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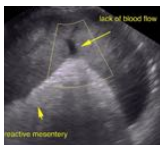
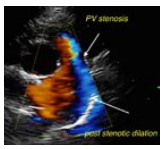
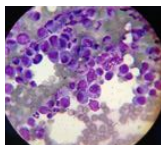
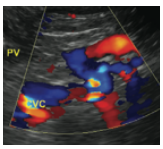

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1-800-838-4268 info@sonopath.com

PATIENT

Sidney McGregor

SPECIES

Canine

BREED

Dachshund

SEX

Nuetered male

AGE

14 years

WEIGHT

29.2 lbs

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Kaitlyn Varga

HOSPITAL NAME

Shuswap VC

REFERRING VET

Dr. Buker

INVOICE

47816

DATE

6/19/23

PRESENTING CLINICAL SIGNS

History: Presented to emergency clinic for GI upset- vomiting/ diarrhea and noted new heart murmur on exam. Cushingoid- controlled on vetoryl. Developed congestive heart failure while hospitalized for GI upset.
Abnormal PE/Chem/CBC/UA Results: Grade 3 murmur PMI left apex. Intermittent arrythmia- today's exam I suspect was more of a sinus arrythmia. Problem list at emerg clinic: 1. vomiting- resolved 2. diarrhea- resolved 3. Cushings- well controlled as per owner 4. weight loss 5. Exercise intolerance over 1-2 months 6. 4-5/6 murmur, enlarged heart, mild 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. 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. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. The hepatic veins were not dilated. Bradyarrhythmia was noted in this patient.

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base;)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			> 2.0	>2.5	59	78	0.1
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		1.9	1.0	29.2 lbs	5.4 max	3.76	

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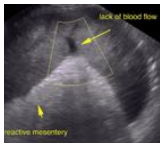
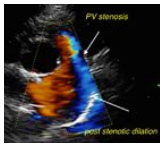
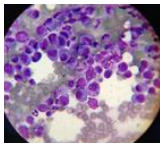
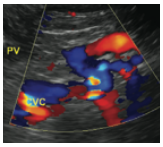

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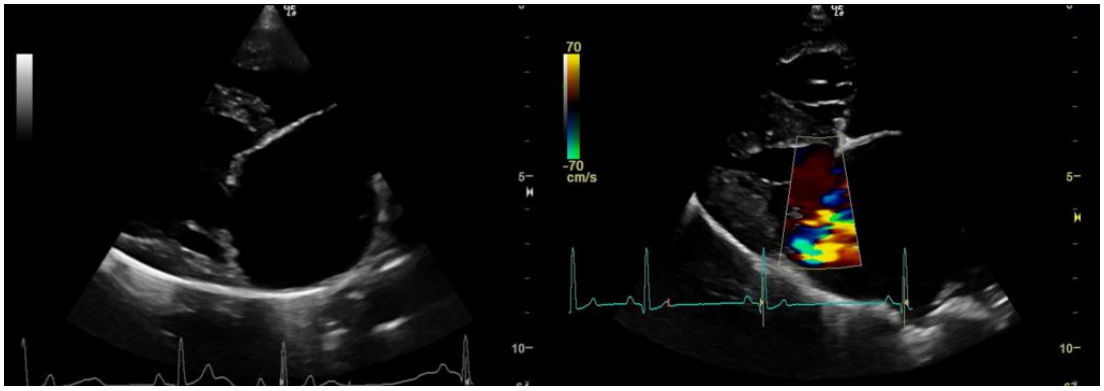
ULTRASONOGRAPHIC FINDINGS

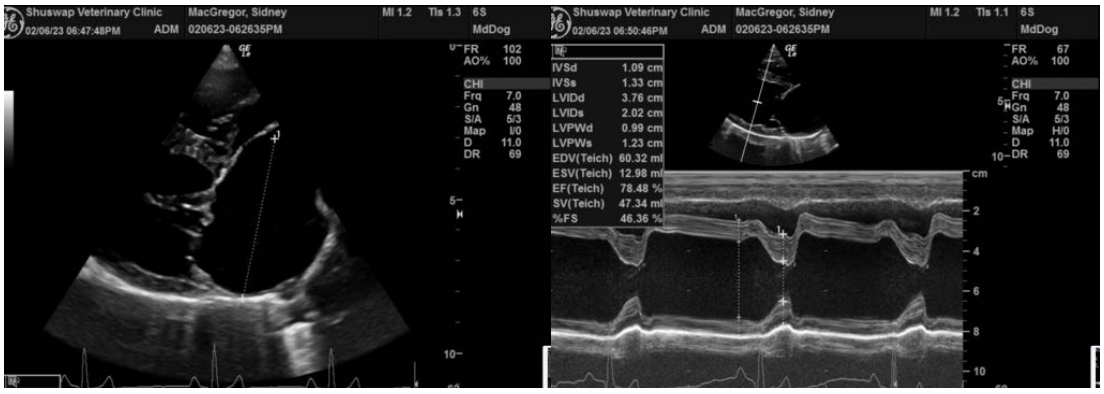
Advanced stage B2+/C1 valvular disease with bradycardia/bradyarrhythmia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

EKG evaluation is indicated to assess for potential heart block. I would expect tachycardia in this patient with volume overload. I recommend Pimobendan in this patient at 0.3 mg/kg b.i.d. Fluid therapy should be utilized with caution if necessary in this patient as volume overload is significant. Given the pulmonary edema Lasix at 1-2 mg/kg b.i.d. Spironolactone at 1-2 mg/kg b.i.d. and ace inhibitor at 0.5 mg/kg s.i.d. progressing to b.i.d. could all be justified depending on BUN, Creatinine, urine specific gravity and hydration status.

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 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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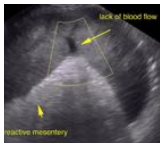
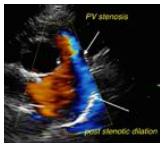
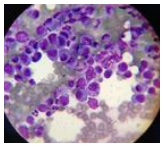
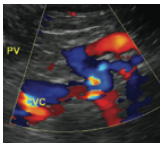

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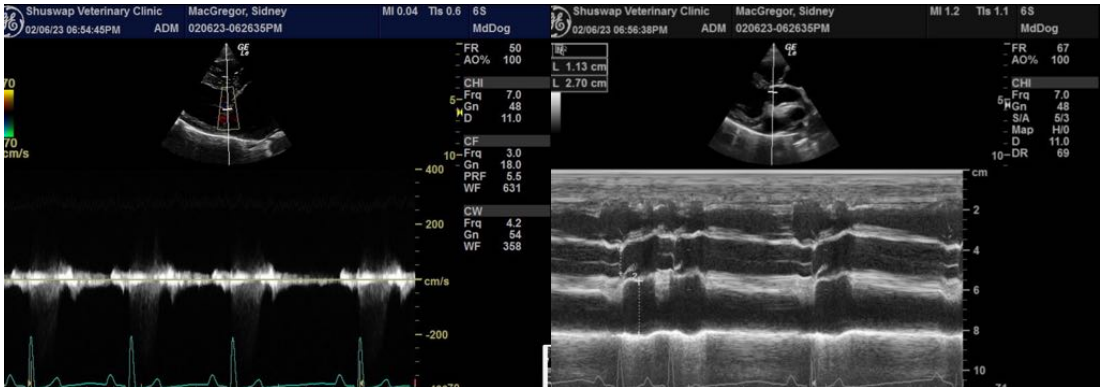

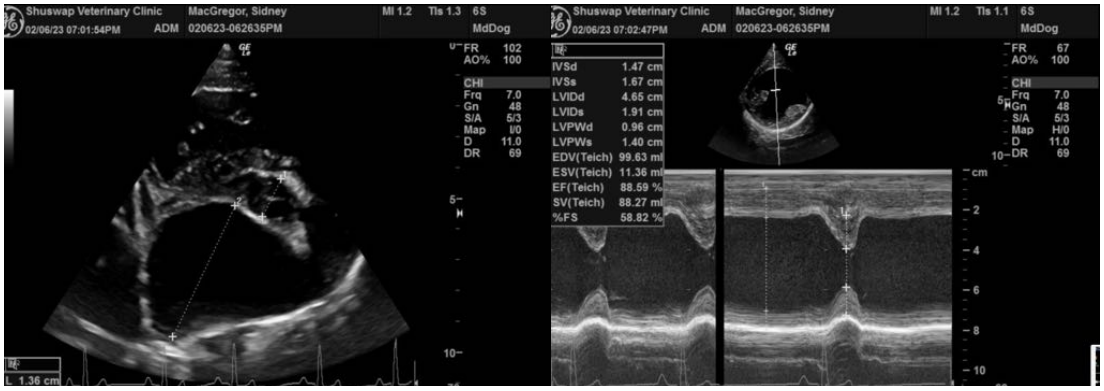

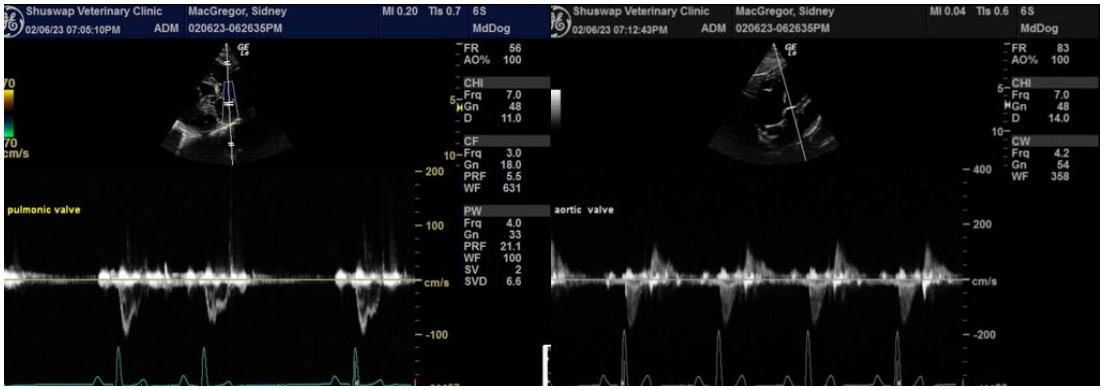

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
info@SonoPath.com