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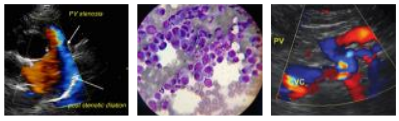

SonoPath

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PATIENT

Chevy Allen

SPECIES

Canine

BREED

Pitbull Terrier Mix

SEX

Female Spayed

AGE

12 years

WEIGHT

67.6lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME

Northwind Animal Hospital

REFERRING VET

Dr. Repsher

INVOICE

20541

DATE

8/13/21

PRESENTING CLINICAL SIGNS

History: History of a heart murmur since May 2020. Presented for metritis and at risk for Pyo in April. Scheduled for spay and mass removal (skin tags). Heart Murmur 3/6 on pre-op exam also noted 2 firm nodules in R and L mammary chain. Chest rads to check heart and looking for mets, shows cardiomegaly no mets seen.
-Pertinent abnormal PE/Chem/CBC/UA Results: Chem 10 – WNL; Cardiomegaly w/tracheal deviation noted on R lateral and VD.
-Sedation used: Sedation not required for scan.
-STAT: Not requested.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental information only.

Normal cardiac silhouette. Bulge in the region of great vessels. No obvious evidence of CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve leaflets appear normal in form and function with no thickening or prolapse into the left atrial lumen. Mild central mitral regurgitation noted with normal left atrial dimension. Normal MR velocity. Normal LV diameter with adequate myocardial function. Normal LV wall thickness. The tricuspid valve appears subjectively normal, no tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology. The pulmonic valve is normal in morphology and mobility. The aortic valve is mildly thickened with mild to moderate aortic insufficiency. Mild subaortic narrowing in systole (see below). Mildly elevated velocity through the region, dilation of the ascending aorta. Normal pulmonic outflow velocity. No pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors identified.

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	5.3	NA	NM	1.2	32	60	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	120	3.2	0.9	30.7	2.6	4.3	3.0
*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 mildly elevated blood flow velocity through the LVOT and aortic root, consistent with mild sub-aortic stenosis (SAS). The LV wall dimensions are normal, indicative of no significant pressure overload. There is a significant aortic leak present with dilation of the ascending aorta, which may reflect concurrent systemic hypertension. **A baseline BP is strongly recommended.** This condition can be exacerbated by volume status changes (anemia, dehydration) and/or heart rate, and may cause the murmur intensity to wax and wane. Screening lab work is recommended to assess for any of these underlying changes. Finally, there is also a small mitral leak which may be physiologic or may reflect early concurrent valve disease. Follow up is advised.

From a cardiac standpoint, monitor for development of labored breathing, exercise intolerance or collapse episodes, as SAS patients are more predisposed to development of arrhythmias than to CHF. No cardiac medications are indicated, as most patients with mild SAS will live a normal life free of complications.

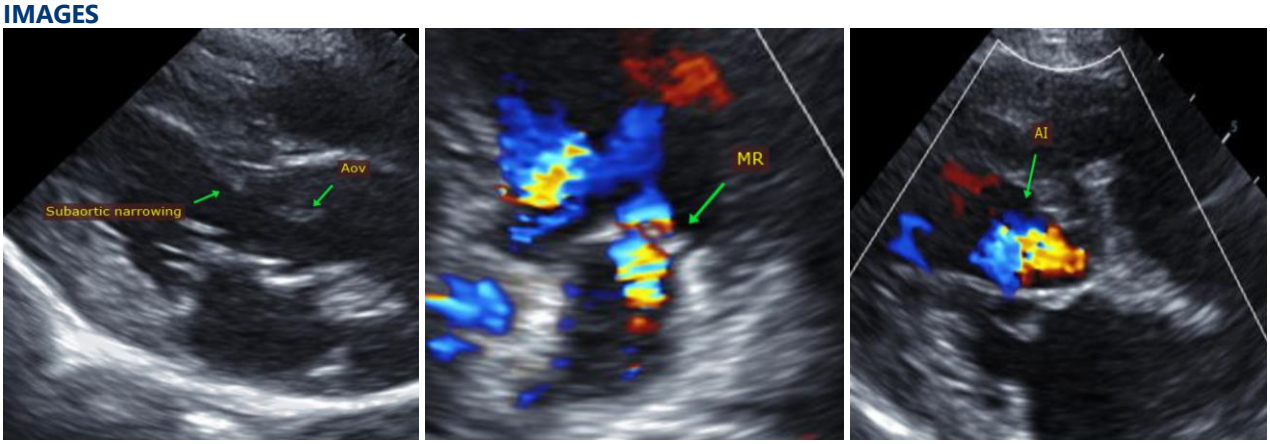
Anesthetic risk is low. Avoid heart rate stimulating drugs such as atropine or glycopyrrolate unless clinically indicated. Recommend prophylactic antibiotics for any orthopedic or dental procedure in the future given slight predisposition to endocarditis. Monitor ECG both intra and post-operatively.

PLAN

Baseline BP is recommended.

A recheck echocardiogram is recommended in 6-12 months 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
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