



PATIENT PRESENTING CLINICAL SIGNS

Snowball Long History: Coughing intermittently, syncope 3 times. Owner describes Snowball falls over and immediately gets up crying. Radiographs showed enlarged heart with deviation of the trachea and hilar pulmonary edema. Current meds: Enalapril 5mgs 1/4 tab BID, Lasix 12.5 mgs 1/2 tab BID.
SPECIES CBC/Chem: WNL, ProBNP high at 6,417. U/A: pH 6.0, USG: 1.016, rest WNL.

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

BREED

Maltese

SEX

Spayed female

AGE

11 years

WEIGHT

5.68 lbs

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 leaflet was noted. 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. Ruptured chordae tendineae is present in this patient. The hepatic veins were not dilated.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Saddle Brook VC

REFERRING VET

Dr. Aronovici

INVOICE

32347

DATE

8/16/22

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	6.0	2.0	1.5	2.2	38	71	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	151	1.0	0.64	5.68 lbs	3.0 max	2.42	

ULTRASONOGRAPHIC FINDINGS

Advanced stage B2 valvular disease.
 Significant left atrial enlargement noted in all parameters.



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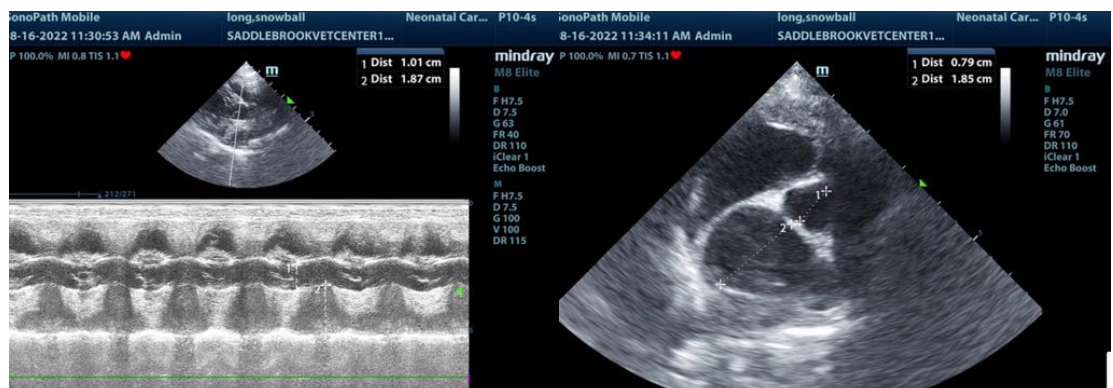
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The patient was on Enalapril and Lasix prior to the sonogram. I recommend adding Pimobendan at 0.3 mg/kg b.i.d. and Spironolactone at 1-2 mg/kg b.i.d. as this is likely stage C1 valvular disease with partial treatment. Holter monitor would be ideal in this patient as well as blood pressure measurements. Torbutrol 30 mins prior to blood pressure measurements would allow for eliminating white coat effect if this patient is excitable. Cough suppressant such as Hycodan can also be utilized. A recheck echocardiogram is recommended in a month. The inciting cause is likely ruptured chordae tendinea in this patient.

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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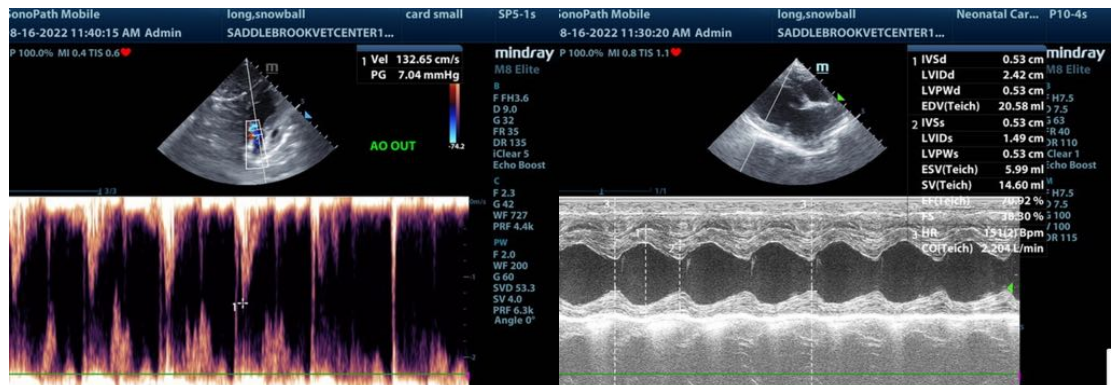
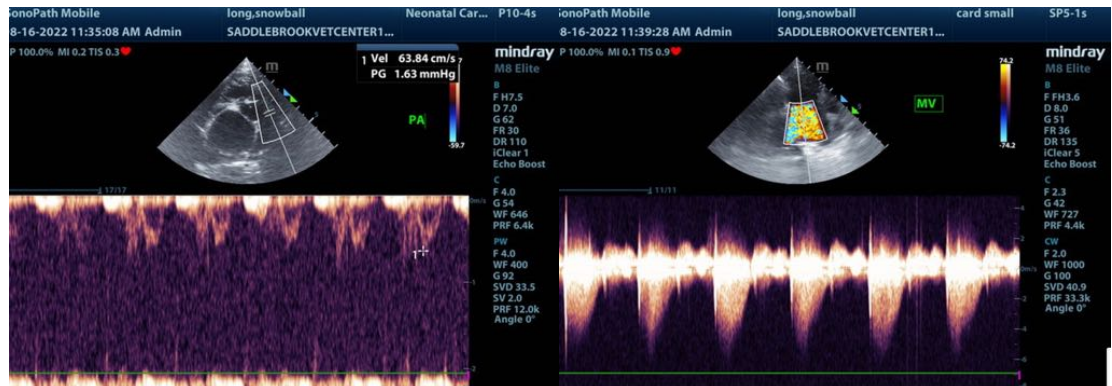
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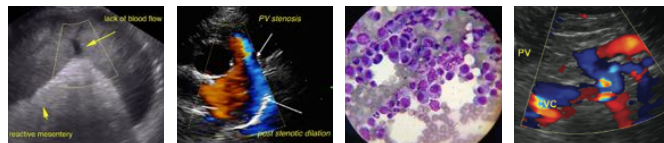


The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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



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