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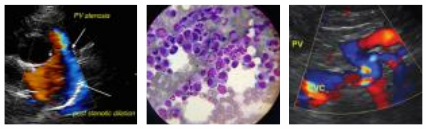


Pennsylvania Mobile
VETERINARY ULTRASOUND SERVICES
IMAGING PERFORMED BY
PAMobileVet.com 443-794-4700

PATIENT
Dippie Daigneault

SPECIES
Canine

BREED
Rottweiler Mix

SEX
Male Neutered

AGE
9 months

WEIGHT
43

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Rebekah Jakum, CVT ARDMS/RVT

HOSPITAL NAME
Conrad Weiser Animal Hospital

REFERRING VET
Dr. Comalli

INVOICE
23565

DATE
4/11/22

PRESENTING CLINICAL SIGNS

History: Grade 2-3/6 heart murmur. Trazadone for sedation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. No mitral regurgitation. Normal left atrial dimension. No LV dilation with adequate myocardial function. Minimal LV wall thickening (1.0cm globally). The tricuspid valve appears subjectively normal, with no tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic valve is normal in morphology and mobility. Normal pulmonic outflow velocity with laminar flow. No pulmonic insufficiency. Mildly thickened aortic valve leaflets. There is mild to moderate aortic stenosis present (50mmHg PG); no obvious sub-aortic ridge. No aortic regurgitation. No pericardial or pleural effusion noted. No cardiac tumors seen.

CARDIAC CHART

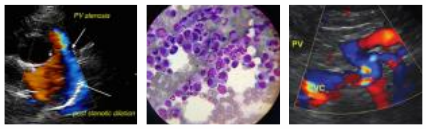
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			NM	1.3	42	80	0.17
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT**	**LA** 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	3.5	1.9	43	2.4	3.3	1.9
*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

The cause of the murmur is mild to moderate aortic stenosis (AS) causing elevated blood flow velocity through the aortic valve. The LV walls are not significantly hypertrophied secondary to the stenosis, the remainder of the cardiac structure and function appears adequate. Most importantly, the LA is normal in dimension indicating the risk for complication remains low.

Aortic stenosis is a congenital disease common in this breed. The condition can worsen up to 1 year of age and monitoring is advised for progression in the future. Prognosis is guarded, with many dogs in the mild/moderate category never experiencing associated clinical signs, while some



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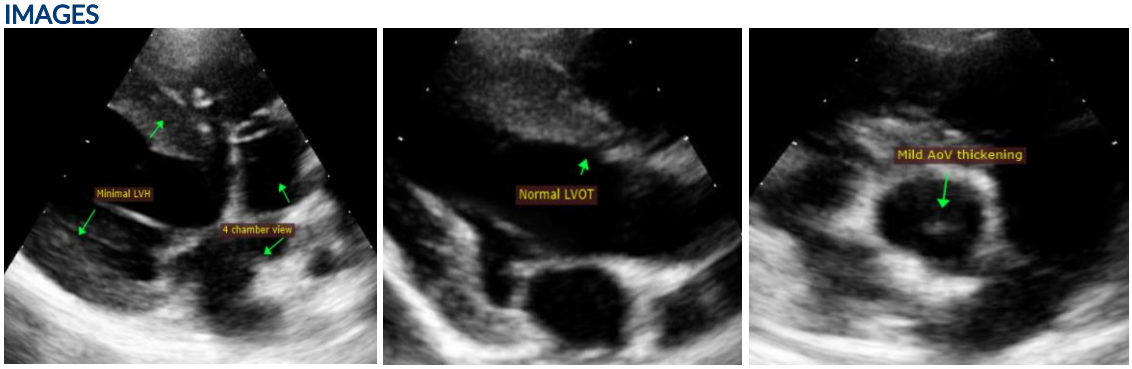
succumbing to malignant arrhythmias. If there is progression in the future, this will certainly dictate a more guarded prognosis. Serial echocardiography is recommended lifelong to assess for progression and risk for complication.

Monitor for development of labored breathing, exercise intolerance or collapse episodes, as AS patients are more predisposed to development of arrhythmias than to CHF which is actually very uncommon. Mild exercise restriction is advised. Omega fatty acid supplementation (1000mg 1-2x daily) is of some long-term benefit for dogs predisposed to arrhythmias. Atenolol is often used in severe cases to decrease heart rate, however in a case that is borderline mild this is not indicated at this time.

If needed, anesthetic risk is mildly elevated. Avoid heart rate stimulating drugs such as atropine or glycopyrrolate unless clinically indicated. Avoid ketamine and acepromazine due to peripheral vascular effects. Mild IV fluid restriction is advised. Recommend prophylactic antibiotics prior to and during any orthopedic or dental procedure in the future given predisposition to endocarditis.

Recommend recheck echocardiogram in 1 year to screen for progression, 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.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
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