



**PATIENT PRESENTING CLINICAL SIGNS**

Walter Sosa History: coughing and wheezing 6/6 systolic murmur crackles ausculted no free fluid on xray  
Abnormal PE/Chem/CBC/UA Results: ALT increased 135 remainder WNL

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

**BREED**

Chihuahua

**SEX**

Neutered Male

**AGE**

10 Years

**WEIGHT**

8 Pounds

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	--	--	--	2.0	50	85	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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	NM	1.0	1.0	--	2.9	2.9	--

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

Rockaway AH

**REFERRING VET**

Dr. Ascot

**INVOICE**

12952

**DATE**

9/8/21

**Cardiac Presentation**

The echocardiogram for this patient presented moderate **left atrial size** expressed both in the LA/AO and LA max measurements. Subtle deviation of the interatrial septum towards the right atrium indicative of elevated left atrial pressure was present. Mild septal leaflet prolapse was present. Doppler indicated measurable 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 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.

**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral valve disease (ACVIM B2, possible emerging stage C)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**



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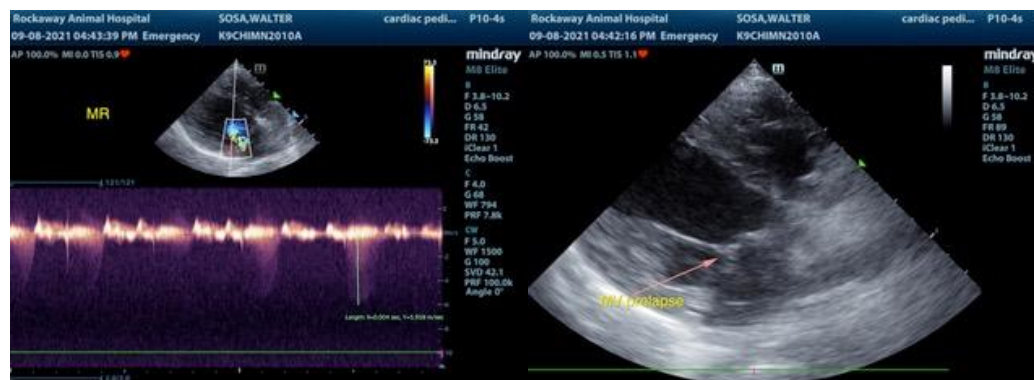
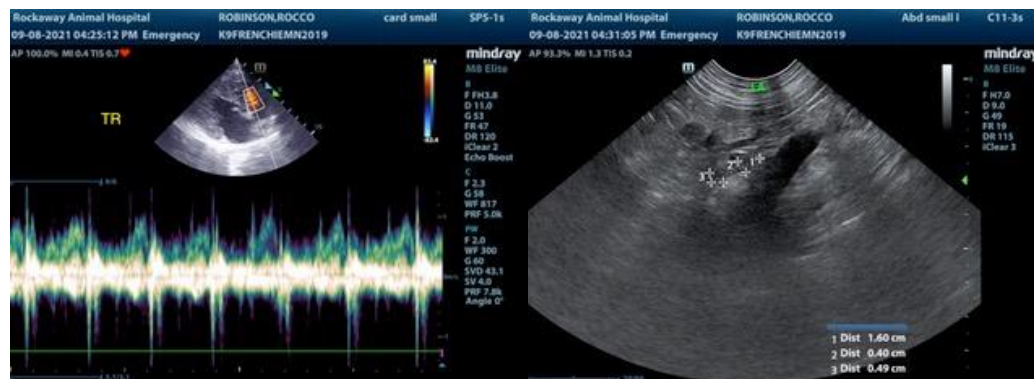
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The cause of the murmur is consistent with chronic degenerative valvular changes with mild septal leaflet prolapse and secondary eccentric mitral valve insufficiency. The moderate left atrium enlargement indicates that the current and future risk is elevated. No other clinical issues such as overt clinical pulmonary hypertension or systolic dysfunction were noted. Pimobendan at 0.3 mg per kg PO BID and given the lack of pulmonary edema, weak diuretic-spironolactone at 1-2 mg per kg PO BID recommended. The coughing and wheezing in this patient may be multifactorial yet potentially secondary to left atrium enlargement and main stem bronchi irritation or compression. Hydrocodone may prove beneficial. Recheck echocardiogram suggested in 6 months or sooner if clinical signs consistent with heart disease or evidence of pulmonary edema develop.



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



**PATIENT**

can be of any further assistance please contact me.

Walter Sosa

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