


PATIENT

Fraya Grimstead

PRESENTING CLINICAL SIGNS

History: Her son has been diagnosed with severe PS.

SPECIES

Canine

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve leaflets with no obvious prolapse into the left atrial lumen. No mitral regurgitation. Normal left atrial dimension. Normal LV diameter with normal myocardial function. The LV wall thickness is normal. The tricuspid valve appears normal in form and function. No right atrial dilation. Mild right ventricular prominence with mild hypertrophy. Mild elevation of pulmonic outflow velocities at the level of the valve. The PV appears mildly thickened, with mild post-stenotic dilatation of the branch PA's. Trace pulmonic insufficiency. The aortic valve appears to have normal morphology and mobility. Mildly elevated LVOT velocity. No pericardial or pleural effusion noted. No obvious cardiac masses.

BREED

American Bulldog

SEX

Female Intact

CARDIAC CHART
AGE

3 years

WEIGHT

50lbs

INTERPRETED BY

 Maggie Machen Lamy,
 DVM DACVIM
 (Cardiology)

IMAGING
PERFORMED BY

Kelly Reschny, RVT

HOSPITAL NAME

 Graham Animal
 Hospital

REFERRING VET

Dr. Collins

INVOICE

21102

DATE

9/20/21

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	1.2	1.2	36	66	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	175	2.4	2.2	22.7	2.3	4.0	2.5
*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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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

Elevated flow velocity through the pulmonic valve is noted, consistent with congenital valvular pulmonic stenosis. Given the breed, a concurrent aberrant coronary artery cannot be ruled out. The degree of obstruction is mild based upon the velocity/pressure gradient across the pulmonic valve and minimal secondary hypertrophy and remodeling of the right ventricle (mild PG is <50mmHg). A mildly elevated aortic outflow velocity is noted; however, the LVOT is not well visualized. No tricuspid regurgitation or other issues are noted.

Mild PS cases typically do not impact a patient clinically, and most are able to live a normal life free of complications. That being said, risk for progression to clinical signs will always remain and periodic monitoring is advised.



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Given mild disease I would not recommend surgical intervention in this case. Medical management with atenolol is often recommended in moderate or severe cases, with mild often not requiring therapy. Given that this case is free of symptoms and mild in severity, it is reasonable to simply monitor going forward rather than instituting lifelong medications. Referral to a local cardiologist should be considered to discuss advanced imaging and potential medical and surgical options if the client is interested.

SPECIES

Canine

BREED

American Bulldog

Breeding this animal is not advised due to the genetic link of this disease.

SEX

Female Intact

Anesthetic risk is considered mildly elevated. **Avoid heart rate stimulating drugs such as atropine or glycopyrrolate.** Avoid excessive vasodilation/hypotension. Pre-oxygenate for 5-10 minutes prior to induction. A reasonable protocol would be as follows: premedicate with opioid/benzodiazepine, propofol or alfaxalone induction, isoflurane maintenance. Monitor ECG, BP as is standard. Monitor for hypoxia in recovery; utilize O2 chamber if needed. Mild IV fluid restriction is advised.

AGE

3 years

Monitor for development of associated clinical signs (exertional collapse, abdominal distention, cough, labored breathing). Omega fatty acid supplementation may have some long-term benefit, given that these cases are predisposed to development of arrhythmias going forward. Breeding is not advised as this condition is genetically linked.

WEIGHT

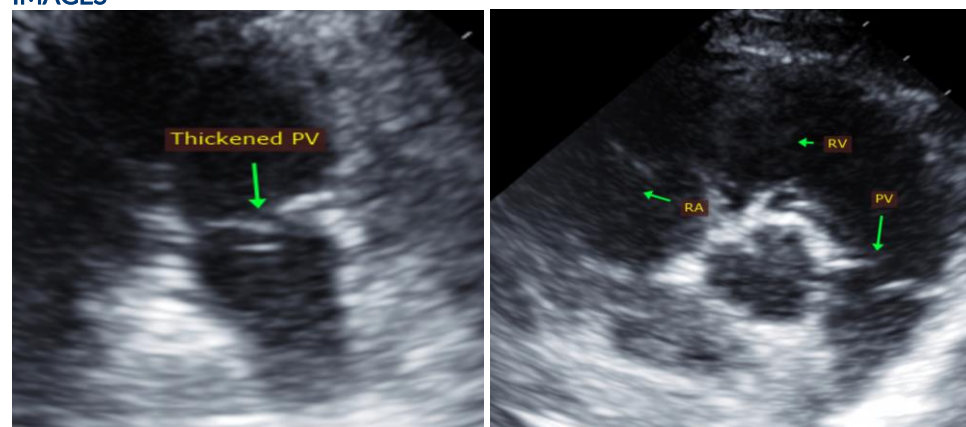
50lbs

Recommend recheck echocardiogram in 12 months to assess for progression, sooner if clinical signs arise in the interim.

INTERPRETED BY

Maggie Machen Lamy,
DVM DACVIM
(Cardiology)

IMAGES



IMAGING PERFORMED BY

Kelly Reschny, RVT

HOSPITAL NAME

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REFERRING VET

Dr. Collins

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.

INVOICE

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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.

DATE

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