



PATIENT

Buddy Harris

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

7 years

WEIGHT

15.9lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Karen Ebersole,
DVM, DABVP

HOSPITAL NAME

Scanvet

REFERRING VET

Dr. Walsh-Meiczinger

INVOICE

30166

DATE

4/11/23

PRESENTING CLINICAL SIGNS

History: Presented for possible seizure episode. PE: increased RR, no heart murmur audible.
-Abnormal PE/Chem/CBC/UA Results: CBC/Chem/T-4/SDMA: all WNL Snap ProBNP: abnormal.
-Radiographs report (DACVR): Mild globoid cardiomegaly. No mention of CHF.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.
Cardiomegaly. Concern for early CHF.

ELECTROCARDIOGRAPHIC FINDINGS

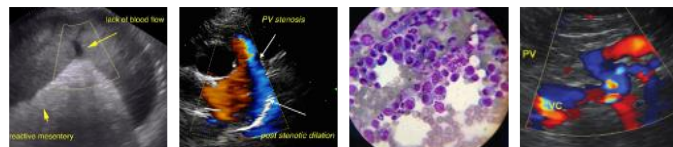
A six lead ECG is available at 25mm/s; 10mm/mV. The underlying rhythm is sinus in origin with an average heart rate of 214bpm and a largely regular rhythm. P for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. Occasional APCs and VPCs throughout; singles only. No additional dysrhythmias observed.
ECG diagnosis: Normal sinus tachycardia with isolated APCs and VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is increased in dimension with regions of irregularity. The LV is normal in dimension. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are remodeled. Systolic function is adequate. The left atrium is severely dilated. No obvious smoke or thrombi. Moderate central mitral regurgitation is seen in systole. The anterior leaflet of the MV is club-like with suspicion for decreased excursion in diastole consistent with mitral valve stenosis. Brief mitral inflows support stenosis. An obstructive component is suspected based upon color flow and 2D imaging, although difficult to visualize and LVOT velocity is normal. No tricuspid regurgitation. The right atrium is normal. The right ventricle is normal. Blood flow through the RVOT is normal velocity. No AI/PI. Scant pericardial effusion seen. No pleural effusion identified.

CARDIAC CHART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LVWd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	7.2	NM	0.80	1.3	0.74	59	91
FELINE CARDIAC PARAMETERS	LA/AO <small>(Boon)</small>	LA/AO HEART BASE (Swe) <small>(Abbott)</small>	LA 2D short axis Base view (cm) <small>(Abbott)</small>	LVOT VEL <small>(m/s)</small>	RVOT VEL <small>(m/s)</small>	E max <small>(m/s)</small>	
NORMAL	<1.5	<1.3	<1.2	<1.6	<1.3	<0.9	
PATIENT	1.8	2.2	2.1	1.6	1.0	NM	
<p><i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i> 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.</p>							



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The diagnosis is suspected mitral valve dysplasia with stenosis. This is a congenital MV abnormality, where the MV leaflets are unable to open normally leading to LA pressure overload and dilation. An obstructive component is suspected, although a lack of a chronic heart murmur and recorded normal LVOT velocity may suggest this is intermittent. The LV wall dimensions are significantly increased, which may be a primary hypertrophic issue (ie HCM), or may be secondary to the aforementioned obstruction. Regardless of categorial classification, severe LA dilation in addition to scant volume effusion in addition to the chest radiographic findings support imminent congestive heart failure. No additional issues are identified.

Assuming the patient can be stabilized, cats with this degree of disease and congestive heart failure unfortunately carry a **poor long-term prognosis**, with an average survival time of <1 year on medications. Depending on severity of symptoms, referral to a 24-hour specialty hospital should be considered, for IV diuresis/O₂/supportive care until the patient is deemed stable. If declined, oral medications are recommended as below.

Mitral stenosis is quite rare in small animals, and even less so in cats. If able to be stabilized, medical management should be continued lifelong. Surgical intervention is possible, however likely requires open heart/bypass in a patient this small. Consultation with a local Cardiologist can be considered once stabilized.

The ECG does show both VPCs and APCs which are no doubt due to structural disease in a patient in crisis. Reassessment is recommended as my hope is stabilizing the structural disease will improve the arrhythmia. No treatment is clearly warranted.

Patient will always be at risk for recurrent CHF, development of blood clots and/or malignant arrhythmias/sudden death going forward. Monitor at home for any progressive labored breathing and/or signs of clot embolization (limb paralysis, neurologic changes, etc.).

PLAN

If the patient is unstable, consider hospitalization as discussed. Oral therapy: Institute Lasix 1-2mg/kg PO q12h. Institute Plavix 18.75mg PO SID (NOTE: this medication is very bitter and may cause foaming at the mouth- coat in entirety). Institute off-label use of Pimobendan 1.25mg PO q12h. No obvious indication for Atenolol at this time.

Recheck renal values/BP/ECG in 10-14 days, then every 4-6 months lifelong. Once deemed normotensive and eating well at home, consider addition of vasodilator ACE-I (benazepril or enalapril) 0.5mg/kg PO BID.

**Note: 5 medications can be difficult in cats. Lasix and Plavix are considered most important. Compound if needed for easier administration.*

Recheck echocardiogram in 6 months to monitor for progression and reassess for need for Atenolol, sooner if any clinical signs arise in the interim.



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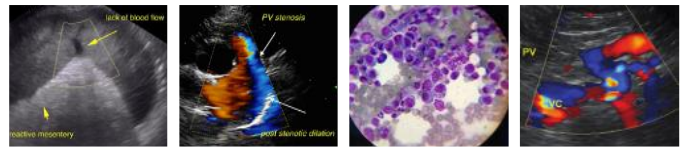
IMAGES



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)
info@sonopath.com



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