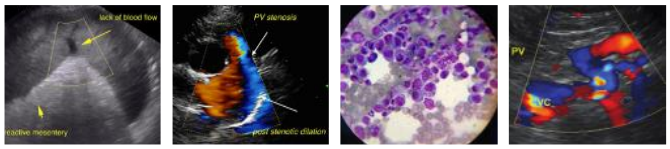
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Theodore Voronin

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

4 Years

WEIGHT

13.08 Pounds

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Mavis McCormick-Rantze

HOSPITAL NAME

Lanier AH

REFERRING VET

Dr. Mavis McCormick-Rantze

INVOICE

13429

DATE

10-1-21

PRESENTING CLINICAL SIGNS

History: Present to me for the first time on 9/29 for a follow up from the ER. Has had 2 episodes in last few weeks of heavy/labored breathing with the most recent being the night before presentation. Responded both times to being put on oxygen. ER did do radiographs (report copy/pasted below). Radiologist report said that heart was big and maybe bronchitis so hesitant to do any steroids. Has not been put on any meds right now.

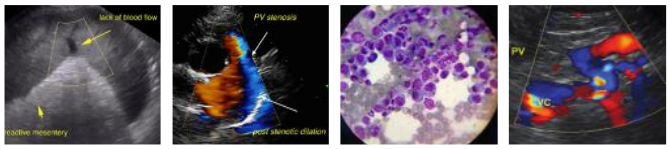
Abnormal PE/Chem/CBC/UA Results: On PE no murmur, lungs clear; BCS 6/9; severe periodontal disease. Radiologist report: History: Open mouth breathing Technique: Orthogonal radiographs of the thorax and abdomen are available for review. Description: The cardiac silhouette is minimally large (vertebral heart score = 7.8, normal < 7.3). There is a mild bronchial lung pattern present, worse caudodorsally. The pulmonary vasculature is unremarkable. No abnormalities of the trachea are seen. The small intestine and stomach are filled with fluid and gas, but no enlargement is seen. The colon has a normal appearance. The hepatic, renal and splenic silhouettes are unremarkable. No evidence of obstructive foreign material is seen. No mass effect associated with the region of the pancreas is seen. Conclusion: Mild cardiomegaly - possible hypertrophic cardiomyopathy Mild bronchial lung pattern The severity of the pulmonary pattern does not match the clinical signs of open mouth breathing and therefore heart failure or an allergic bronchitis are considered equally likely. A furosemide challenge with reassessment of the clinical signs can help determine if the bronchial lung pattern is secondary to cardiogenic pulmonary edema if the signs improve on furosemide alone. Anthony Pease, DVM, MS, DACVR CBC; sl anemic, RBC 6.83; rest wnl Chem: wnl/nsf proBNP 346

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	**BODY WEIGHT** (kg)	**HR** (BPM)	**IVSd** (cm)	**LVIDd** (cm)	**LVWd** (cm)	**FS** (%)	**EF** (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	--	NM	0.5	1.2	0.5	50	--
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE** (Sisson)	**LA** 2D 4-chamber long axis AS to FW (Sisson) (cm)		**LVOT VEL.** (m/s)	**RVOT VEL.** (m/s)	**IVRT** (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7		<1.6	<1.3	40-60
PATIENT	--	1.2	1.2		--	--	NM
Adapted from June Boon,Veterinary Echocardiography,1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics.. The **left ventricle** presented normal thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant



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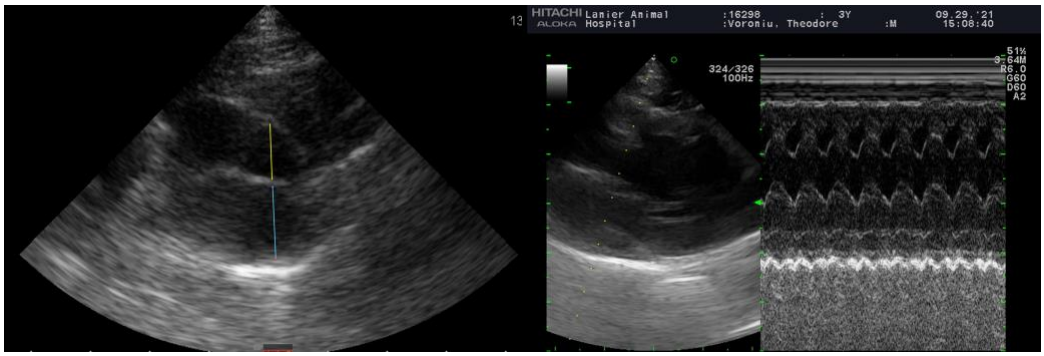
fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions and angles of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

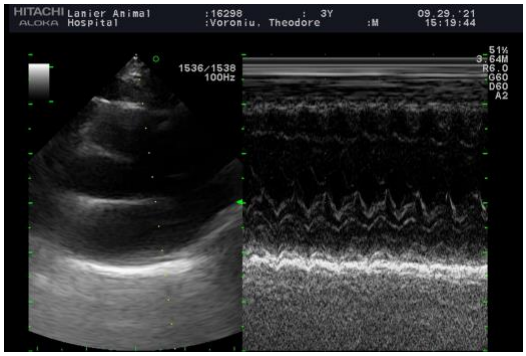
ULTRASONOGRAPHIC FINDINGS

- Normal Cardiac structure and function

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of primary disease responsible for the clinical signs. Paroxysmal arrhythmia cannot be entirely ruled out, however, other causes of exercise intolerance such as obstructive or primary respiratory disease, pain management paroxysmal arrythmia all possible yet structurally and functionally the heart appears normal.





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. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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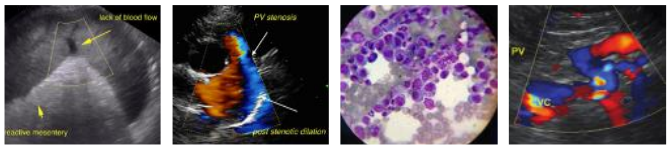

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