



PATIENT

Norman Ritter

SPECIES

Feline

BREED

Domestic Short Hair

SEX

MN

AGE

2007

WEIGHT

8.88lbs

PRESENTING CLINICAL SIGNS

History: Tech appt for lab work early September showed worsening kidney disease. At DVM appointment to assess for cardiac status to start SQF, detected new arrhythmia and ongoing heart murmur. Pet has history of vomiting also. Lungs clear on auscultation.
 Pertinent abnormal PE/Chem/CBC/UA Results: crea 3.3, BUN 38, USG 1.026, 1+ protein, 3+ RBC
 Current medications: None
 Sedation used: Torbugesic.
 Pertinent previous ultrasound results: No previous.
 STAT: Not requested.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at both 25 and 50mm/s; 2mm/mV. The average heart rate is 140bpm. Underlying rhythm appears sinus in origin, although p waves are difficult to visualize. The QRS morphology is inverted with a right-axis deviation. Brief runs of SVT; HR 280bpm. Intermittent APCs. No ventricular ectopic beats, pauses or other dysrhythmias observed.
 ECG diagnosis: Normal sinus rhythm with supraventricular arrhythmias. RAD.

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 fibrosis. The papillary muscles are mildly remodeled and hyperechoic. The endocardium also appears remodeled. The left atrium is normal in size. The right atrium is mildly enlarged. The right ventricle appears normal. The mitral valve is normal in structure and mobility. Trace MR. The TV is mildly thickened, with moderate TR; normal velocity. Blood flow through both the LVOT and RVOT is normal in velocity. No pleural or pericardial effusion seen. No obvious cardiac tumors.

CARDIAC CHART

INTERPRETED BY

Maggie Machen
 Lamy, DVM, DACVIM
 (Cardiology)

HOSPITAL NAME

Everhart Veterinary
 Hospital

REFERRING VET

Dr. AN

INVOICE

21425

DATE

10/7/21

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	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	4.0	134	0.48	1.3	0.49	42	76
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	1.3	1.3		0.98	NM	NM

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

Moderate tricuspid regurgitation is identified. TR in cats is often physiologic, however in this case the volume is significant and there is mild RA enlargement making it more concerning. There is also a significant amount of remodeling and fibrosis of both ventricular walls which is of unknown relevance at this juncture. No additional issues are identified.

The ECG is most consistent with intermittent supraventricular arrhythmias, with APCs and brief runs of SVT up to 250-280bpm. These may be secondary to underlying structural disease, although this patient also has reported systemic issues that may be contributing. Regardless, treatment is warranted as elevated sustained heart rates can have negative impacts both clinically and on structural disease. Recommend institute Diltiazem as below. Any patient with arrhythmias may be at risk for collapse and/or sudden death in the future, and this should be relayed to the owner.

From a structural standpoint, no medications are indicated.

Anesthetic risk is considered mild. With this degree of remodeling and diastolic stiffening, there is an elevated risk for fluid overload in this patient and judicious IV fluid use is recommended. Heart rate stimulating drugs such as atropine, glycopyrrolate or ketamine should be avoided unless medically necessary.

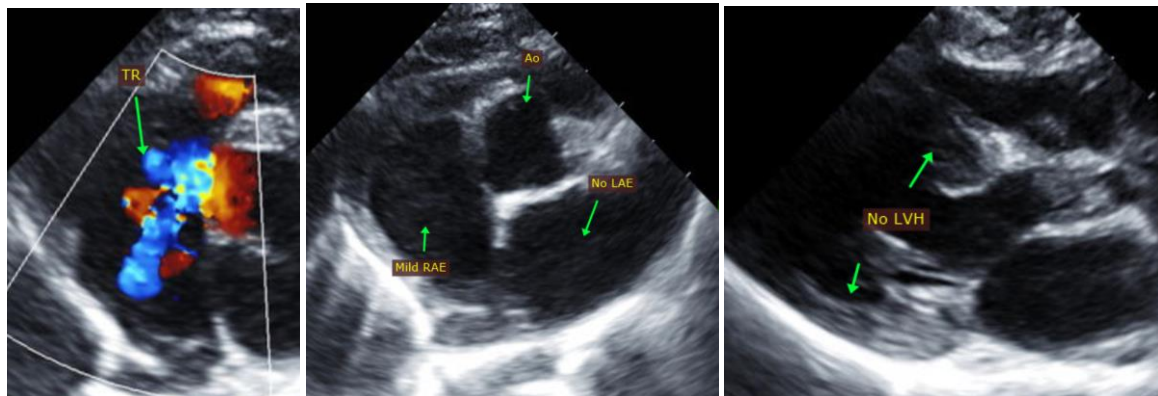
Monitor in the future for respiratory compromise, syncope/lethargy, or signs of a blood clot (paralysis, lameness).

Plan: Institute diltiazem 30mg tabs, give ¼ tab PO q12h Recheck HR/ECG in 1-2 weeks to assess response.

Baseline BP recommended.

Recommend recheck echocardiogram in 6 months to assess for progression.

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

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