



PATIENT PRESENTING CLINICAL SIGNS

Angelina Thielman

SPECIES

Canine

BREED

Shih Tzu

SEX

Spayed Female

ULTRASOUND PERFORMED FEBRUARY 25th- Case did not submit properly. There are 4 images from February 16th but the patient was not cooperative (paradoxical trazodone excitement), so rescheduled to the 25th. Clinical Signs: heart murmur progression from 2/6 in June to 4/6 in Jan overw/ no cough on tracheal palpation, no abnormal lung sounds noted no arrhythmia, strong synch femoral pulses
 Significant/ relevant exam findings: see above Lab work performed: N
 Abnormal PE/Chem/CBC/UA Results: Progressive heart murmur- now 4/6 on exam. Radiographs: Y Date: Jan 18 Findings: Thorax: Right and left lateral and VD views are included. The heart is moderately increased in height with moderate left atrial enlargement. The caudal thoracic trachea is elevated due to cardiomegaly. There is no evidence of tracheal or bronchial collapse. The pulmonary vessels are normal size. There is no evidence of cardiogenic edema. Opinion & Recommendation Moderate left-sided cardiomegaly with moderate left atrial enlargement. Mitral valve degeneration is most likely. No evidence of pulmonary vascular congestion or cardiogenic edema, so there are no signs of congestive heart failure. No tracheal or caudal mainstem bronchial abnormalities noted, although due to the large size of the left atrium, it is possible that the left atrial enlargement is causing intermittent compression of the left caudal mainstem bronchus, which can lead to coughing.

AGE

11.5 Years

WEIGHT

6.9 kg

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Kaitylyn Varga

HOSPITAL NAME

Shuswap Vet Clinic

REFERRING VET

Dr. Morgan Stevenson

INVOICE

36207

DATE

3/15/22

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	<1.6	28-40	40-100	<0.6
PATIENT			1.8	1.8	50	83	NM
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	BELOW	BELOW	BELOW	BELOW
PATIENT		1.2	0.8		3.0	2.59	

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. Prolapse of the anterior mitral valve leaflet noted. 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



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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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Canine

ULTRASONOGRAPHIC FINDINGS

- Early B2 valvular disease

BREED

Shih Tzu

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Blood pressure measurements recommended. If systolic pressure is >160, ACE inhibitor therapy would be warranted. Pimobendan indicated at 0.3 mg/kg BID.

SEX

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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.

AGE

11.5 Years

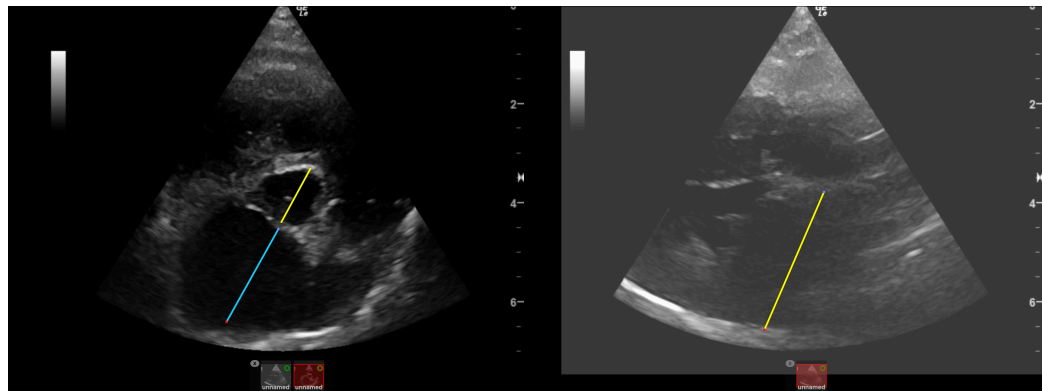
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1	AO	0.85 cm
1	IVSd	0.93 cm
7	LVIDd	2.59 cm
4	LVIDs	1.30 cm
5	LVPWd	0.98 cm
9	LVPWs	1.20 cm
6	EDV(Teich)	24.30 ml
	ESV(Teich)	4.19 ml
	EF(Teich)	82.74 %
	SV(Teich)	20.11 ml
	%FS	49.58 %

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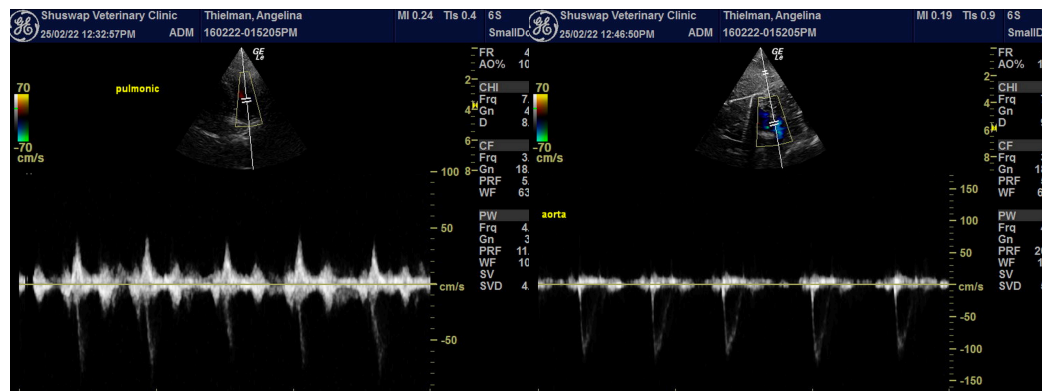
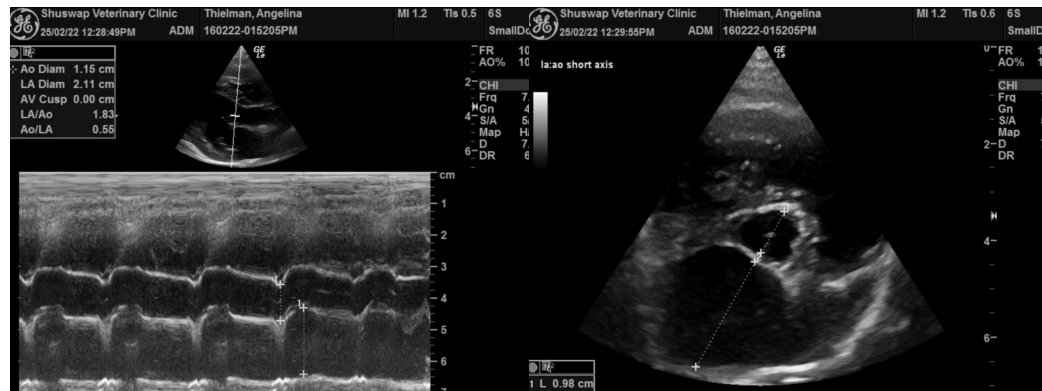
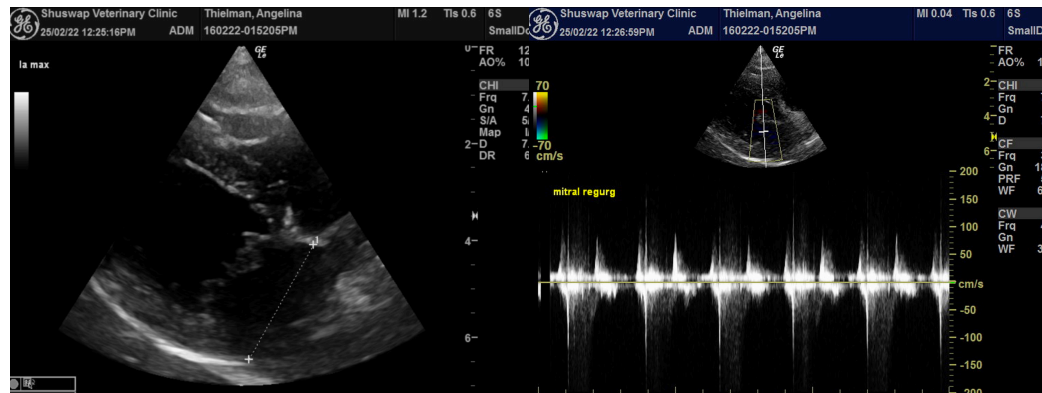
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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