



PATIENT

Stewart Little Hulstein

SPECIES

Canine

BREED

Chihuahua

SEX

Neutered Male

AGE

7 Years 7 Months

WEIGHT

8.85 Pounds

PRESENTING CLINICAL SIGNS

History: Patient presented for coughing. 2-3/6 left side systolic heart murmur was noted on exam. VHS 11.5 and heart looked enlarged on radiographs. Started patient on pemobendan 1.25mb BID and Furosemide 12/5mg BID. Baseline echo to assess heart disease.

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	<1.3	28-40	40-100	<0.6
PATIENT	5.0	2.8	NM	2.5	51	83.2	0.24
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				
PATIENT	101	1.4	1.0	--	3.7	3.1	--

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Wolff

INVOICE

20111

DATE

12/15/22

Cardiac Presentation

The echocardiogram for this patient presented moderate to severely excessive **left atrial size** expressed both in the LA/AO and LA max measurements, exhibiting mild horizontal component to the LA enlargement. Deviation of the intraatrial septum towards the right atrium was consistent with left atrial pressure. The cranial and caudal **mitral** valve leaflets presented moderate thickening consistent with endocardiosis with minor valvular prolapse. Doppler indicated moderate eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with increased left ventricle volume. 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 thickening with mild TR. 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. No evidence of arrhythmia.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM advanced stage B, possible emerging stage C)



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- TR- estimated pulmonary pressure gradient approximately 32 mmHg, suggestive of mild increased pulmonary pressure yet not consistent with overt clinical pulmonary hypertension.

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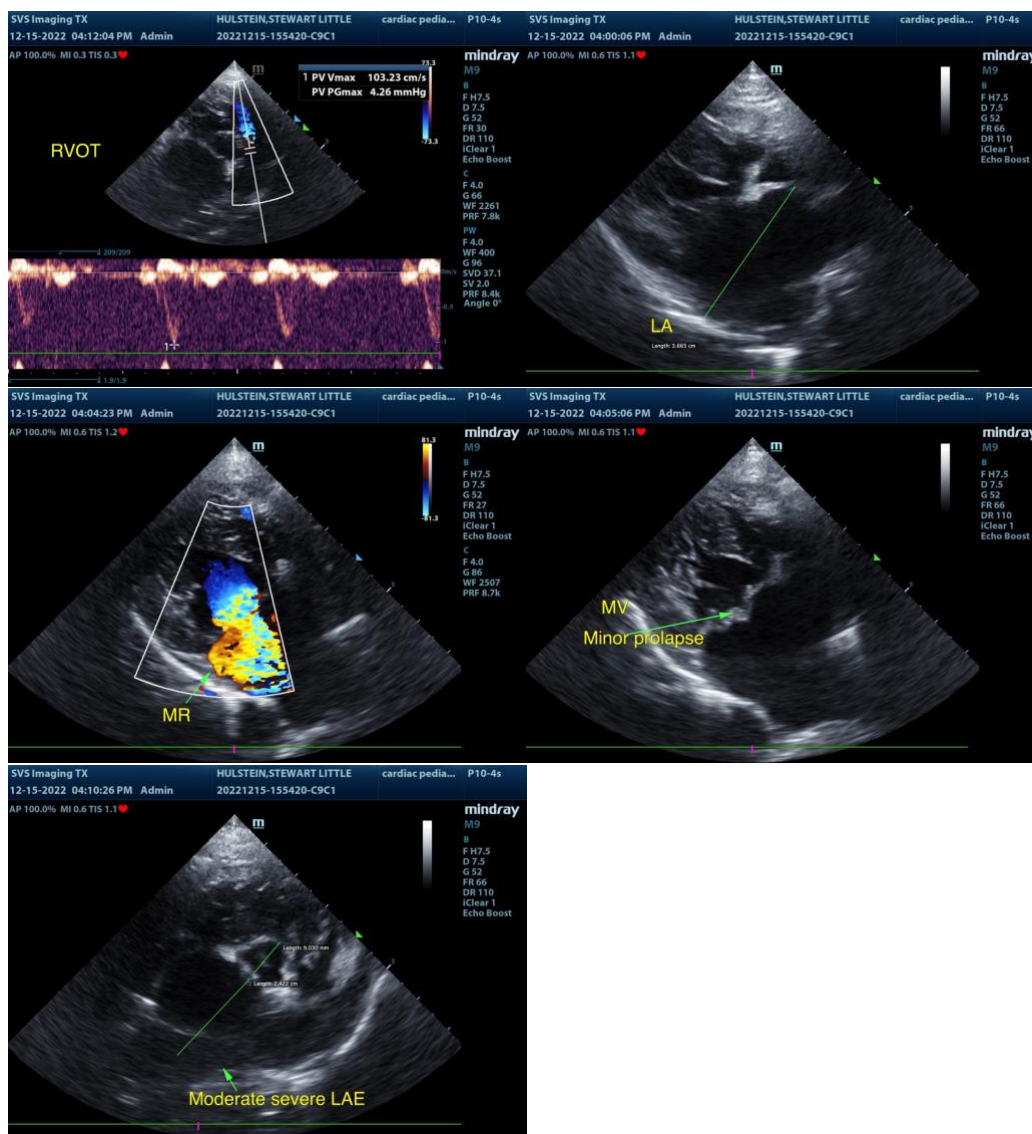
DATE

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The moderate to severe LA enlargement indicates that the current and future risk, going forward, of complications secondary to MR is moderate to significantly elevated. The coughing in this patient may be multifactorial in origin with potential for emerging cardiogenic component, mainstem bronchi irritation/compression owing to LA enlargement, as well as possible concurrent lower airway disease.

Continued Pimobendan at 0.3 mg/kg PO BID, lowest effective dose of diuretic therapy 1-2 mg/kg PO BID, as well as antitussive medications, such as hydrocodone, which may improve quality of life and coughing frequency is recommended. Baseline monitoring of resting respiration rate is suggested, Omega 3 fatty acid supplementation and mild salt restriction may prove beneficial. Prognosis is highly variable with potential emerging left sided congestion. Serial sonographic monitoring is recommended, especially if evidence of pulmonary edema or increased resting respiration rate. If patient is stable, recheck echocardiogram is recommended in 6 months.





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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.

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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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info@SonoPath.com

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