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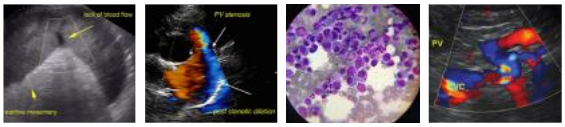

ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT
Neap Pandey

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
8 years

WEIGHT
10.8lbs

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

IMAGING PERFORMED BY
Jenna Walsh, CVT

HOSPITAL NAME
Corvallis Cat Care

REFERRING VET
Dr. Blouin

INVOICE
21264

DATE
9/28/21

PRESENTING CLINICAL SIGNS

History: Recent history of malaise. HR: 120bpm dispute growling. On 9/24 he presented emergently for tachypnea (RR=80) while HR was <100. This was his second episode of tachypnea with bradycardia. He has rapid RR but keeps mouth closed. The second episode lasted 1.5 hours before O gave gabapentin, after which RR=16 and HR=60 Heart Rate and Respiratory Rates On gabapentin today. HR = 110. RR = meowing, between 24 and 80.
-Blood Pressure: 92,112,102mmHg.
-CXR report: No cardiomegaly. No CHF.
-Abnormal PE/Chem/CBC/UA Results: Creatinine was elevated at 2.4 which may be his raw food diet, T4 was suspicious at 3.0 though essentially WNL for an 8-year-old, Free T4 ED elevated at 60.7 (10-50).

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

Normal cardiac silhouette. No obvious evidence of CHF.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 140bpm (range 130-150bpm). The complexes are low voltage making P waves difficult to identify consistently throughout; however, a sinus origin is suspected. No premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Sinus bradycardia.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. There is a diffusely hyperechoic endocardium consistent with mild fibrosis. The papillary muscles are normal in size and hyperechoic. The endocardium appears normal. 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. Normal flow through both the RVOT and LVOT. No obvious TR, AI or PI. 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	4.9	120	0.41	1.46	0.45	46	81
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	1.5	1.3	1.2		0.8	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.

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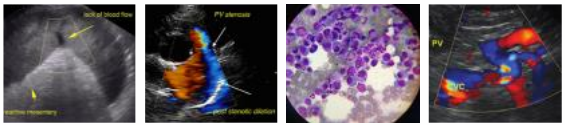

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure and function. The LV wall thickness is normal and there is no evidence of elevated left atrial pressure. No significant valve leaks or other structural issues are documented.

Normal atrial dimensions would suggest the intermittent episodes of labored breathing is certainly noncardiac in origin and other possibilities should be explored.

The ECG does show a relative bradycardia which persists throughout the echocardiogram. The complexes appear sinus in origin likely ruling out AV block; however, with low voltage complexes a six-lead tracing should be considered to confirm the diagnosis. An Atropine challenge is recommended to determine if high vagal tone is in fact the cause of a relatively low resting heart rate as below. If confirmed, causes of high vagal tone should be considered, such as GI or neurologic disease. If the patient's heart rate does not stimulate adequately with Atropine, Sinus Node Dysfunction or AV block is suspected and referral should be considered. Suspicion for the latter is low.

Based upon what is seen here, no medications are indicated at this time.

Pending a normal Atropine Challenge, anesthetic risk is considered low. If the challenge is abnormal, anesthesia becomes contraindicated.

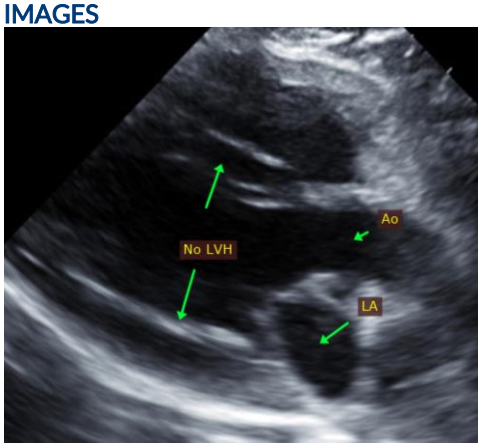
Monitor for a murmur, gallop or signs of cardiac disease going forward.

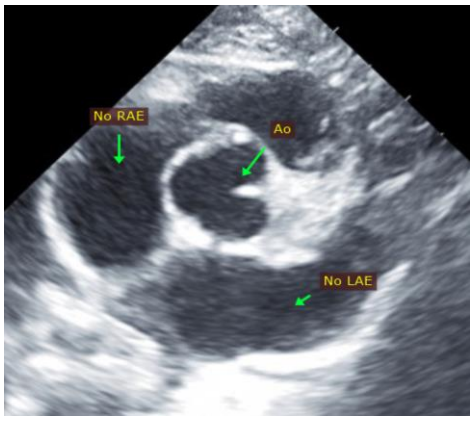
PLAN

Consider a six lead ECG tracing if possible. Atropine Challenge should be administered: Administer 0.04mg/kg atropine IV or IM and assess response. A normal exuberant response >200bpm would suggest high vagal tone and causes of high vagal tone should be further investigated. If the response is lacking, referral is advised.

A recheck echocardiogram is recommended should a murmur, gallop or signs of cardiac compromise be noted in the future.

IMAGES





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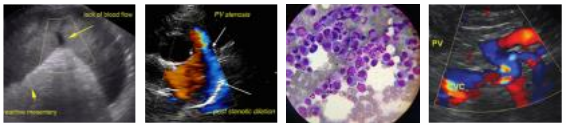

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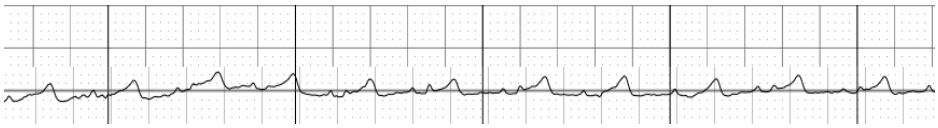

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. 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