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PATIENT

Zeus Ramos

SPECIES

Canine

BREED

Doberman Pinscher

SEX

Male Neutered

AGE

8.4.13

WEIGHT

106lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Stephanie Pearce,
RDCS, RVT

HOSPITAL NAME

Happy Tails Veterinary
Hospital

REFERRING VET

Dr. Kraselski

INVOICE

22721

DATE

2/21/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. Routine screening exam.

-Pertinent abnormal PE/Chem/CBC/UA Results: Chronic elevated cholestatic liver enzyme- recently doubled. Thyroid panel sent out in past- no thyroid disease suspected.

-Current medications: Telmisartan 40mg- 1 SID, Dasuquin Advanced- 2 SID.

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results (1/2021 MML): Normal. LA: 3.2, LV: 4.3/3.1, FS: 28%.

-STAT: Not requested

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve with no obvious prolapse into the left atrial lumen. No mitral regurgitation with normal left atrial dimension. Borderline LV dilation with borderline myocardial dysfunction. Normal LV wall thickness. The tricuspid valve appears normal with no TR. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal aortic outflow velocities; laminar flow. Trace/mild aortic insufficiency. Normal pulmonary outflow velocity with no pulmonic insufficiency. No pericardial or pleural effusion noted.

CARDIAC CHART

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	NA	NA	NM	1.3	23	40	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	92	1.9	1.3	48.1	3.4	4.7	3.6
*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)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Compared to the prior study, there are mild changes appreciated. The LV is slightly increased comparatively in both systole and diastole, and the overall systolic function is mildly depressed (FS previously 28%). This may reflect normal variation; however, early DCM cannot be ruled out. The LA remains normal indicating low risk for complication at this time. The small aortic leak is unchanged and routine blood pressure monitoring advised.

Continued recheck echocardiograms every 6-12 months are indicated in this predisposed breed. Additionally, holter monitoring every 6-12 months can and should also be considered to screen for the arrhythmic form of disease. Finally, the BNP test has also been shown to be a decent predictor of occult DCM and can consider routine screening going forward.

No cardiac medications are indicated at this time. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. I generally recommend fish oil supplementation in any Doberman, given the anti-arrhythmic properties of omega fatty acids.

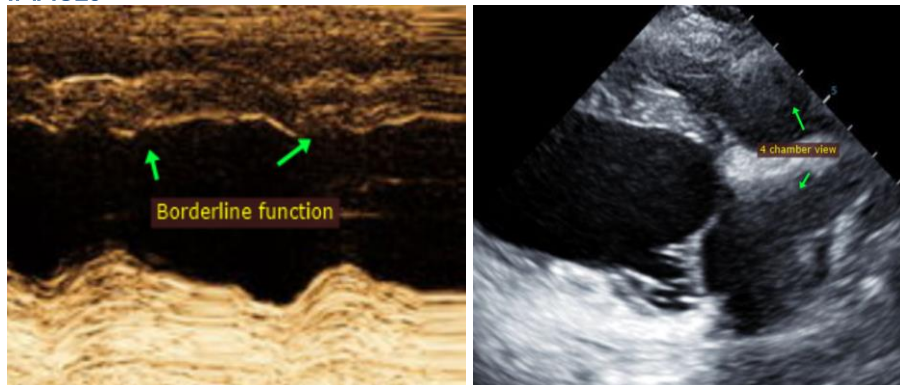
Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively 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.

PLAN

Baseline BP is recommended every 6 months.

Recheck is recommended in 6 months, sooner if clinical signs arise.

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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