



PATIENT

London Miller

PRESENTING CLINICAL SIGNS

History: Urinating issues. Grade 4-5 heart murmur.
 -Blood pressures: 149/104 (122), 167/102 (121), 148/95 (117)mmHg.

SPECIES

Canine

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Significant thickening of mitral valve leaflets with marked prolapse into the left atrial lumen. Trace eccentric mitral regurgitation with no left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Velocity consistent with early pulmonary hypertension. Normal right atrial and ventricular diameter and morphology. The aortic valve is asymmetrically thickened with mild aortic insufficiency. The pulmonic valve is normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

BREED

Poodle

SEX

Female Spayed

CARDIAC CHART

AGE

16 years

| 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 | 6.2 | 3.0 | NM | 1.1 | 46 | 80 | 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 | 150 | 1.7 | 0.6 | 2.2 | 1.24 | 2.0 | 1.1 |
| *Normal chamber parameters expressed as a mean value (SD) | | | | | | | |
| BODY WEIGHT DEPENDENT PARAMETERS | | | | | | | |
| <i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i> | | | | | | | |
| Adapted from June Boon, Veterinary Echocardiography, 1998 | | | | | | | |
| Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435 | | | | | | | |
| Hansson et al, Vet Rad and Ultrasound 2002 | | | | | | | |
| Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995 | | | | | | | |
| | | | | 3 | 1.27 (5.3) | 2.46 (2.46) | 1.36 (5.5) |
| | | | | 5 | 1.40 (4.5) | 2.74 (5.2) | 1.60 (4.7) |
| | | | | 10 | 1.50 (3.8) | 3.27 (3.5) | 2.06 (3.1) |
| | | | | 15 | 1.83 (2.0) | 3.71 (2.4) | 2.43 (2.1) |
| | | | | 20 | 2.02 (1.9) | 4.14 (2.2) | 2.80 (2.0) |
| | | | | 25 | 2.18 (2.4) | 4.48 (2.9) | 3.10 (2.5) |
| | | | | 30 | 2.33 (3.3) | 4.83 (3.9) | 3.39 (3.4) |
| | | | | 35 | 2.48 (4.3) | 5.17 (5.0) | 3.69 (4.5) |
| | | | | 40 | 2.62 (5.2) | 5.48 (6.1) | 3.96 (5.4) |
| | | | | 50 | 2.88 (7.1) | 6.07 (8.3) | 4.46 (7.4) |

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques, LVT/RVT

HOSPITAL NAME

Donner Truckee Veterinary Hospital

REFERRING VET

Dr. Vannini

INVOICE

21149

DATE

9/21/21

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing trace mitral and mild tricuspid regurgitation. The degree of mitral valve abnormality is marked; however, the leak appears insignificant. The LA and LV are normal indicating the disease is well compensated for at this time. Early pulmonary hypertension is suspected which is of unknown significance in a dog without respiratory signs. Monitoring is advised. Finally, there is an abnormal aortic valve with aortic insufficiency; however, the reported blood pressures are reasonable. It is worth mentioning that aortic valve endocarditis can have this appearance; however, this is extremely rare in small animals particularly in a patient without severe fever, lethargy, etc. If clinical suspicion is elevated, consider blood culture and/or treatment with broad spectrum antibiotic therapy.



Portable Animal Western Sonography, Inc.

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AGE

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WEIGHT

5lbs

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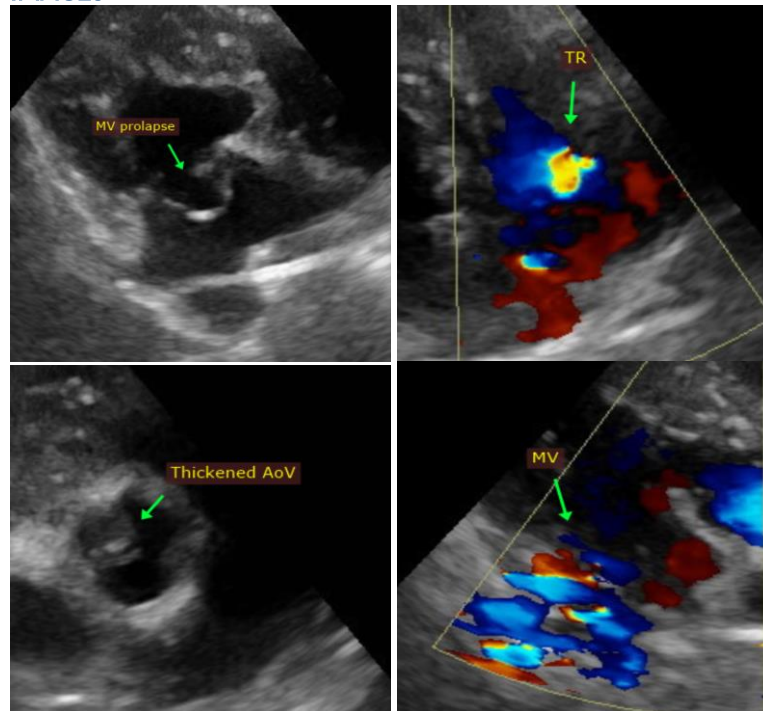
Given these findings, no cardiac medications are clearly indicated. Lifelong blood pressure monitoring is advised. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

Given the unusual appearance of the aortic valve, a brief recheck echocardiogram is recommended in 1-2 months to screen for any progressive issues.

Recommend conservative monitoring with a full recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES



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. This report was generated using transcription software, and minor dictation errors may be present. 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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