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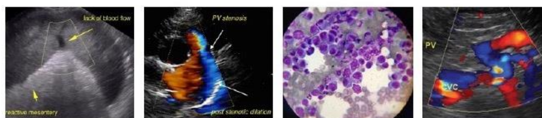


THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT
Squeek Llewellyn

SPECIES
Feline

BREED
DSH

SEX
Female Intact

AGE
10years

WEIGHT
10.14lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Kelly Reschny, RVT

HOSPITAL NAME
Gagemount Animal Hospital

REFERRING VET
Dr. Milliken

INVOICE
24426

DATE
5/26/22

PRESENTING CLINICAL SIGNS

History: Presented May 24/22 listless, not herself, laying on her side, (last seen Aug. 1/18) eating very little; not moving; normal feces in litter and urinating normally according to owner.
-Abnormal PE/Chem/CBC/UA Results: CBC ;WNL except mild monocytosis 0.6 (0.0 - 0.5).
Chemistry abnormalities: Glucose 11.6 (4.0 - 9.7) SDMA 18 (0-14) calcium 2.0 (2.2 - 2.7) T. Protein 56 (63 - 88) Albumin low normal 27 (26 - 39) Globulin 29 (30 - 59) T4 is normal low 18.6 (10 - 60).
Prelim AUS results: Pyometra

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is decreased globally with a diffusely hyperechoic endocardium. The systolic function is markedly depressed. The papillary muscles are mildly remodeled. The left atrium is severely dilated. No obvious spontaneous contrast; no obvious thrombus. No MR. The right ventricle is also affected, with diffuse fibrosis and remodeling. Severe RA dilation. Mild central TR. Normal velocity. Blood flow through the RVOT is decreased in velocity. Trace pericardial effusion. Moderate volume pleural effusion. Ascites on abdominal images. No obvious cardiac tumors.

CARDIAC CHART

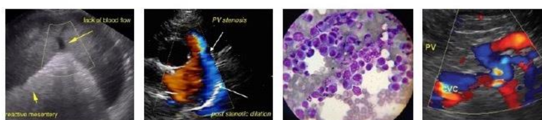
FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	4.6	NM	0.28	2.1	0.30	9	15
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO 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	1.9	1.5		NM	0.52	NM

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*
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

These finding are most consistent with dilated cardiomyopathy (DCM); however, end-stage restrictive disease or some historical infectious or inflammatory insult to the myocardium cannot be ruled out. DCM/LV failure in cats is quite unusual, and possible contributing issues should be considered such as an atypical diet, myocarditis or other insult to the myocardium, etc. Regardless, severe four chamber dilation is present with marked systolic dysfunction reflecting high risk for decompensation.

This study confirms the origin of the clinical signs and effusion is congestive heart failure, and lifelong medications are warranted as below. This patient is at high risk for thromboembolic events regardless of medications and this should be expressed to the



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owner (monitor for neurologic change, acute paralysis/lameness, etc.). Highly recommend hospitalization for stabilization, oxygen and Lasix therapy based upon patient presentation. A thoracocentesis should also be considered if not already performed pending evaluation of patients' stability.

Without serial examinations it is difficult to know if the finding of pyometra is related or not. Myocarditis could theoretically link the two findings, and a cTnI may be useful. That being said, the prognosis and treatment is independent, with simply cardiac support and treatment for CHF. **If anesthesia is necessary in this case, there is HIGH risk for complication and immediate referral to a multi-specialty center with an ECC specialist and anesthesiologist is strongly recommended.**

The prognosis is poor to grave overall, 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.

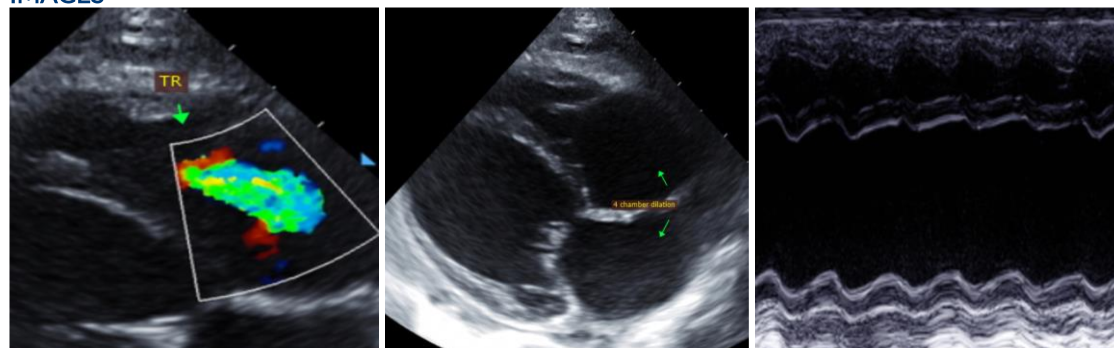
PLAN

Consider immediate referral to a facility with an ECC specialist if elected. Consider thoracocentesis, hospitalization, oxygen, IV diuretic in hospital until stabilized due to effusion. Consider a cTnI as discussed. Treatment for pyometra should be based upon the AUS report.
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.

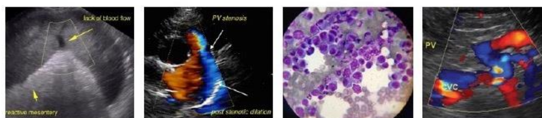
Monitor renal values and BP in 10-14 days to ensure tolerance of medications, then every 3-4 months lifelong.

A recheck echocardiogram is recommended in 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.



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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)
info@sonopath.com