

PATIENT

Shakira Burke

SPECIES

Canine

BREED

Doberman

SEX

Female Spayed

AGE

8 years

WEIGHT

94.8lbs

PRESENTING CLINICAL SIGNS

History: Post-op GDV (surgery performed 5/15) with high rate (>200 bpm) runs of V-tach post-op responsive to lidocaine boluses and CRI at 50 mcg/kg/min.
 Abnormal PE/Chem/CBC/UA Results: PE S/O: QAR wagging tail. MM tacky CRT < 2 seconds. Has dental tartar grade II. Mass left lateral aspect of OS dark black in color approx 0.25cm in diameter. Mass inside of left ear. Heart rate regular (had v-tach intra and post-op) can now auscult a heart murmur on the left side of the chest grade 2/6. Abdomen palpates soft and non-painful. Incision is clean and dry. Ambulatory all four limbs. Appears neurologically appropriate at this time. Nasogastric tube is in place . Not eating, tolerating NG tube feeding Lab/trends: 5/15 CBC - wnl Chem - Elevated ALT 146, Low Amylase 456, rest wnl Lytes - hypokalemia 3.0 Post op lactate - 1.17 5/17 6am EPOC-hypernatremia 152 mmol/L, hypokalemia 2.6 mmol/L. On 100ml/hour IVF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is diffusely thickened with mild prolapse into the left atrial lumen. There is severe mitral regurgitation present. The MR velocity is decreased. There is marked left atrial enlargement. There is severe left ventricular dilation with increased sphericity. Left ventricular systolic function is borderline depressed. Mild right atrial and ventricular dilation (subjective). Mild thickening of the tricuspid valve with mild TR. Normal velocity. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is normal in diameter. The pulmonic valve is normal in appearance. No pericardial/pleural effusion or cardiac masses are seen. Ventricular beats noted throughout the study.

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Emily Kalenius, DVM

HOSPITAL NAME

Willvet Salem

REFERRING VET

Dr. Ebert

INVOICE

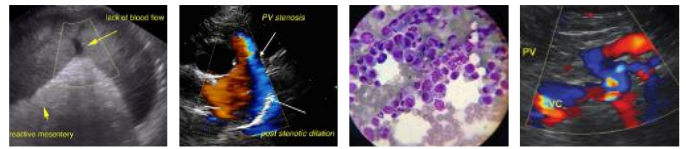
24227

DATE

5/17/22

| 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 | 4.2 | 2.5 | 2.3 | 2.2 | 24 | 40 | 1.1 |
| 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 | NM | 1.9 | 1.1 | 43.0 | 5.5 | 6.8 | 5.2 |
| *Normal chamber parameters expressed as a mean value (SD) | | | | 3 | 1.27 (5.3) | 2.46 (2.46) | 1.36 (5.5) |
| BODY WEIGHT DEPENDENT PARAMETERS | | | | 5 | 1.40 (4.5) | 2.74 (5.2) | 1.60 (4.7) |
| <i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i> | | | | 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) |

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



PATIENT

Shakira Burke

SPECIES

Canine

BREED

Doberman

SEX

Female Spayed

AGE

8 years

WEIGHT

94.8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Emily Kalenius, DVM

HOSPITAL NAME

Willvet Salem

REFERRING VET

Dr. Ebert

INVOICE

24227

DATE

5/17/22

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. The LA is markedly dilated indicating a high risk for clinical signs going forward. The LV is also significantly dilated; however, the systolic function appears adequate for this signalment. The left heart dimensions must be interpreted in light of fluid therapy, given the patients post-operative status; however, even if mild inflation is contributing there is still significant underlying structural issues. The right heart is mildly affected with mild TR. No additional structural issues are identified.

With this degree of left heart changes, the risk for spontaneous congestive heart failure is elevated and **cardiac supportive medications are indicated as below**. If the patient is on aggressive fluid therapy, this should be altered based upon these results and utilizing patient's systemic hydration status as a guide. Discontinuation would be ideal; however, if necessary for systemic stabilization this must be weighed. Spironolactone is recommended for potential long-term benefit, in addition to Pimobendan and an ACE-I. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (late B2/C). Unfortunately, the patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

Ventricular arrhythmias (VT v AIVR) persist throughout the study and a full ECG evaluation is advised. Follow up and treatment should be dictated by the ECG report.

Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.

Elective anesthesia is not advised.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit.

PLAN

Highly recommend a six-lead ECG evaluation. Administer Pimobendan 0.3mg/kg PO q12h. Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Alter fluid therapy based upon these results and assessment of patient's volume status as able.

Monitor renal values in 1-2 weeks, then every 3-4 months lifelong to ensure tolerance of medications.

A recheck echocardiogram is recommended in 4-6 months to screen for progression, sooner if clinical signs arise.



PATIENT

Shakira Burke

SPECIES

Canine

BREED

Doberman

SEX

Female Spayed

AGE

8 years

WEIGHT

94.8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Emily Kalenius, DVM

HOSPITAL NAME

Willvet Salem

REFERRING VET

Dr. Ebert

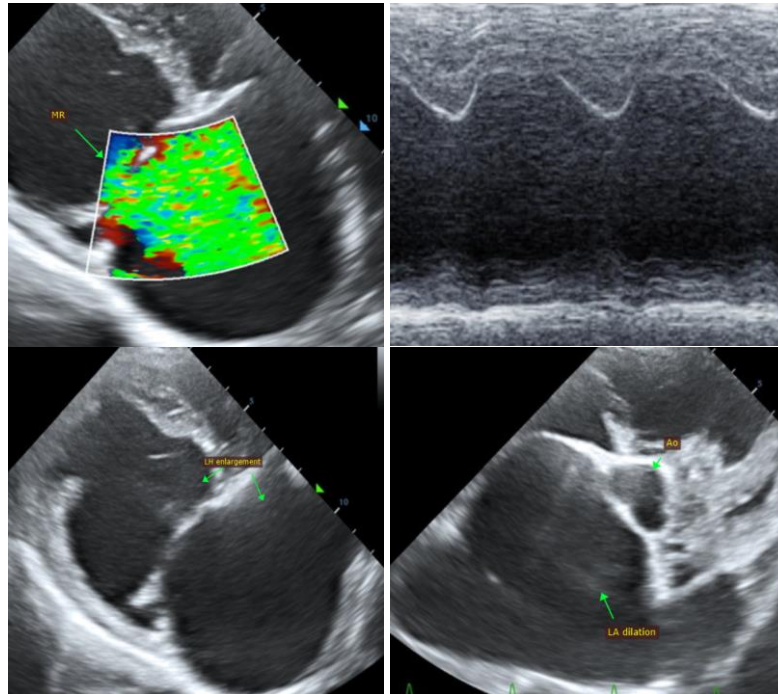
INVOICE

24227

DATE

5/17/22

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.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com