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Clinical Sonography & Telecytology
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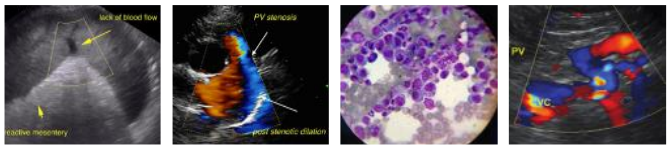

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Rocky Wayne

SPECIES
Canine

BREED
Havanese

SEX
Neutered Male

AGE
11 Years

WEIGHT
19.8 Pounds

INTERPRETED BY
Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Dr. Kitz

HOSPITAL NAME
Woodlands AH

REFERRING VET
Dr. Danielle Kitz

INVOICE
16683

DATE
7/18/22

PRESENTING CLINICAL SIGNS

History: The dog has been on benazepril BID for awhile to manage hypertension. Also based on the radiographs taken and the preliminary echo data (7/15/2022) - Pimobendan was started but not furosemide at this time.

Abnormal PE/Chem/CBC/UA Results: Grade III systolic murmur PMI left apex. Dog has been more lethargic and reluctant to go on walks and has history of elevated liver enzymes. When performed the abdominal ultrasound (6/22/2022) dilation of the hepatic veins was seen which was suggestive to be related to primary cardiac disease.

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	5.23	--	1.4	1.8	--	--	0.1
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	--	1.76	.75	--	3.2	3.07	--

Cardiac Presentation

The echocardiogram for this patient presented excessive **left atrial size** expressed both in the LA/AO and LA max measurements Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. The mitral insufficiency jet was eccentric and mild to moderate. 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.

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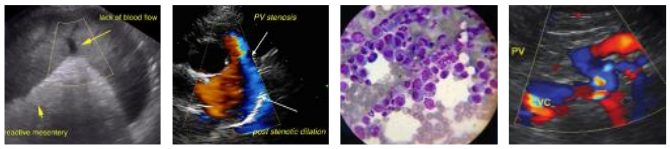

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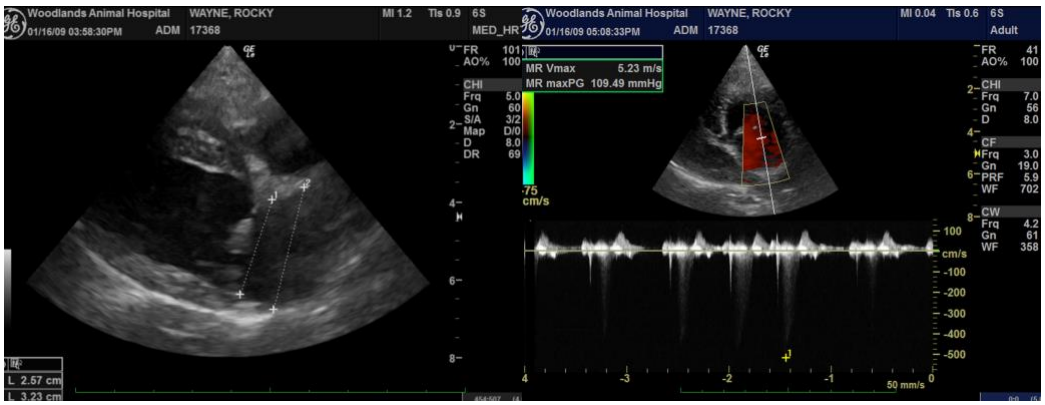
ULTRASONOGRAPHIC FINDINGS

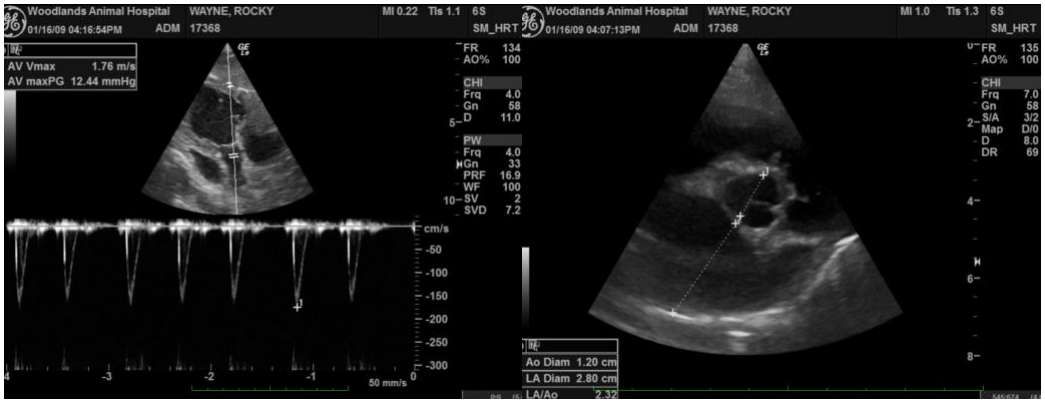
- Mitral insufficiency
- Minor left atrial enlargement
- Early stage B-2 valvular disease

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Pimobendan could be considered in this patient. However, left atrial size is borderline and only slightly enlarged. I do not recommend any further medication other than Pimobendan at this time. The cause of lethargy is unlikely to be cardiac related. Abdominal, CNS or orthopedic disease should be considered as complicated factors.

The heart is in a somewhat precarious state with volume overload and a heart that is working to compensate for the valvular insufficiency. Target respiratory rate is < 20 resp/minute after therapy. After initiating therapy, I recommend recheck on the clinical exam, BUN, Creatinine, USG, Chest radiographs & Blood pressure in 5-7 days. Recheck echo in 1 month. Earlier if clinical decompensation is occurring. I do not recommend anesthesia at this time until stabilization has occurred on the recommended medications. Repeat preanesthetic echo is ideal if anesthesia is eventually necessary.





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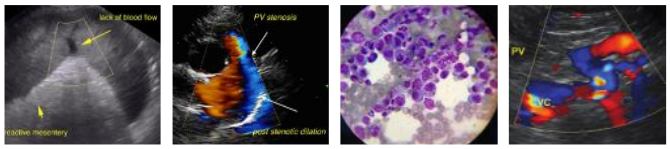

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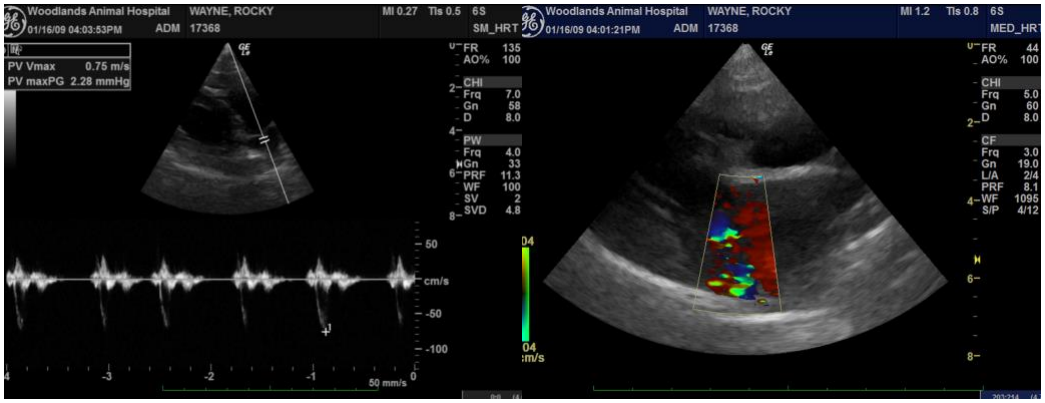

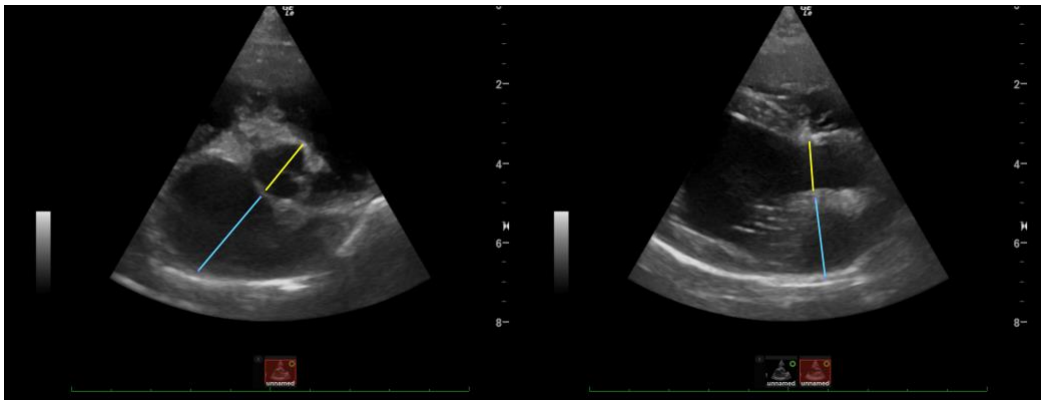

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com