



PATIENT PRESENTING CLINICAL SIGNS

Rex Strude 4/6 murmur, coughing, labored breathing. on vetmedin 1.25 mg bid, furosemide 12.5 mg x 1/2 sid

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Miniature Pinscher

SEX

Intact male

AGE

7 years

WEIGHT

13 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Diane McFadden, RVT

HOSPITAL NAME

Animal Hospital of
Sussex County

INVOICE

95285

DATE

1/17/22

The **left atrial** size presented chronic dilation and prolapse. Severe left atrial enlargement was present. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. 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. Arrhythmogenic activity was noted.

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	5.21	3.8	2.3	> 3.0	52	84	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				
PATIENT	86	1.35	1.1	13 lbs	4.7	3.89	

ULTRASONOGRAPHIC FINDINGS

Mitral and tricuspid insufficiency.

Pulmonary hypertension.

Stage C1 valvular disease.

Severe left atrial enlargement and arrhythmia.



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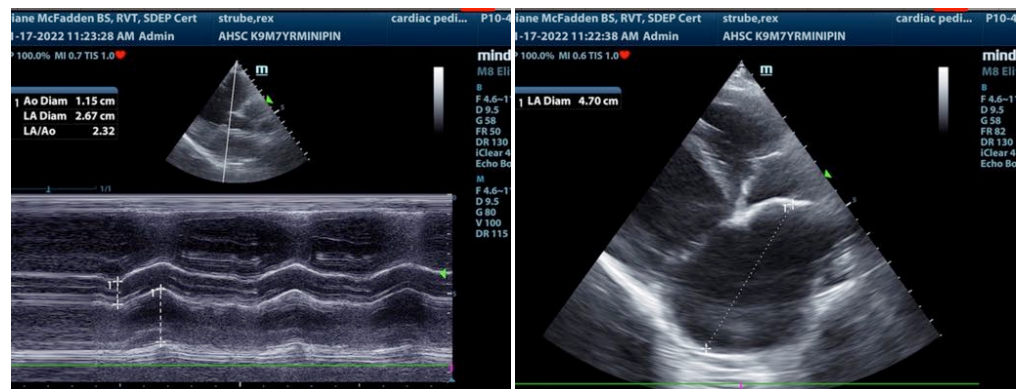
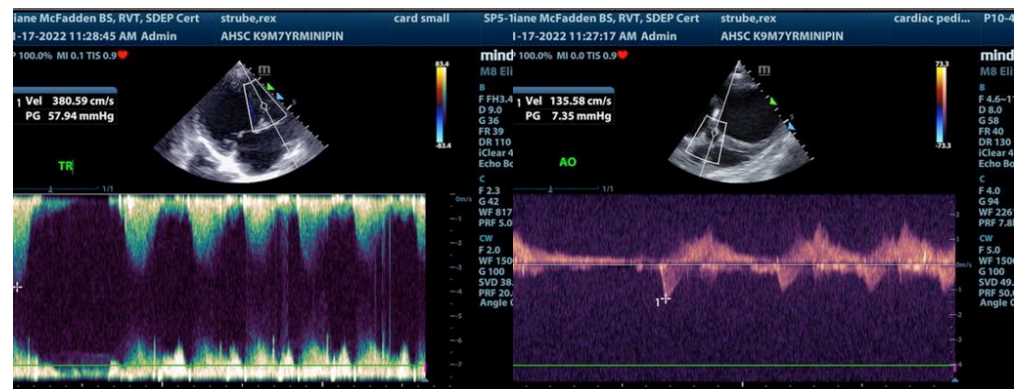
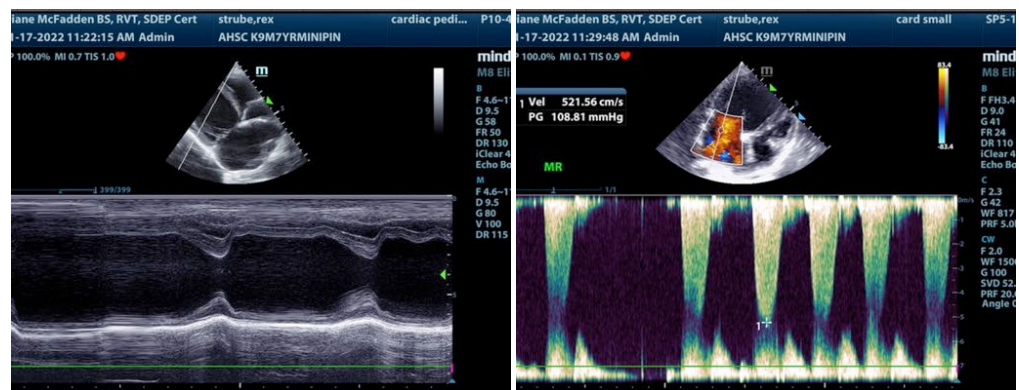
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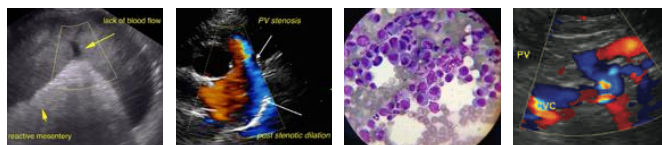
1/17/22

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

EKG is indicated. Aggressive quadro therapy is recommended in this patient in addition to Vetmedin and Furosemide. I recommend ace inhibitor at 0.5 mg/kg s.i.d. progressing to b.i.d. and Spironolactone at 1-2 mg/kg b.i.d. Lasix can be increased 2-4 mg/kg b.i.d. Target respiratory rate is < 20/minute. Hycodan can be utilized to control cough. The prognosis is extremely guarded. The patient is at risk for sudden death.

B2/C1: 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 pre-anesthetic echo is ideal if anesthesia is eventually necessary.





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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