has developed.

The finding of this degree of biatrial dilation confirms the origin of the tachypnea and effusion is spontaneous congestive heart failure, and lifelong medications are warranted as below with an increased Lasix dose. Amlodipine is being administered without explanation; a BP should be assessed to determine if this is warranted as many CHF patients are hypotensive. If BP <130mmHg, discontinue. This patient is at high risk for thromboembolic events regardless of medications and this should be expressed to the owner (monitor for neurologic change, acute paralysis/lameness, etc.). **Consider hospitalization for continued stabilization, oxygen and Lasix therapy.** A thoracocentesis should also be considered due to effusion and instability. The prognosis is **poor to grave**, with a mean survival time for cats with CHF <8-12 months, however most are able to maintain a good quality of life on medications if able to be stabilized. There will always remain risk for recurrent episodes of CHF, development of blood clots, arrhythmias, and/or sudden death in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.

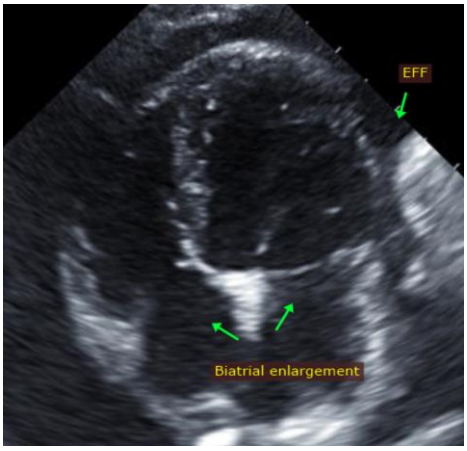
PLAN

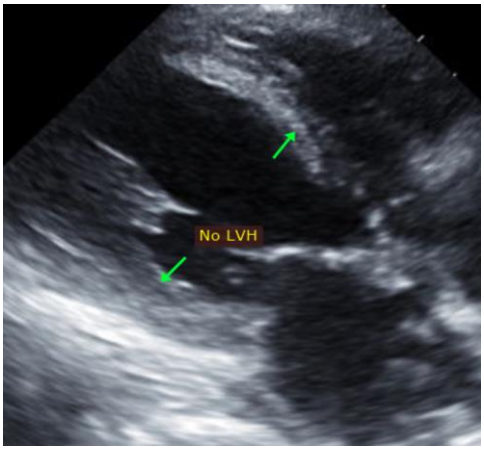
Consider thoracocentesis, hospitalization, oxygen, IV diuretic in hospital until stabilized due to effusion. Oral medications: furosemide 1-2mg/kg PO q12h. Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges). Institute Pimobendan (off label use) 1.25mg PO q12h. Unclear if Amlodipine is warranted at this time; discontinue at least for the short term.

Once stabilized, eating well at home and BP >130mmHg, consider addition of vasodilator ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.

Recheck renal values in 10-14 days to ensure tolerance of medications, then every 3-4 months lifelong. A recheck echocardiogram is recommended in 4-6 months to assess for 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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
Email: info@sonopath.com