



PATIENT
Moses Kester

PRESENTING CLINICAL SIGNS
History: Grade 2/6 Murmur. Asymptomatic. BSE.

SPECIES
Canine

BREED
Rottweiler

SEX
Male

AGE
1 year

WEIGHT
89lbs

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

IMAGING PERFORMED BY
Rebekah Jakum, CVT
ARDMS/RVT

HOSPITAL NAME
Blue Ridge Veterinary
Clinic

REFERRING VET
Dr. Filchner

INVOICE
21455

DATE
10/11/21

ECHOCARDIOGRAM FINDINGS

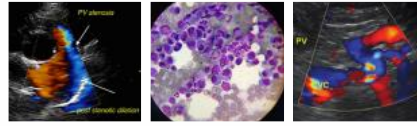
2D, m-mode, color flow and doppler imaging is available. The mitral valve appears mildly thickened with no obvious mitral regurgitation. No prolapse into the left atrial lumen. No left atrial dilation. Normal LV internal diameter with adequate myocardial function. The left ventricular walls are mildly hypertrophied (IVSd 1.2, LVPWd 1.2) consistent with pressure overload. Hypertrophied papillary muscles. The endocardium appears hyperechoic consistent with fibrosis. Sub-aortic narrowing is visualized (see below) causing severe SAS. The aortic valve also appears abnormal, with a thickened morphology and decreased excursion in systole. Moderate aortic insufficiency. Prominent coronary arteries can be seen. The tricuspid valve appears subjectively normal, with no tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology. The pulmonic valve is normal in morphology and mobility. Trivial pulmonic insufficiency. Normal PA outflow velocity; laminar. 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	NA	NA	NM	1.3	35	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	NM	4.7	1.5	40.4	2.7	5.1	3.2
*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)
*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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is severe sub-aortic stenosis (SAS) causing significantly elevated blood flow velocity through the LVOT and aortic valve. The velocity is indicative of a severe pressure gradient elevation. A primary valvular component is also suspected given the morphology of the valve. The degree of LV hypertrophy secondary to the stenosis is mild; however, in this young dog this may certainly worsen over time. The amount of aortic insufficiency is moderate and should be monitored going forward. No additional congenital issues are identified in this study (shunts, etc.),



PATIENT
Moses Kester

however it should be noted that small defects are easily missed. Referral for advanced imaging should always be considered in congenital cases (bubble study, TEE, angiogram, etc.).

SPECIES
Canine

Surgery for SAS has not been proven to alter long term outcome, however select Universities will attempt a cutting balloon valvuloplasty. A concurrent valvular stenosis may limit this utility; however, if the client is interested in more information evaluation by attending Cardiologist is highly recommended for advanced echocardiography. Medical management through heart rate control is recommended as below, in hopes of decreasing the obstruction long term. Target heart rate is <130bpm with stress/activity. Omega fatty acid supplementation may be of some long-term benefit.

BREED
Rottweiler

SEX
Male

Prognosis is guarded yet highly variable, with many dogs in the severe category succumbing to malignant arrhythmias by mid-life and others maintaining asymptomatic status for some time. Serial echocardiography is recommended lifelong to assess for progression and risk for complication as the patient matures. Monitor for development of labored breathing, exercise intolerance or collapse episodes, as SAS patients are more predisposed to development of arrhythmias than to CHF. The degree of AI however will likely lead to significant LV volume overload in time and puts CHF of equal concern to arrhythmias. Moderate exercise restriction is advised lifelong.

AGE
1 year

WEIGHT
89lbs

Given the familial history and genetic link of SAS, breeding is not advised.

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

Anesthetic risk is moderately elevated. Avoid heart rate stimulating drugs such as atropine or glycopyrrolate unless clinically indicated. Avoid ketamine and acepromazine due to systemic vascular effects. Mild IV fluid restriction is advised. Close monitoring for tachyarrhythmias is advised with lidocaine on hand if needed. Recommend prophylactic antibiotics for any orthopedic or dental procedure in the future given predisposition to endocarditis.

PLAN

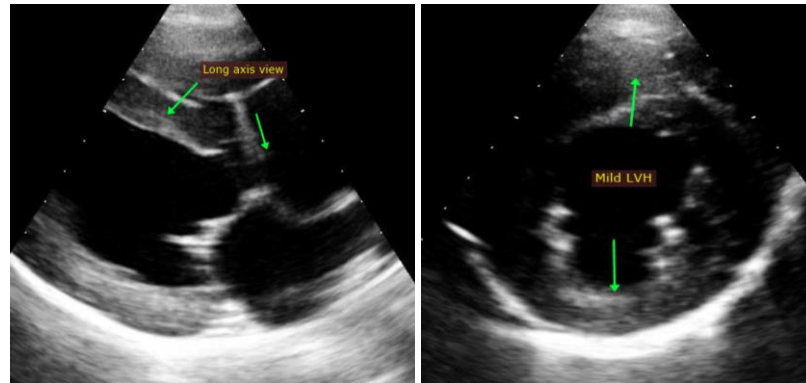
Institute atenolol 12.5mg PO q12h and assess response, the target stressed HR of <130bpm.

IMAGING PERFORMED BY
Rebekah Jakum, CVT
ARDMS/RVT

Recommend recheck echocardiogram in 6-12 months to assess for progression.

HOSPITAL NAME
Blue Ridge Veterinary
Clinic

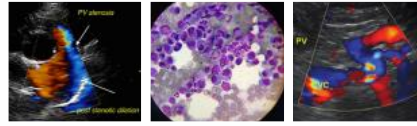
IMAGES



REFERRING VET
Dr. Filchner

INVOICE
21455

DATE
10/11/21



PATIENT

Moses Kester

SPECIES

Canine

BREED

Rottweiler

SEX

Male

AGE

1 year

WEIGHT

89lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

Rebekah Jakum, CVT
ARDMS/RVT

HOSPITAL NAME

Blue Ridge Veterinary
Clinic

REFERRING VET

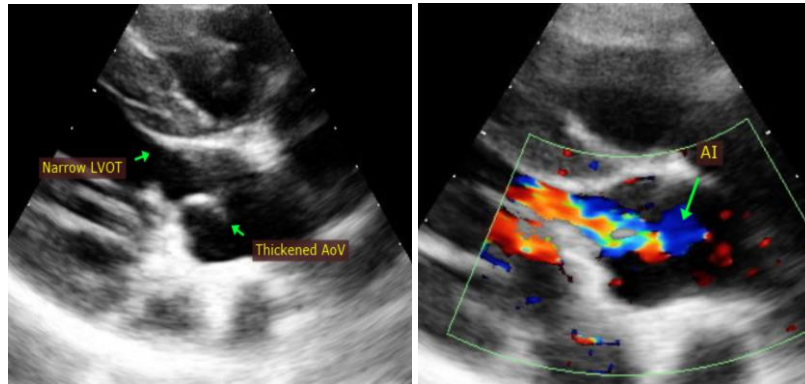
Dr. Filchner

INVOICE

21455

DATE

10/11/21



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