SonoPath
Clinical Sonography & Telecytology
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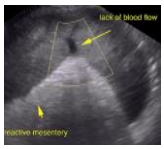
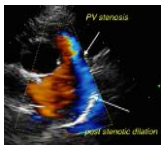
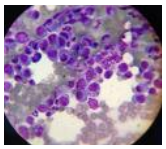
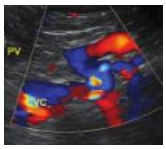

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Loki Hensley

SPECIES
Canine

BREED
Brussels Mix

SEX
Neutered male

AGE
9 years

WEIGHT
13 pounds

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Nicole Gotfredson

HOSPITAL NAME
Buffalo Veterinary Clinic

REFERRING VET
Dr. Garry Gotfredson

INVOICE
10414ag

DATE
04/18/2022

PRESENTING CLINICAL SIGNS

History: Patient came in for frequent inappropriate urination for the past 2 days. Examination reveals grade 2-3 heart murmur on the left side. No clinical signs at home. Radiographs confirm bladder stones in bladder and urethra. Would like echocardiogram prior to surgery

Abnormal PE/Chem/CBC/UA Results:

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT	NM	NM	NM	1.38	44	76	0.2
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LA** 2D short axis Base view (cm)	**LVIDd** Avg; 2D and m-mode short axis (cm)	**LVIDs** Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	NM	NM	0.88		2.6	2.5	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis. The left ventricle presented thicknesses with linear contour and was not dilated nor restricted. The myocardium presented normal echogenicity without subjective evidence of significant 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 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. 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. No echographically detectable evidence of infiltrative disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window.

ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure and function.
- Thickened mitral valve leaflets -more pronounced in septal leaflet.

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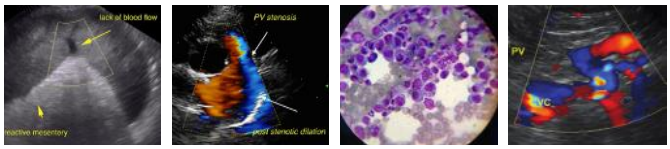

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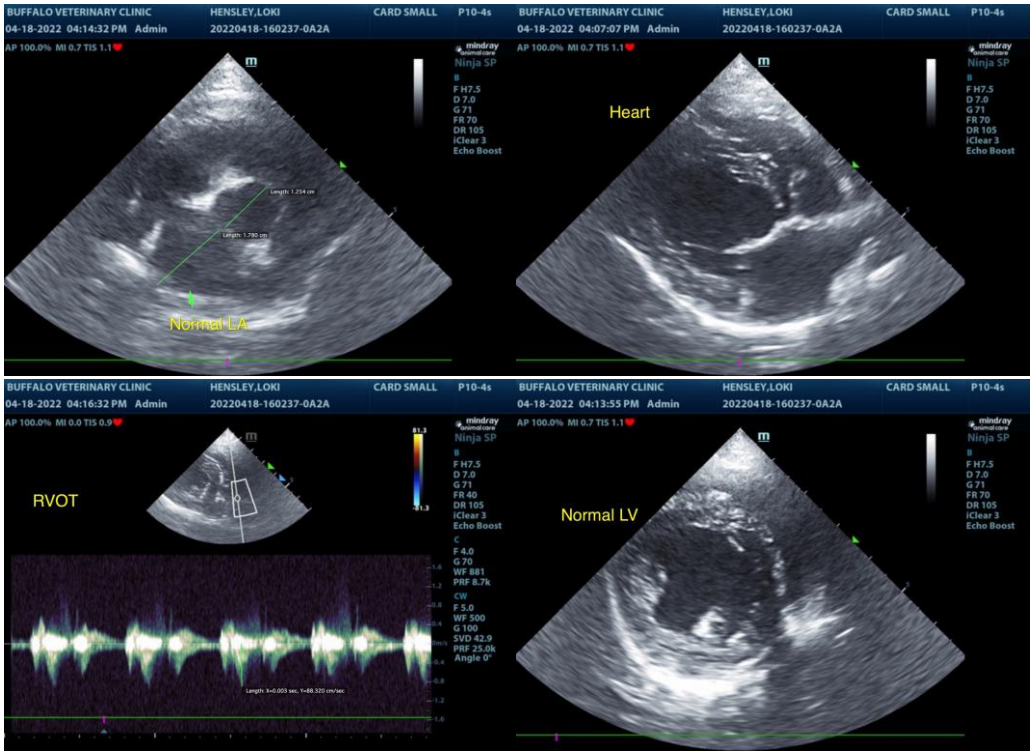
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The echocardiogram is most consistent with chronic degenerative valvular changes and suspected secondary mitral valve insufficiency as the primary cause of the murmur. No other clinical issues such as LV systolic dysfunction or overt evidence of right heart disease or clinical pulmonary hypertension were noted. Regardless the lack of left or right heart chamber enlargement (specifically LA enlargement) indicates that any potential risk secondary to the murmur is low at this stage. In a nonclinical patient without evidence of significant chamber enlargement, cardiac medications are not indicated. Continued monitoring of the murmur at this stage would be appropriate yet serial sonographic monitoring is required for further prognosis. No anesthetic contraindications based on this study. This patient may be a minor increased risk for fluid overload secondary to mitral valve insufficiency. Judicious IVF use under anesthesia is advised. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

Recheck echocardiogram suggested in 6 months or sooner if clinical signs arise.



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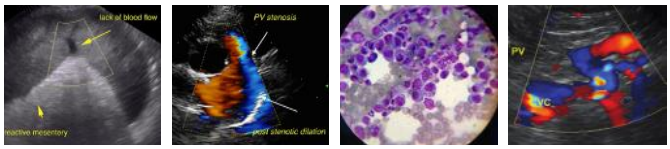

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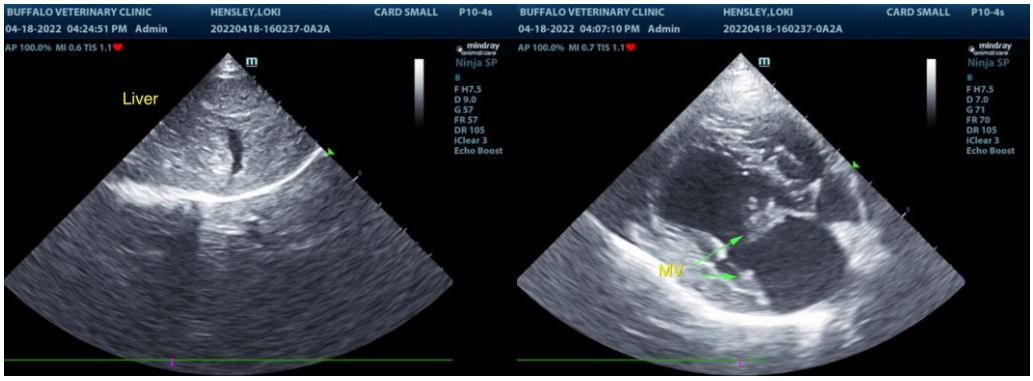

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com