



PATIENT

Logan Anderson

SPECIES

Canine

BREED

Pomeranian

SEX

MN

AGE

18Y, 3M

WEIGHT

Pending

INTERPRETED BY

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

IMAGING PERFORMED BY

Chloe Lowe, CVT

HOSPITAL NAME

Denville Animal
Hospital

REFERRING VET

Dr. Reddy

INVOICE

75198

DATE

5-28-26

PRESENTING CLINICAL SIGNS

Grade 6 heart murmur, coughing, and a collapsed episode recently. Vetmedin 2.5 mg 1 sid, lasix 12.5 mg 1 bid, enalapril 5mg 1/2 tab sid.

Abnormal PE/Chem/CBC/UA Results: SDMA high, potassium high, Na/k ratio low, alp high, cholesterol low.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO (M-mode) | LA/AO (Heart Base; Swe) | FS (%) | EF (%) | EPSS (cm) |
|---------------------------|---------------|---------------|----------------|-------------------------|----------------------|--|--|
| NORMAL PARAMETER | 4.5-5.5 | <2.7 | 1.3 | Up to 1.6 | 28-40 | 40-100 | <0.6 |
| PATIENT | | | NM | 1.6 | 44 | 77 | 0.1 |
| CANINE CARDIAC PARAMETERS | HR (BPM) | AV VMAX (m/s) | PV MAX (m/s) | BODY WEIGHT (kg) | LAD LA MAX 4 Chamber | 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 | 124 | 1.2 | 0.7 | -- | 3.3 | 2.95 | |

Cardiac Presentation

The echocardiogram in this patient demonstrated mild increased **left atrial** size based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis with mild valvular prolapse. Doppler indicated significant eccentric MR. MR velocity 5.2 m/s. The **left ventricle** presented borderline increased dimension 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 mild thickening with minor TR on Doppler. Measured TR velocity less than 2 m/s. 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 cardiac / pericardial tumors was visible. No evidence of arrhythmia or hepatic congestion.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease with mild valve prolapse (ACVIM mild B2).
- Minor tricuspid insufficiency - no obvious clinical pulmonary hypertension.



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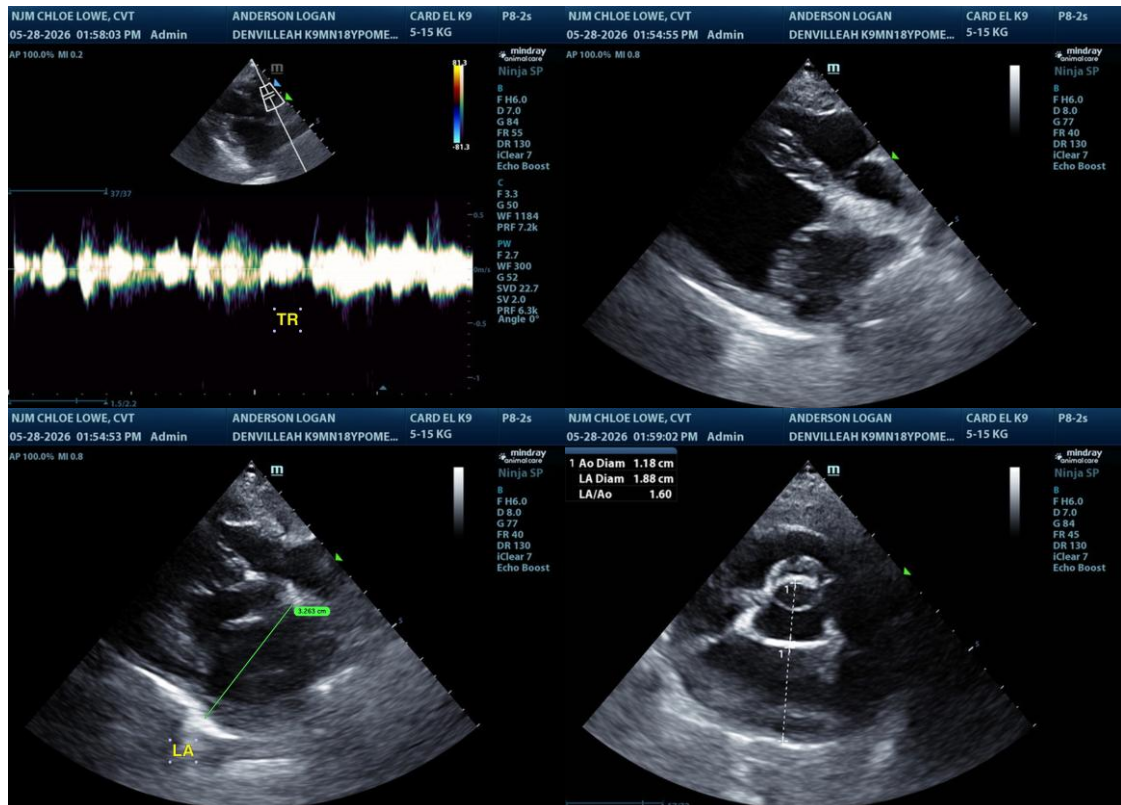
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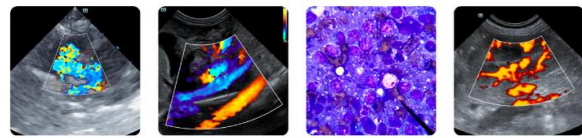
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The mild increased LA/LV dimension indicates the current and future risk of complication secondary to MR as mildly elevated yet overall the left heart appears compensated. Clinical signs associated with left heart disease are not anticipated. Likewise, no evidence of clinical pulmonary hypertension. This suggests noncardiogenic coughing. Assessment of systemic BP for hypertension as well as ECG for evidence of nonobvious or paroxysmal arrhythmia as a potential contributing factor to the collapsing episode recommended. Continued Vetmedin 0.3mg/kg PO BID and ace inhibitor if systemic BP greater than 130 is warranted. No obvious indication for diuretic therapy. concurrent respiratory support recommended with clinical monitoring. Recheck echo suggested in 6 months, sooner if clinically indicated. Three-view chest radiographs suggested if not done. Cardiac anesthetic risk is mild to moderate. If required, the following protocol is suggested with limited anesthetic time and close clinical monitoring and judicious IV fluid administration:

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.





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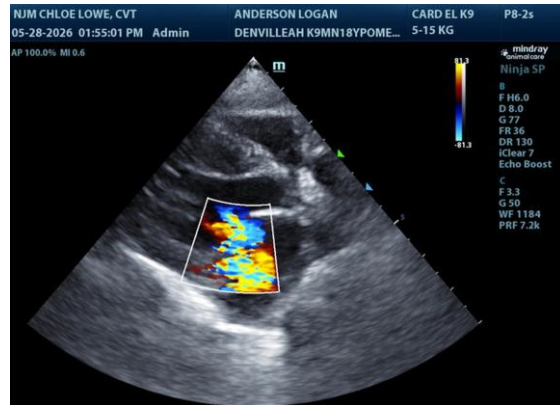
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@sonopath.com