



PATIENT

Tito Goril

SPECIES

Canine

BREED

Greyhound

SEX

Male Neutered

AGE

5 years

WEIGHT

83.8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Stengel

INVOICE

28634

DATE

1/30/23

PRESENTING CLINICAL SIGNS

History: Heart murmur. Elevated ProBNP: 1036.

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. Mild central mitral regurgitation. Normal velocity. Mild left atrial enlargement. No LV dilation with adequate myocardial function. Mild LV wall thickening (1.1cm). The tricuspid valve appears subjectively normal, with trace tricuspid regurgitation. Normal velocity. 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. The aortic valve is mildly thickened. A valvular stenosis is identified with mild flow elevation through the region (max pressure gradient: 44mmHg). Moderate aortic 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	4.9	2.7	1.6	1.5	32	61	0.418
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	108	3.5	1.3	38.0	4.1	4.5	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)
<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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is mild aortic stenosis (AS) causing elevated blood flow velocity through the aortic valve. The LV walls are mildly hypertrophied secondary to the stenosis, suggesting the disease is well compensated for. A significant aortic leak is associated with the abnormal valve and lifelong blood pressure monitoring is advised. If >150mmHg, an ACEI should be utilized. Additionally, there are small leaks associated with the mitral and tricuspid valves, likely suggesting early chronic degeneration. Mild LA dilation suggests risk for complication is low at this time. No additional issues are identified.

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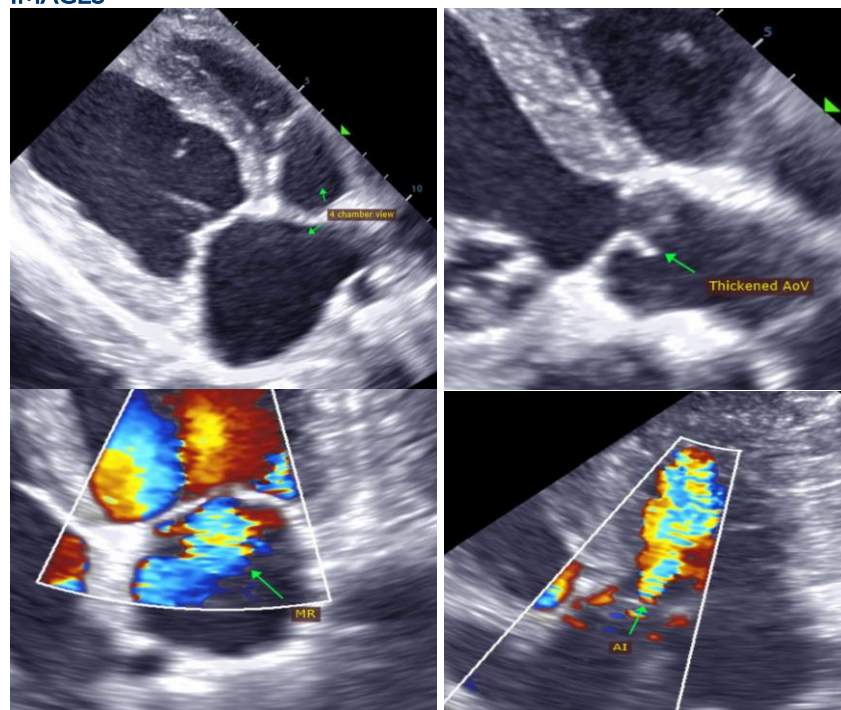
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Prognosis is guarded, with many dogs in the mild category will never experience associated clinical signs. Serial echocardiography is recommended lifelong to continue assessment for progression and risk for complication, particularly given atrial dilation. 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 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. 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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