



PATIENT

Elsa Cormier

SPECIES

Feline

BREED

DSH

SEX

FS

AGE

1.5 years

WEIGHT

3.56kgs

INTERPRETED BY

Maggie Machen Lamy,
DVM DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kelly Reschny, CVT

HOSPITAL NAME

Hamilton Regional
VEC

REFERRING VET

Dr. Bourque

INVOICE

23419

DATE

4/4/22

PRESENTING CLINICAL SIGNS

History: Dyspnea, 3 days duration. Pleural effusion diagnosed.
Abnormal PE/Chem/CBC/UA Results: Felv fiv snap Dec 2020 was neg.
Pleural effusion Tapped clear - slightly pink fluid. CXR: Suspect pleural effusion, pulmonary edema, cardiomegaly; CHF.

ECHOCARDIOGRAM FINDINGS *Anatomic distortion limits imaging.

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. The LV is decreased in dimension in diastole with adequate function. Bowing of the IVS in systole consistent with elevated RV pressure. Flow can be seen crossing the IVS in some views; not confirmed on Doppler or 2D imaging however a VSD is suspected. The left atrium is mildly dilated (small aortic root falsely elevating LA:Ao). Mild eccentric mitral regurgitation. Atypical flow seen during diastole within the LA. The right atrium is severely dilated without obvious spontaneous contrast. The right ventricle is markedly dilated with increased wall thickness. Mild tricuspid regurgitation. The MPA is severely dilated; no obvious pulmonic stenosis seen. Blood flow through both the LVOT and RVOT is normal in velocity. Large volume pleural effusion. Scant pericardial effusion seen.

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	3.5		0.36	0.8	0.35	50	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	2.5	1.6	1.5		1.0	0.7	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

Severe complex congenital heart disease is present. The exact underlying pathology cannot be determined in this study, however there is certainly pressure overload of the RV (rule out pulmonary hypertension, an obstruction not seen such as branch PS, or R-L PDA, etc). Several atypical color jets are seen that are difficult to decipher at this juncture; however, a VSD is suspected at minimum. The left heart is severely volume underloaded likely due to massive right heart changes. **Given the young age of the patient and unusual findings, highly recommend referral to a local Cardiologist in this case for further evaluation and advanced imaging (advanced echocardiography, bubble study, CT, etc).**

Regardless of categorical classification, The finding of severe right atrial/ventricular and MPA enlargement would suggest effusions are certainly cardiac in origin, consistent with right-sided



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CHF. Immediate lifelong cardiac supportive medications are warranted as below. If the patient appears unstable or experiences any further decline at home, hospitalization for stabilization and supportive care may be necessary.

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The mean survival time for cats with CHF is <12 months, however most are able to maintain a reasonably good quality of life on medications. There will always remain risk for recurrent episodes of CHF, malignant arrhythmias and/or development of further 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.

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Plan: Highly recommend referral to a local Cardiologist as discussed. Consider hospitalization as discussed. Institute oral diuretic Lasix 1-2mg/kg PO q12h (tablets or consider liquid suspension 10mg/ml). Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges; coat in entirety or place in a gel cap). Institute off label Pimobendan 1.25mg PO q12h. Institute Spironolactone 1-2mg/kg PO q12h.

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Recheck renal values/BP in 10-14 days to ensure tolerance of medications. If patient is doing well at home, is able to be easily medicated and BP >130mmHg, institute ACEI 0.5mg/kg PO q12h at this time.

WEIGHT

3.56kgs

*NOTE: 5 medications can be overwhelming in a cat; if difficult to administer, lasix and Plavix are most important.

INTERPRETED BY

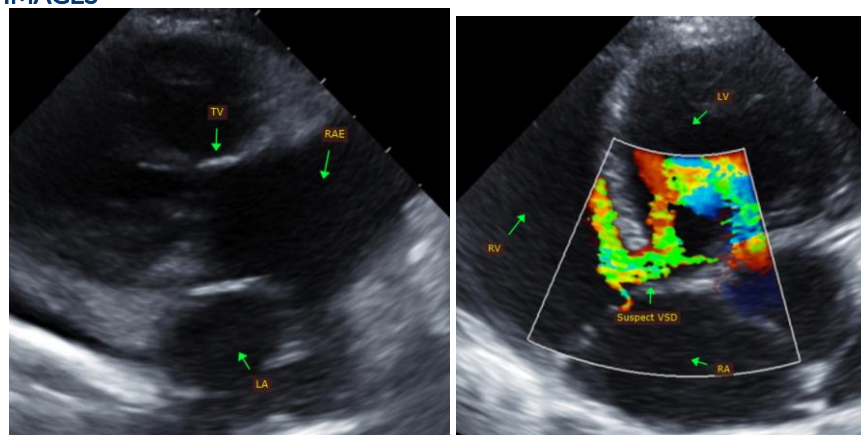
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If referral is declined, a recheck echocardiogram is recommended in 4-6 months to assess progression, sooner if clinical issues arise in the interim.

IMAGES

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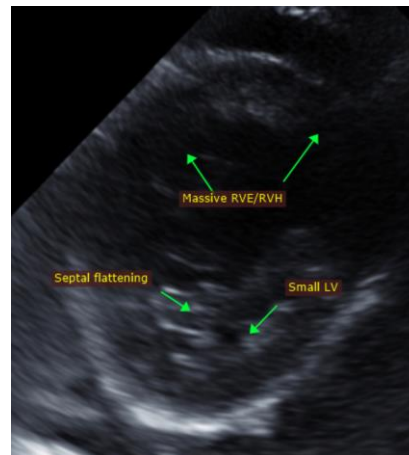
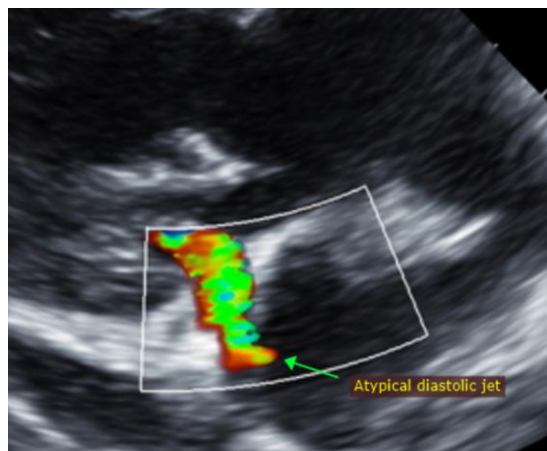
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. 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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