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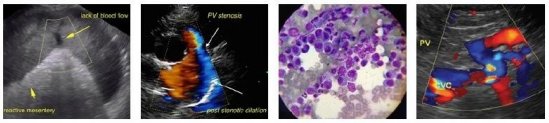

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT
Herman Graves

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
11 years

WEIGHT
9lbs; 4.1kgs

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

IMAGING PERFORMED BY
Loetitia St-Jacques, LVT/RVT

HOSPITAL NAME
Mountain Veiw Animal Hospital

REFERRING VET
Dr. Kalivoda

INVOICE
21079

DATE
9/16/21

PRESENTING CLINICAL SIGNS
History: ProBNP: 100. Labs: WNL including T4.
*Fractious patient. Sedated with alfaxalone

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.
Normal cardiac silhouette increased sternal contact. No obvious evidence of CHF.

ELECTROCARDIOGRAPHIC FINDINGS
A six lead ECG is available at 50mm/s; 10mm/mV. The average heart rate is 166bpm with a largely regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS low voltage. MEA is normal. A single ventricular premature contraction is identified. No supraventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with a single VPC.

ECHOCARDIOGRAM FINDINGS
2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. There is a mildly hyperechoic endocardium consistent with mild fibrosis. The endocardium also appears mildly remodeled. The papillary muscles are normal in size and hyperechoic. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility. Trace TR. No other obvious valve regurgitation. Blood flow through both the LVOT and RVOT is normal in velocity. No pleural or pericardial effusion seen. 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	4.1	176	0.5	1.16	0.51	65	95
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	1.2	1.0		0.9	0.6	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
Overtly normal cardiac structure and function. The LV wall thickness is normal, and there is no evidence of elevated left atrial pressure or underlying pathology at this time. There is mild remodeling and fibrosis of the left ventricular wall, which is considered likely a normal age-related finding. No additional issues are identified.

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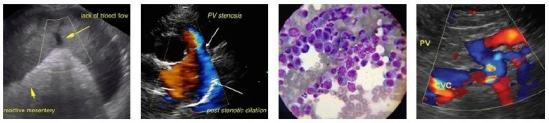

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The ECG is largely normal with a single ventricular premature contraction. What is more concerning is there are several episodes during the echocardiogram were acute tachycardia is observed despite alfaxalone sedation. The heart rate is difficult to measure on 2D imaging; however, suspected to be >300bpm. In light of a single VPC on echo, this may reflect ventricular tachycardia, although in an asymptomatic animal difficult to interpret. Arrythmias are theoretically enough to cause BNP elevation and may be the underlying issue in this case. Ideally, hospitalization for continuous ECG monitoring would be the gold standard approach, given that an extended tracing did not reveal a definitive tachycardia. If declined or not possible given the patient's temperament, close monitoring for signs of arrhythmias at home is advised (acute collapse/lethargy). Cats with sustained arrythmias are unusual and full systemic evaluation should also be considered to assess for any underlying exacerbating issues (such as neoplasia).

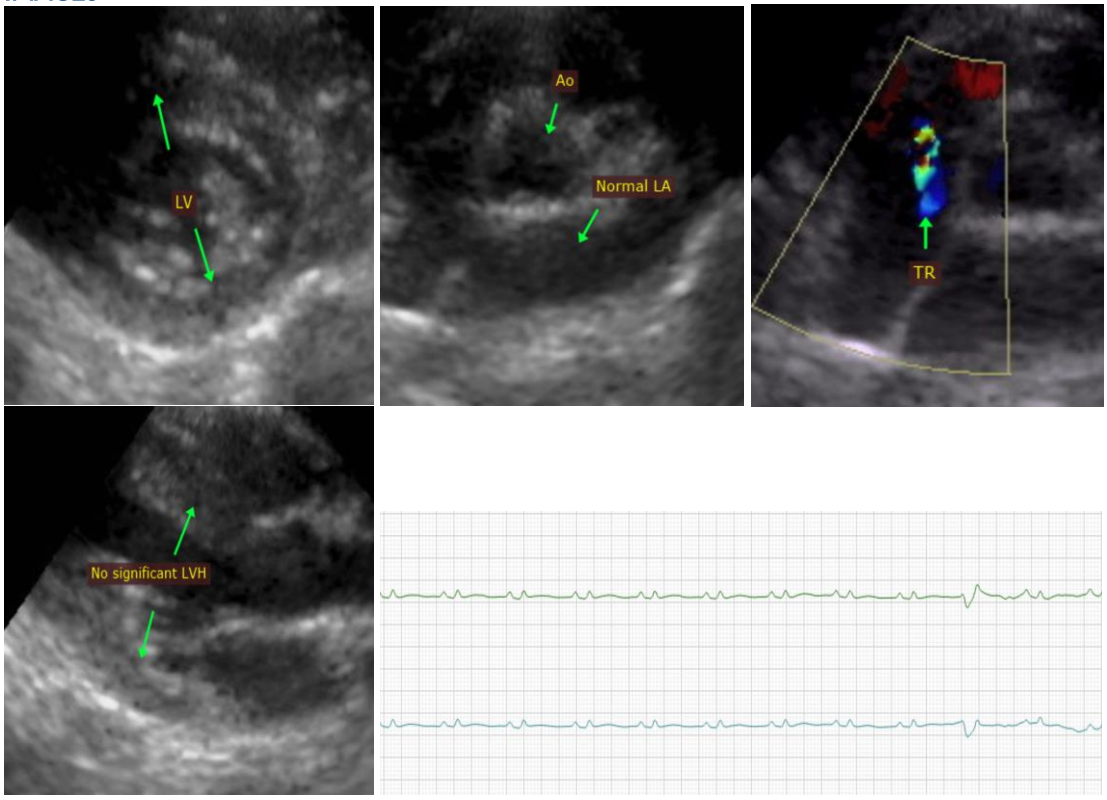
Anesthesia is not advised prior to further arrythmia evaluation. Patient will always be at risk for collapse and sudden death going forward.

PLAN

Highly recommend 12 hours hospitalization for ECG monitoring in attempt to capture periods of tachycardia. If declined or not possible, referral should be considered. If referral is declined or not possible, close monitoring for signs of sustained arrhythmias is advised.

Recommend recheck echocardiogram in 6-12 months, sooner if clinical signs arise.

IMAGES



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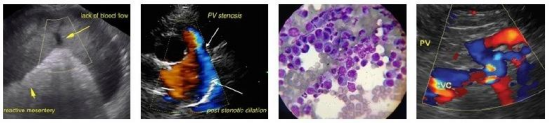

Portable Animal Western Sonography, Inc.
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips 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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com