



PATIENT

Sheyla Varelos

PRESENTING CLINICAL SIGNS

History: Grade III/VI systolic murmur.

SPECIES

Canine

ECHOCARDIOGRAM FINDINGS

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

BREED

French Bulldog

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

Left atrium: The left atrium is normal.

SEX

Female Intact

Mitral valve: The mitral valve is normal. No mitral regurgitation.

Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. Trace aortic insufficiency.

AGE

3 months

Right ventricle: The RV chamber is obliterated with marked RV and infundibular hypertrophy. The degree of hypertrophy is causing a subvalvular stenosis through the region. Septal flattening in systole.

Right atrium: Moderate RA dilation.

WEIGHT

6lbs

Tricuspid valve: The tricuspid valve appears mildly thickened with moderate tricuspid regurgitation. Elevated velocity; secondary to PS.

Pulmonic valve/Pulmonary artery: Pulmonic outflow velocities are severely elevated at the level of the valve. The pulmonic valve appears markedly abnormal, asymmetric and thickened with mild pulmonic insufficiency. There is significant post-stenotic dilation of the main pulmonary artery and branches.

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

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

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 150bpm. Inverted QRS.

IMAGING

PERFORMED BY

Pamela Harrigan,
RDCS

2-Dimensional Measurements

Ao diam (cm)	1.0
LA diam (cm)	1.1
LA:Ao (Swe)	1.1
IVS thickness (cm)	0.55
LVID diastole (cm)	1.0
PW thickness (cm)	0.64
LVID systole (cm)	0.4
FS (%)	64

Doppler Measurements

PV Vmax (m/s)	6.7
AoV Vmax (m/s)	1.0
MR Vmax (m/s)	NA
TR Vmax (m/s)	4.0
TR PG (mmHg)	64

HOSPITAL NAME

East Boston Animal
Hospital

INTERPRETATION OF THE FINDINGS

The cause of the murmur is valvular and subvalvular pulmonic stenosis secondary to infundibular hypertrophy. The degree of obstruction is marked based upon the velocity and degree of hypertrophy of the right ventricle. There is also a significant tricuspid leak, no doubt impacted by the stenosis; however, the tricuspid valve appears mildly thickened as well. No other obvious congenital abnormalities were visualized. Finally, trivial pericardial effusion is noted which is of unknown significance yet concerning going forward. Given the degree of disease seen here this may reflect early congestion, or may simply be normal (<5ml is normal). Given the young age of the patient I would not utilize

REFERRING VET

Dr. Chopra

INVOICE

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DATE

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Lasix at this point; however, close monitoring for abdominal distention or breathing changes is advised.

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Referral for consultation and possible balloon valvuloplasty should be considered in this patient 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). It should be mentioned that bulldog breeds are predisposed to an abnormal coronary artery pattern that can obstruct flow through the vessel and this cannot be determined (versus purely valvular) on 2D echo. An aberrant coronary would limit surgical options if present. An angiogram must be performed to rule out this possibility prior to surgery. Additionally the degree of RVH at such a young age will limit surgical outcome, and should be considered as well. Referral for discussion is advised.

BREED

French Bulldog

SEX

Female Intact

AGE

3 months

If surgery is not elected, this patient's condition will likely limit lifespan, with many severe PS cases developing CHF early to mid-life. Medical management with atenolol is recommended to decrease heart rate and lessen the obstruction; however, this patient is quite young to start this medication and waiting until at least 4 months of age is recommended.

WEIGHT

6lbs

The prognosis with severe PS is quite variable; however, the degree of hypertrophy and fibrosis at such a young age, certainly confers a poor to grave outcome. This patient is at high risk for development of right-sided CHF (ascites/effusions), development of exertional syncope and/or malignant arrhythmias lifelong.

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RECOMMENDATIONS

- Referral for balloon valvuloplasty consultation ASAP if desired.
- At 4 months of age, institute atenolol to effect: 25mg tabs, ¼ tab PO SID to start. Goal is to suppress heart rate <120-140bpm even with stress/activity.
- If any change in RR/RE or abdominal distention noted, reassess for effusion accumulation as discussed.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Elective anesthesia is not advised.
- Monitor for development of labored breathing, progressive cough, exertional collapse episodes, abdominal distention or exercise intolerance in the future.
- Lifelong activity restriction is advised while maintaining QOL.

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Pamela Harrigan,
RDCS

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REFERRING VET

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PLAN

- If referral is declined, recommend recheck echocardiogram in 6 months to screen for progression, sooner if any development of clinical signs.

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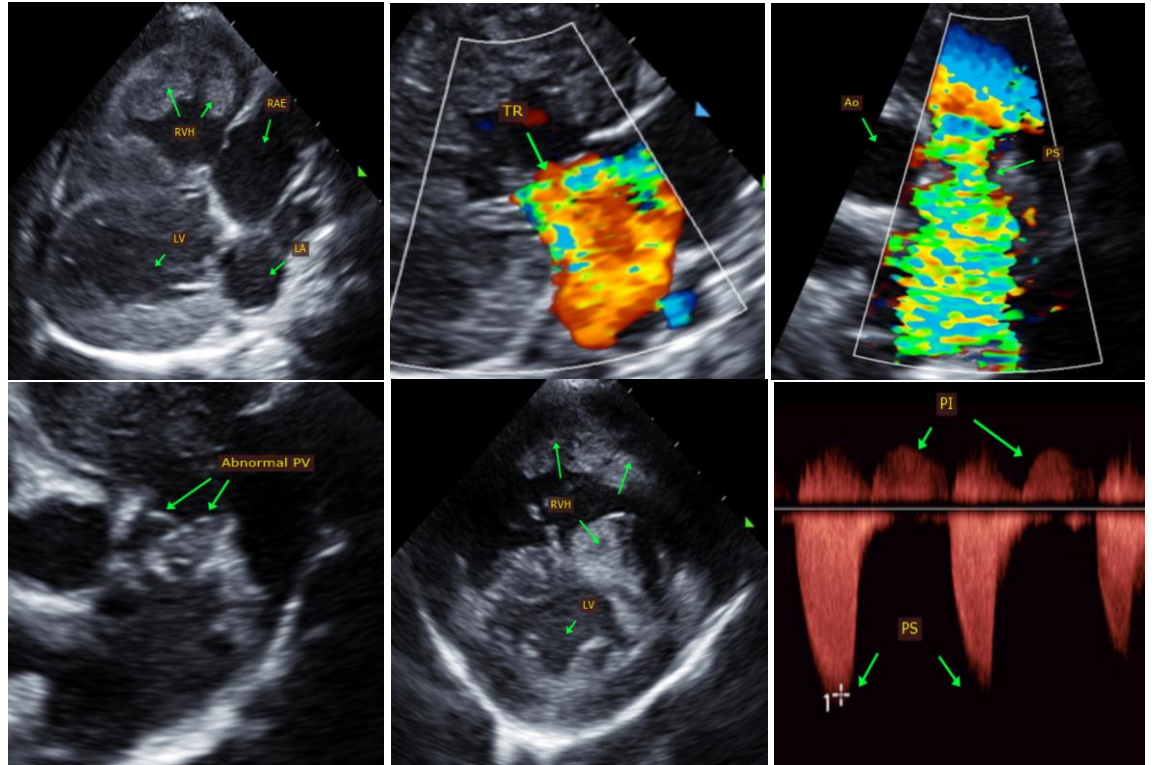
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IMAGES



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.

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