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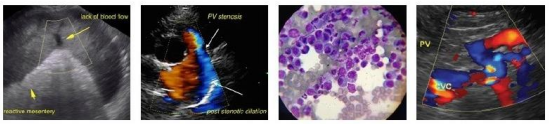


IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT
Buster IFTIGER

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
~11 years

WEIGHT
15lbs; 6.8kgs

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

IMAGING PERFORMED BY
Loetitia St-Jacques, LVT/RVT

HOSPITAL NAME
VCA Feline Animal Hospital

REFERRING VET
Dr. Fleming

INVOICE
21150

DATE
9/21/21

PRESENTING CLINICAL SIGNS

History: Presented for further diagnostics; not improved at home. Echo reassessed at time of AUS. Lasix was increased since last week's evaluation. AUS showed lymphadenopathy.
-Current medications: Furosemide 10mg PO TID, Atenolol 6.25mg PO q24h, Benazepril 2.5mg PO BID.
-Pertinent previous echo findings (8/2019 MML): Severe LVH, RVH, moderate RAE, moderate to severe LAE, moderate MR, moderate SAM, mild TR. IVSd: 0.83, LVWd: 1.0, AV max: 3.5, LA; 2.0.
*NOTE: Additional image set evaluated.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mildly hypertrophied with regions of irregularity. The LVOT flow velocity is normal. No obvious SAM. Mild MR due to annular stretch. There is normal LV diameter in diastole, adequate function. Mild papillary muscle hypertrophy with remodeling. The left atrium is markedly dilated with a horizontal component. Obvious spontaneous contrast seen in both atria. The right atrium is severely dilated as well. The right ventricle is mildly hypertrophied. There is mild to moderate TR. TR velocity consistent with mild to moderate pulmonary hypertension. The flow through the RVOT is normal in velocity. Scant pericardial and pleural effusion. No evidence of cardiac tumors.
*NOTE: Reassessment 9-21-21 did not show significant differences from the prior study; however, no persistent effusion was noted.

CARDIAC CHART

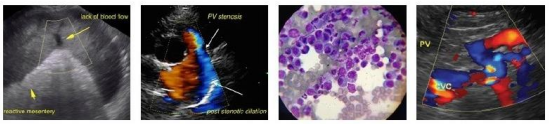
FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	6.8	NM	0.6	1.8	0.67	60	90
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO 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	2.5	2.5		1.5	1.7	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

End-stage cardiomyopathy with biventricular involvement persists, with evidence of significant progression. The LV wall continues to decrease, consistent with burnout or end-stage disease. Both atria are severely enlarged with smoke identified; however, no obvious thrombus formation. No obvious LVOT obstruction is seen, and the overall heart rate appears relatively low. Follow up is advised as Atenolol may need to be weaned or discontinued. Finally, and most importantly, scant pericardial and pleural effusion is identified suggesting recurrent congestive heart failure.

Continued full cardiac support is recommended as below. If Lasix has recently been increased and the patient has improved, this should be continued. If no changes have been made, certainly an



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increase is warranted as below. A heart rate should be evaluated; if <140bpm stressed discontinuing Atenolol is recommended going forward. Finally, a baseline blood pressure is strongly recommended as many cases with effusion will present hypotensive. If <130mmHg, Benazepril should also be discontinued. Finally, Plavix is strongly recommended if able to be administered in this patient and Pimobendan could also be considered. As an aside, this patient does appear unstable and if the clinical signs persist or worsen hospitalization is strongly recommended. Long-term is prognosis remains poor to grave. If any symptoms of a peripheral thrombus develop, such as paralysis, humane euthanasia should certainly be considered.

The patient will always be at high risk for recurrent episodes of CHF, development of blood clots, and/or malignant arrhythmias/sudden death in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for response to medications and progressing to recurrent CHF at home.

PLAN

Consider alter Lasix dose as discussed if not recently performed. If needed, increase to TID dosing. Assess heart heat and blood pressure and wean/discontinue Atenolol and Benazepril as discussed. Consider institute Plavix if possible: 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety). Consider institute Pimobendan if possible: 1.25mg PO q12h. Hospitalize if needed.

Recheck renal values and BP in 1-2 weeks, then every 3-4 months lifelong.

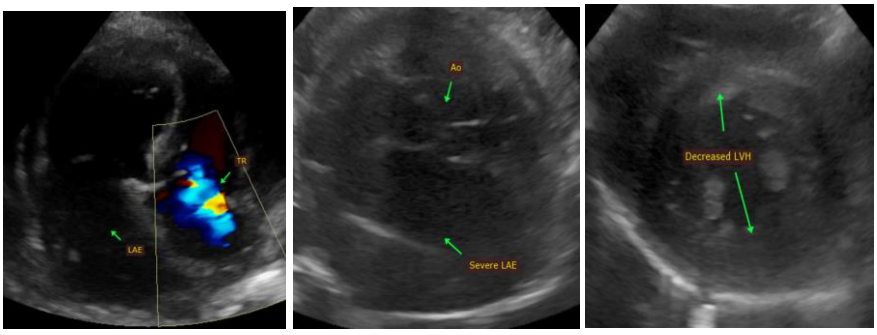
Going forward, a recheck echocardiogram is recommended in 6 months to assess progression.

Addendum 9-21-21 Compared to the prior study, the most significant change is resolution of pericardial effusion. This is good news; however, if the patient is persistently doing poorly despite this then CHF is unlikely to be the cause. Consider further evaluation of systemic findings, etc. Renal values should be monitored carefully, as the patient is on quite a high dose of Lasix (4.4mg/kg/day). Consider decrease mid-day dose to 5mg if possible. Assuming the BP has been assessed and is >130mmHg, continuing atenolol and Benazepril is reasonable.
Plan: Consider decrease Lasix to 10mg am, 5mg mid-day, 10mg pm. Assuming BP is 130mmHg, continue Benazepril as prescribed. Assuming HR is 140-160bpm, continue atenolol as prescribed.

Reassess renal values every 3-4 months lifelong, sooner if inappetence/lethargy worsens.
A recheck echocardiogram is recommended in 6 months.

IMAGES

9-14-21



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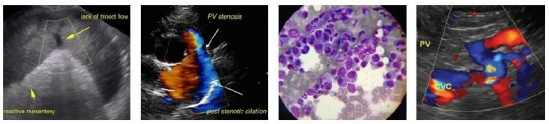

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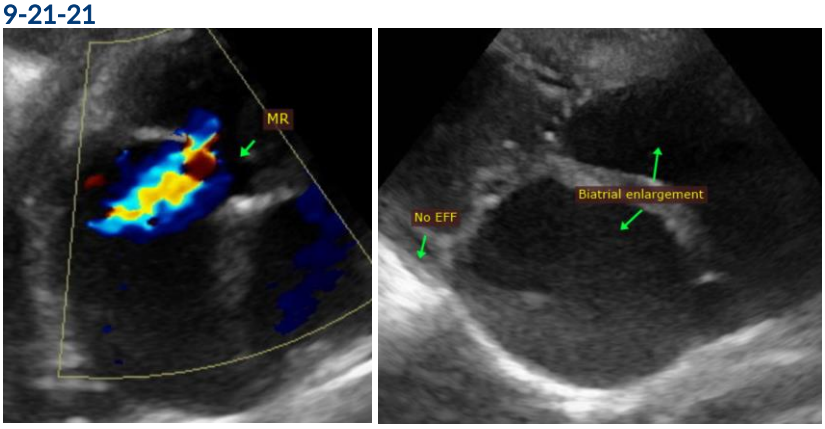

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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