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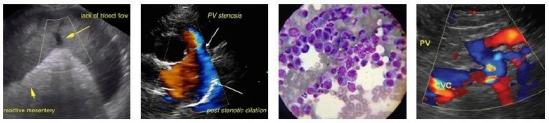


IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT
Boris Brown

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
15 years

WEIGHT
11.9lbs; 5.4kgs

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

IMAGING PERFORMED BY
Loetitia St-Jacques, LVT/RVT

HOSPITAL NAME
Pine Creek Veterinary Clinic

REFERRING VET
Dr Nolet.

INVOICE
22624

DATE
2/16/22

PRESENTING CLINICAL SIGNS

History: Presented for collapse and struggling to walk on hind limbs. Had recovered by the time of presentation. Rapid heart rate noted.
-CXR: Concerning for cardiomegaly and CHF.
-Current medications: Started on Plavix.
*Sedated alfazalone and torb.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 50mm/s; 10mm/mV. The average heart rate is 214bpm with a largely regular rhythm. The underlying rhythm is sinus in origin with low voltage complexes. P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. Isolated VPCs are seen throughout, singles only and monomorphic. Brief paroxysm of a ventricular rhythm are appreciated; non-sustained with a heart rate only slightly faster than the sinus rate. No supraventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus tachycardia with ventricular arrythmias.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension with an increased chamber size. The LV function is borderline depressed. There is a diffusely hyperechoic endocardium consistent with fibrosis. The left atrium is moderate to severe increased in size. No obvious spontaneous contrast. The right atrium is normal. The right ventricle appears normal. The mitral valve is normal in structure and mobility. No MR or TR. Blood flow through both the LVOT and RVOT are normal in velocity. No PI or AI. No obvious cardiac tumors identified. No effusions seen.

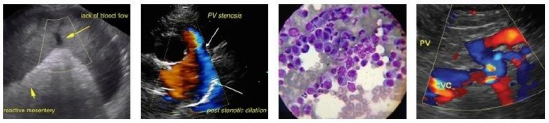
CARDIAC CHART

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	5.4	200	0.58	1.5	0.54	38	72
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	1.73		0.9	1.0	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

Normal LV wall measurements are noted in this study, ruling out typical hypertrophic disease. Mild fibrosis and remodeling is seen which is not considered excessive in a geriatric cat. What is most concerning there is significant left atrial enlargement, in addition to mild LV dilation and



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borderline function, which may be suggestive of unclassified disease. Atrial dilation can also develop secondary to sustained tachycardia (tachycardia-induced cardiomyopathy) which is also a possibility in this arrhythmic cat. No matter the categorical diagnosis, a cat with any degree of atrial enlargement should be followed up closely, as there is evidence of increasing LA pressure which may progress in the future. Serial echocardiography will be necessary to determine progression.

The ECG shows a normal sinus rhythm with isolated VPC's and brief runs of ventricular tachycardia. My suspicion is that this may be a primary arrhythmic issue that is leading to the cardiac changes that are seen here; however, the inverse is also possible. Ultimately this puts the patient at high risk for acute CHF and collapse, which was suspected on exam. While primary VT is suspected, this is exceedingly rare in cats and assessing for underlying systemic conditions is also recommended.

Going forward, referral to a cardiologist is recommended and should be offered to the client. Ventricular arrhythmias in cats carry high risk when considering treatment, as anti-arrhythmic medications can be poorly tolerated. This senior cat will also require management going forward and reassessment and referral would be ideal. If this option is declined, immediate institution of compounded solution of sotalol is recommended, understanding there is risk involved.

Until the arrhythmia is further assessed and treated, instituting full cardiac supportive medications are recommended as below. In the future if the arrhythmia is well controlled, there is a chance that the structural changes may improve, and medications can be reconsidered at that time.

Monitor for any development of clinical signs at home, including labored breathing, cough, syncope or signs of a blood clot (paralysis, neurologic change). Arrhythmic patients will always be at risk for further syncope and/or sudden death going forward.

Elective anesthesia, steroid therapy and/or fluids are contraindicated in this patient at this time.

PLAN

Consider referral as discussed. If declined, initiate sotalol 1mg/kg PO q12h (compound into a solution for easy dose titration). Reassess ECG in 5-7 days post-initiation, sooner if any clinical changes in the interim.

Administer Lasix 1-2mg/kg PO q12h. Institute Pimobendan 1.25mg PO q12h. Institute anti-coagulant Plavix/Clopidogrel 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety).

A recheck renal panel is recommended 1-2 weeks then every 3-4 months life-long.

A recheck echocardiogram/ECG is recommended in 6 months to screen for progressive changes.

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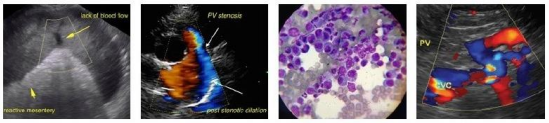

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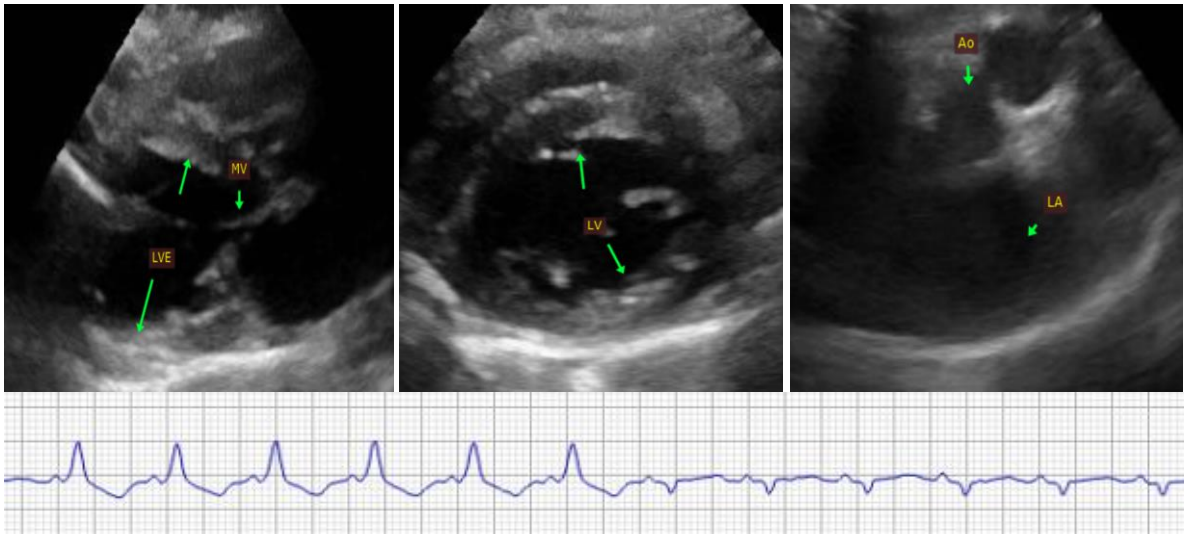
IMAGES



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