PAUS
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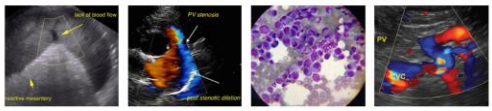


SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Sadie Hurst

SPECIES
Canine

BREED
Golden Retriever

SEX
Female Spayed

AGE
1y 10mo

WEIGHT
55lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mashphee Veterinary Hospital

REFERRING VET
Dr. Oldham

INVOICE
20783

DATE
8/29/21

PRESENTING CLINICAL SIGNS

History: Grade IV/VI systolic found on yearly exam.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is normal with adequate myocardial function. LV wall thicknesses are moderately increased. Hyperechoic hypertrophied papillary muscles.
Left atrium: The left atrium is mildly dilated.
Mitral valve: The mitral valve is normal. No MR.
Aortic valve/Aorta: The aortic valve is thickened with abnormal morphology. Three cusps are visualized with a fusion is suspected. The sub-valvular region is severely narrowed consistent with stenosis. Aortic outflow velocity consistent with severe stenosis; mild aortic insufficiency. A sub-valvular component is visualized. The ascending portion of the aorta is severely dilated following the stenosis.
Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.
Right atrium: Normal RA dimension.
Tricuspid valve: The tricuspid valve appears normal with no tricuspid regurgitation.
Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 120bpm.

2-Dimensional Measurements

Ao diam (cm)	2.65
LA diam (cm)	3.7
LA:Ao (Swe)	1.4
IVS thickness (cm)	1.5
LVID diastole (cm)	3.5
PW thickness (cm)	1.2
LVID systole (cm)	2.5
FS (%)	29

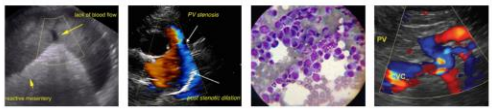
Doppler Measurements

PV Vmax (m/s)	1.1
AoV Vmax (m/s)	5.3
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

The cause of the murmur is severe aortic and subaortic stenosis (AS/SAS) causing severely elevated blood flow velocity through the LVOT and aortic root. The valve is abnormal with a significant valvular component, in addition to a severely narrowed subvalvular region. The LV walls are moderately increased indicating pressure overload of the left heart and the LA is mildly dilated No additional issues are identified.

No surgical intervention is widely available at this time; however, advanced options could be discussed at an academic institution. Medical management through heart rate control is recommended as below, in hopes of decreasing the obstruction long term.



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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 long term. Serial echocardiography is recommended lifelong to assess for progression and risk for complication.

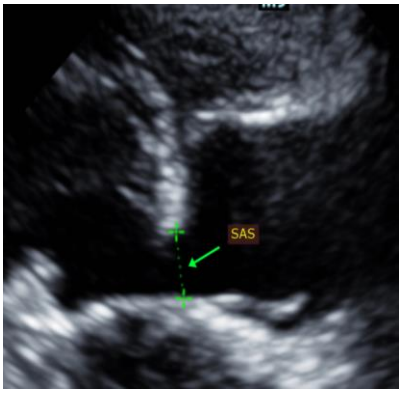
RECOMMENDATIONS

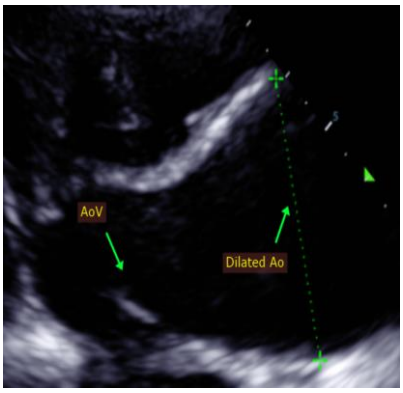
- Institute atenolol to effect: 0.5-1.5mg/kg SID-BID (up-titrate to desired effect). Goal is to suppress heart rate <130bpm even with stress/activity.
- Consider referral as discussed to explore surgical options if desired.
- Omega fatty acid supplementation and mild salt restriction may be of some long term anti-arrhythmic benefit.
- Once Atenolol is initiated, anesthetic risk is mild if needed. 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. Recommend prophylactic antibiotics for any orthopedic or dental procedure in the future given predisposition to endocarditis.
- Monitor for development of labored breathing, exercise intolerance or collapse episodes, as AS patients are more predisposed to development of arrhythmias than to CHF.
- Moderate lifelong exercise restriction is advised.

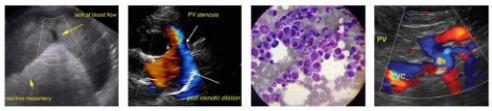
PLAN

- Recommend conservative monitoring with a recheck echocardiogram in 6-12 months, sooner if any development of clinical signs.

IMAGES







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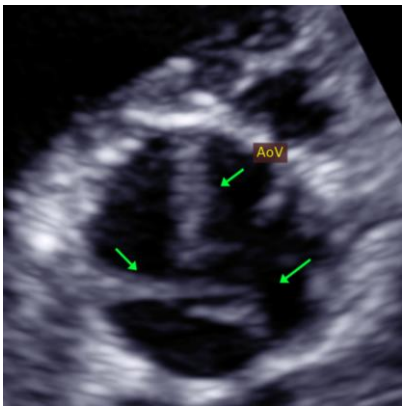

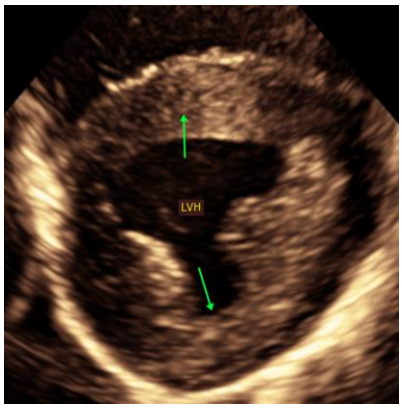

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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