



PATIENT
Valentino Roberge

SPECIES
Canine

BREED
Border CollieMix

SEX
Male Neutered

AGE
2.5 years

WEIGHT
59lbs

INTERPRETED BY
Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

**IMAGING
PERFORMED BY**
Pamela Harrigan,
RDCS

HOSPITAL NAME
Mass Veterinary
Specialty Services

REFERRING VET
Dr. Masloski

INVOICE
20851

DATE
9/1/21

PRESENTING CLINICAL SIGNS

History: Recheck echo after pulmonary valve balloon valvuloplasty for severe pulmonic stenosis (July 7, 2021). Current presentation: Overall, he has been doing well but the past few evenings, Valentino has not been eating dinner. He does eat his breakfast. He will cough a bit after exercise, but not consistently, and has been breathing comfortably at home. CV/RESP: NSR, grade IV-V/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 200mmHg x 3.

-Current medications: 1) Lasix/furosemide 20mg 1.5 tabs twice a day (early CHF at time of original echo March, 2021) 2) Spironolactone 25mg 1.5 tabs twice a day 3) Atenolol 25mg 1/2 tab twice a day. *Sedated for echo with propofol.

-Previous echo findings (Angell: pre-procedure 5/27/21): LA 2.17 cm; LA:Ao 1.07; LV 3.02 cm; IVS hypertrophy with flattening; moderate RVE with moderate-severe free wall and infundibular hypertrophy. PV thick and severely tethered (annulus ~1.53 cm); MPA mildly dilated; RVOT 5.92 m/s (PG 140 mmHg).

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV diameter is normal with adequate function. LV wall thicknesses are normal.

Left atrium: The left atrium is normal.

Mitral valve: The mitral valve appears normal with no MR.

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 dilated in short axis with mild hypertrophy. Subtle septal flattening.

Right atrium: Mild RA dilation.

Tricuspid valve: The tricuspid valve appears mildly thickened. No obvious stenosis. Mild tricuspid regurgitation.

Pulmonic valve/Pulmonary artery: Pulmonic outflow velocities are elevated at the level of the valve. The max velocity is consistent with a moderate stenosis (PG 67mmHg). The pulmonic valve appears thickened and tethered. Moderate pulmonic insufficiency. Mild post-stenotic dilation of the MPA and branches.

Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 90bpm.

2-Dimensional Measurements

| | |
|--------------------|-----|
| Ao diam (cm) | 1.9 |
| LA diam (cm) | 2.1 |
| LA:Ao (Swe) | 1.1 |
| IVS thickness (cm) | 0.8 |
| LVID diastole (cm) | 3.5 |
| PW thickness (cm) | 0.8 |
| LVID systole (cm) | 2.4 |
| FS (%) | 31 |

Doppler Measurements

| | |
|----------------|-----|
| PV Vmax (m/s) | 4.1 |
| AoV Vmax (m/s) | 1.2 |
| MR Vmax (m/s) | NAY |
| TR Vmax (m/s) | 3.1 |
| TR PG (mmHg) | 40 |



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INTERPRETATION OF THE FINDINGS

Valvular pulmonic stenosis persists, with evidence of improvement overall. While RV evaluation is highly subjective, previously noted moderate to severe free wall and infundibular thickening appears improved. Additionally the pressure gradient across the affected valve is >50% improved, which is the goal with the BV procedure. That being said, the patient is sedated with propofol which may falsely lower this value. Regardless, compared to previous overall this does appear to have been a successful procedure.

Given improvement seen here, I do not see a need to continue Lasix or spironolactone therapy at this time. Atenolol should be continued lifelong with a well controlled rate seen here. While this is good news thus far, prognosis long-term remains difficult to predict as some dogs will re-stenose over time to the severe category. Lifelong monitoring remains advised.

No obvious cardiac contribution to the current inappetence is suspected. Consider alternative causes.

Monitor for development of associated clinical signs (collapse, abdominal distention, cough, labored breathing). Mild exercise restriction is advised. Omega fatty acid supplementation may have some long-term benefit, given these cases are predisposed to development of arrhythmias going forward.

RECOMMENDATIONS

- Continue atenolol as prescribed.
- NO obvious indication to continue diuretic therapy; discontinue Lasix and if doing well after 1 week discontinue Spironolactone.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Anesthetic risk is mild to moderate at this time. Avoid heart rate stimulating drugs such as atropine or glycopyrrolate unless absolutely necessary. Avoid vasodilators such as acepromazine. Mild IV fluid restriction is advised. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 if possible.
- Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary.
- Mild activity restriction is advised.

PLAN

- A recheck echocardiogram is recommended in 6-12 months, sooner if any development of clinical signs. If stable at that time, annual rechecks are advised.



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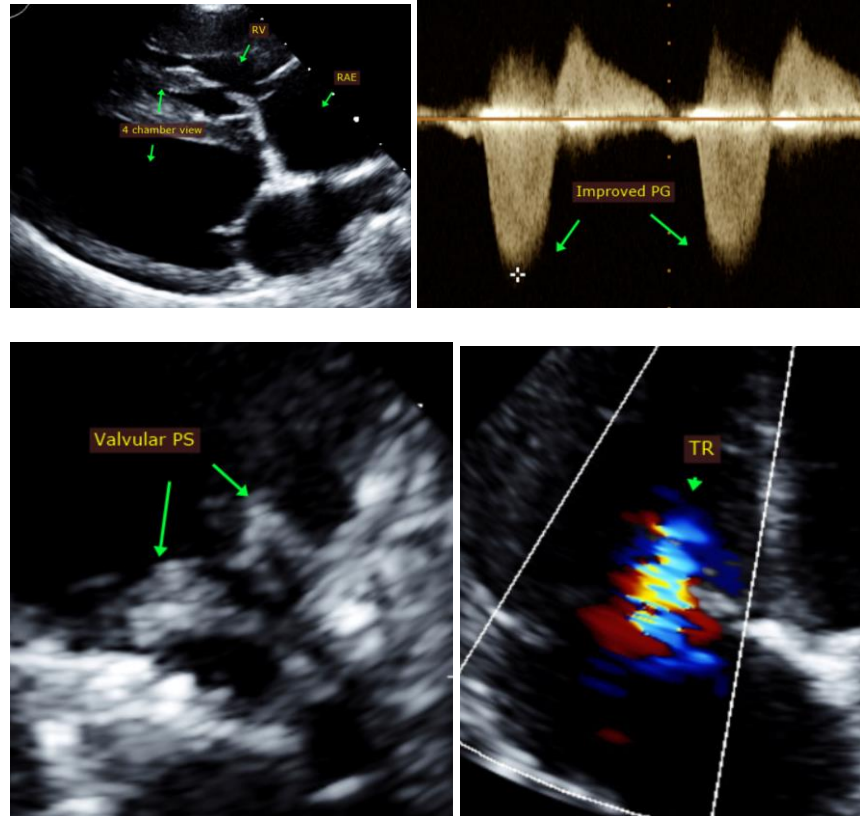
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IMAGES



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

Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)