



PATIENT PRESENTING CLINICAL SIGNS

Crouton Dawson

Has had a history of a heart murmur, though one was not heard on her most recent exam. Had a couple collapsing episodes a couple of months ago during a nail trim per O. Was only out for a couple of seconds, no lasting effects. P has significant dental disease and O would like to pursue a dental procedure. Currently on enalapril 1.25 mg BID for history of elevated blood pressure.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: BP 4/9/21 at preventative care exam 150/125 133 average Mild elevation in SDMA (15), normal Cre (1.3) BUN (27), NSF urine- USG 1.027, no proteinuria Heavy dental tartar Could not appreciate heart murmur on exam

BREED

Chihuahua X

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

SEX

Spayed Female

AGE

12 Years

WEIGHT

14 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) |
|---------------------------|---------------|---------------|---------------------|-------------------------|---------------------------------|--|--|
| NORMAL PARAMETER | 4.5-5.5 | <2.7 | 1.3 | <1.6 | 28-40 | 40-100 | <0.6 |
| PATIENT | 5.0 | 1.5 | NM | 1.47 | 48.6 | 82.2 | 0.2 |
| 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 | 157 | 1.8 | 0.94 | | 2.3 | 2.3 | |

INTERPRETED BY

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

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented mild vegetative thickening consistent with mild endocardiosis. Doppler indicated measurable mild eccentric 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. Color doppler assessment of the tricuspid valve revealed minor tricuspid valve insufficiency. 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.

IMAGING PERFORMED BY

Dr. Gromalak

HOSPITAL NAME

SVS Imaging

REFERRING VET

Dr. Panther

INVOICE

24552

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8/11/21



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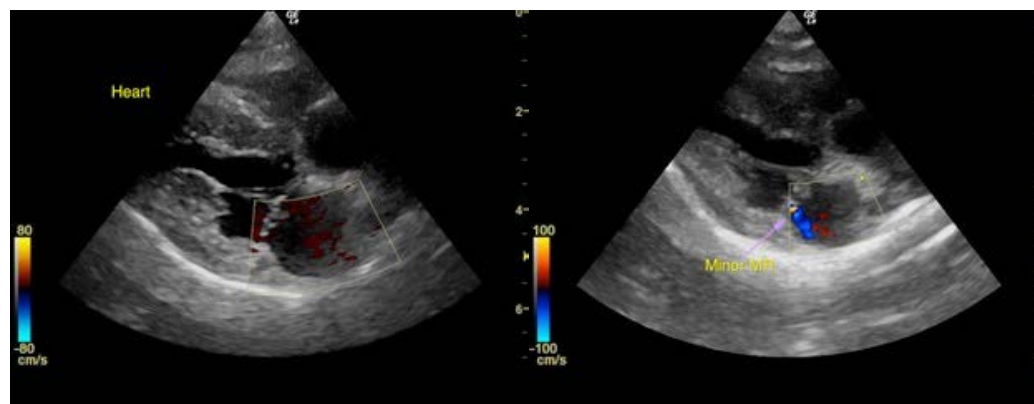
Dr. Panther

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B1), minor eccentric mitral valve insufficiency
- Minor tricuspid valve insufficiency – estimated pulmonary pressure gradient (less than 20 mmHg) not consistent with clinical pulmonary hypertension.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure and function. The lack of left atrial enlargement indicates that the risk of future complication is low. No other clinical issues such as systolic dysfunction, arrhythmogenic disease or clinical pulmonary hypertension noted. The possibility of a potential paroxysmal arrhythmia as a possible cause of collapsing episode cannot be definitive excluded. However, clinical signs associated with the heart are not anticipated. No indication for cardiac medications. ECG assessment may be considered. Recheck echocardiogram suggested in 6 months to assess for evidence of progression owing to mitral valve insufficiency, sooner if clinical signs suggestive of heart disease develop.



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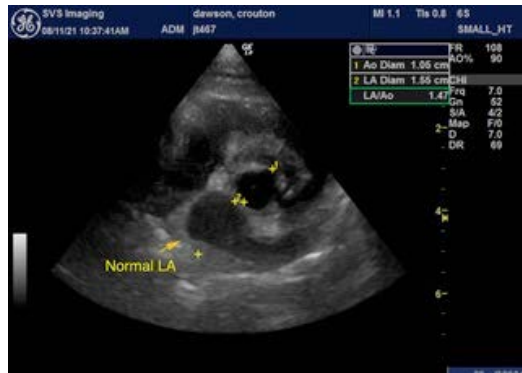
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
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