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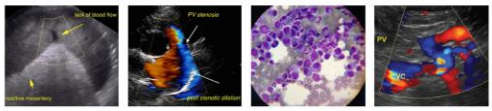


SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Freya Malcuit

SPECIES
Canine

BREED
French Bulldog

SEX
Female Intact

AGE
3 years

WEIGHT
24lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Wignall Animal Hospital

REFERRING VET
Dr. Harvey

INVOICE
28114

DATE
1/5/23

PRESENTING CLINICAL SIGNS

History: History moderate-severe pulmonic stenosis on echo done elsewhere (Jan 2021 - report not available). Doing well at home. On Atenolol 25mg, 3/4-tab BID.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is normal with low normal myocardial function. LV wall thicknesses are normal. No septal flattening.
Left atrium: The left atrium is normal.
Mitral valve: The mitral valve is normal. Trace mitral regurgitation.
Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.
Right ventricle: The RV is moderately dilated with mild to moderate hypertrophy and remodeling.
Right atrium: Moderate RA dilation.
Tricuspid valve: The tricuspid valve appears normal with no tricuspid regurgitation.
Pulmonary valve/Pulmonary artery: Pulmonic outflow velocities are elevated at the level of the valve; 4.8m/s depending on heart rate. The pulmonic valve appears severely thickened and stenotic. There is post-stenotic dilation of the main pulmonary artery and branches. Mild pulmonic insufficiency.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 100bpm.

2-Dimensional Measurements

Ao diam (cm)	1.5
LA diam (cm)	2.0
LA:Ao (Swe)	1.3
IVS thickness (cm)	0.9
LVID diastole (cm)	2.2
PW thickness (cm)	0.9
LVID systole (cm)	1.4
FS (%)	37

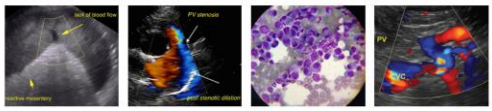
Doppler Measurements

PV Vmax (m/s)	4.8
AoV Vmax (m/s)	1.1
MR Vmax (m/s)	NM
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

Severe valvular pulmonic stenosis persists. The degree of obstruction is severe based upon the velocity/pressure gradient across the pulmonic valve and the secondary hypertrophy and remodeling of the right ventricle. There is moderate RA dilation as well. A small mitral leak is noted, which is of little hemodynamic significance. No other issues are identified in this study. The prior report moderate to severe PS, which may imply progression.

While an asymptomatic patient is encouraging, referral for balloon valvuloplasty should always be considered in severe PS cases as the gold standard therapeutic option for this condition, and may improve long term outcome and delay onset of clinical signs (including exertional syncope and right-sided congestive heart failure). If surgery is not elected, this patient's condition may certainly limit lifespan, with many severe PS cases developing CHF by mid-life. That being said outcome is highly variable with congenital disease and long term prognosis is guarded. Patient will always be at risk for progression to clinical signs/CHF, development of arrhythmias and/or sudden death lifelong.



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Continued lifelong medical management with Atenolol is recommended.

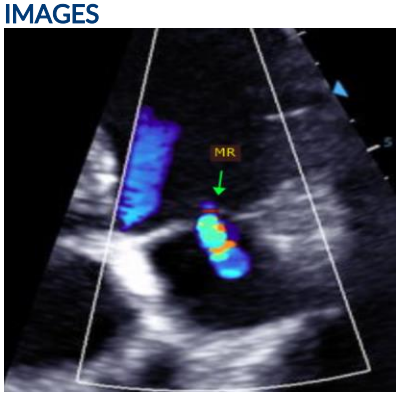
RECOMMENDATIONS

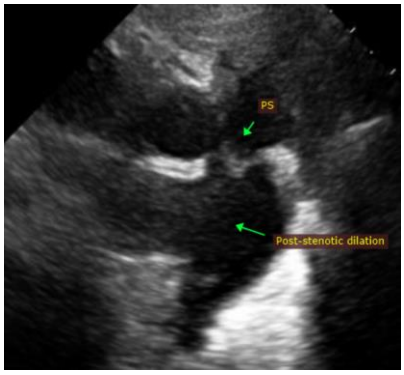
- Consider referral for surgical intervention if an option.
- Continue atenolol as prescribed with no additional medications at this time.
- Monitor for development of associated clinical signs (collapse, abdominal distention, cough, labored breathing).
- Mild lifelong exercise restriction is advised.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.
- **Monitor** for development of a cough, labored breathing, exercise intolerance or collapse episodes.

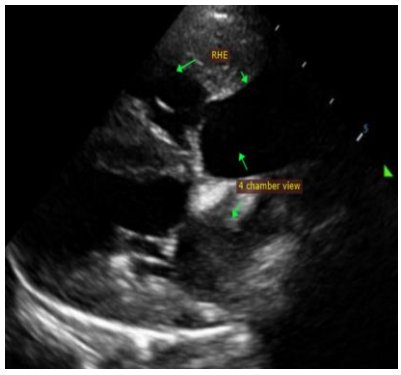
PLAN

- Recommend conservative monitoring with a recheck annually lifelong, sooner if any development of clinical signs (exertional syncope, right-sided CHF).

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)
info@sonopath.com