SonoPath
Clinical Sonography & Telecytology
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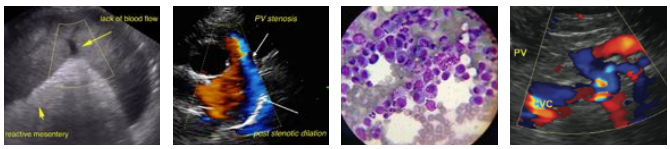

SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Hercules Germano

SPECIES

Canine

BREED

Shipperke

SEX

Neutered male

AGE

14 years

WEIGHT

16 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez , CVT

HOSPITAL NAME

Midland Park VH

REFERRING VET

Dr. Shokoff

INVOICE

42085

DATE

10/24/22

PRESENTING CLINICAL SIGNS

History: Chronic cough and grade 4/6 systolic murmur over mitral valve. rads revealed cardiomegaly, +/- early, mild perihilar edema. Current meds: furosemide 2mgs/kg and Clavamox.
Abnormal PE/Chem/CBC/UA Results: Bloods: pending.
Chest radiographs revealed severe cardiomegaly, left atrial enlargement and early pulmonary edema.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Prolapse of the anterior mitral valve with arrhythmia was noted. Complete filling of the left atrium was noted on color flow assessment. Doppler indicated measurable insufficiency. 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 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. A trace amount of **pericardial** effusion was noted. Arrhythmia is present.

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	<1.6	28-40	40-100	<0.6
PATIENT	5.8			1.8	43	75	NM
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT**	**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	BELOW	BELOW	BELOW	BELOW
PATIENT		1.12	0.73	16 lbs	4.7	4.19	

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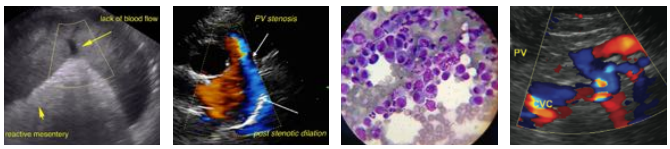

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ULTRASONOGRAPHIC FINDINGS

Arrhythmia present.

Trace amount of pericardial effusion.

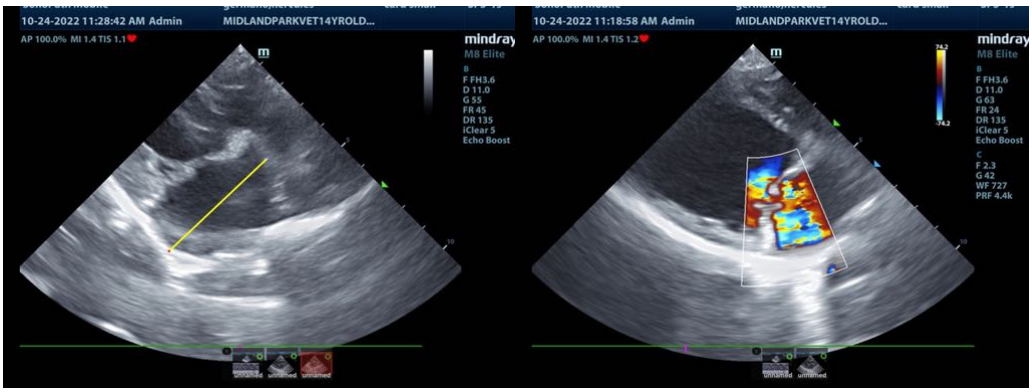
Mitral valve prolapse with left atrial enlargement and trace pericardial effusion. Possible left atrial tear.

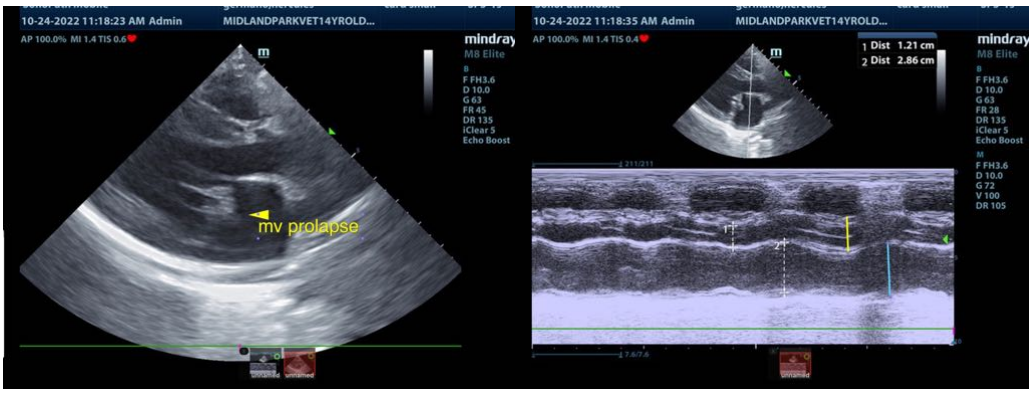
Early C1 valvular disease.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

EKG is indicated. I cannot rule out a small, left atrial tear in this patient. I recommend adding Spironolactone at 1-2 mg/kg b.i.d., ace inhibitor at 0.5 mg/kg s.i.d. progressing to b.i.d. and Pimobendan at 0.3 mg/kg b.i.d. Given that this patient was given Lasix prior to the echocardiogram the original presentation is surely more dramatic then the current and significant volume overload was noted in the left atrium and left ventricle based on radiographs and echocardiogram.

The heart has some volume overload and 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 3-6 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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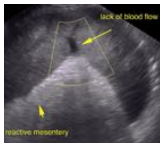
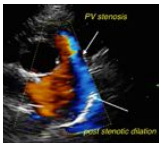
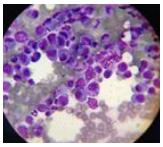
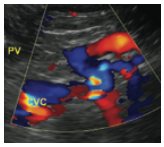

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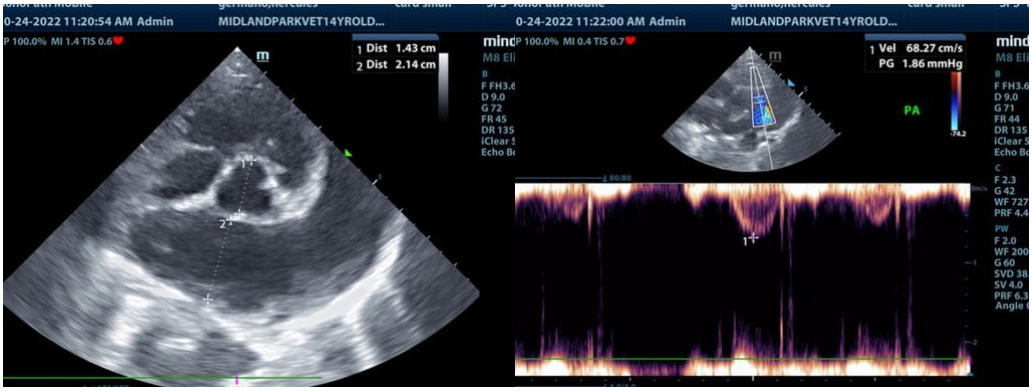

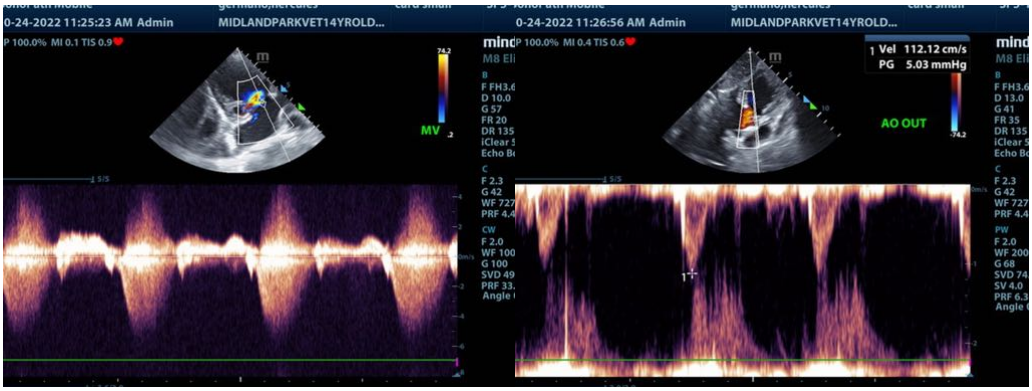

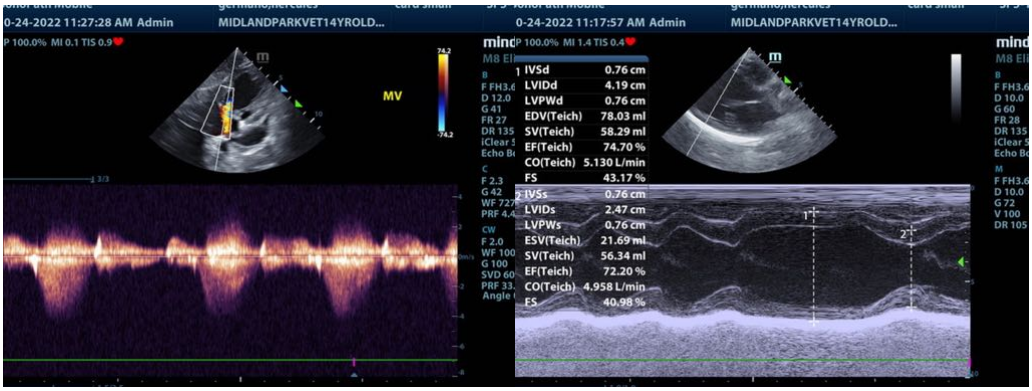

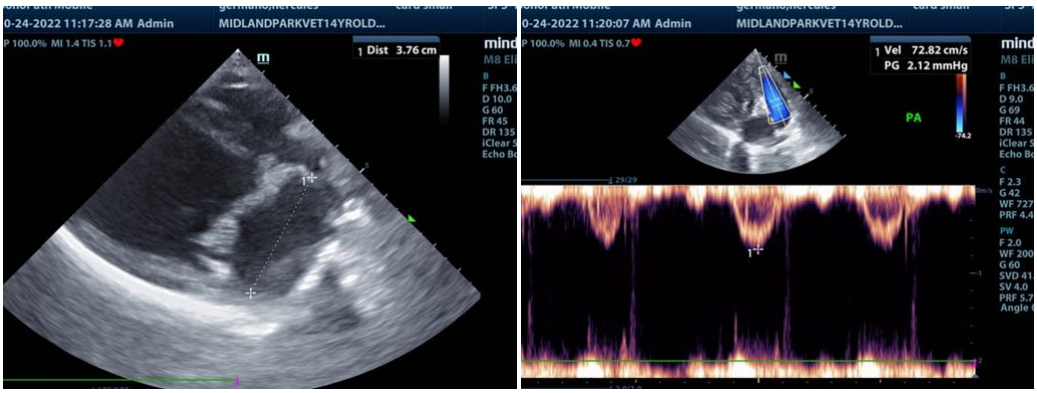

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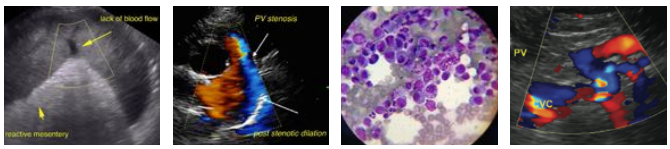

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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