



PATIENT

Suge Phillips

PRESENTING CLINICAL SIGNS

History: Moderate heart murmur. Asymptomatic.

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 obvious mitral regurgitation. Normal left atrial dimension. Normal LV diameter with normal myocardial function. The LV wall appears normal. The tricuspid valve appears normal with no obvious insufficiency. Mild right atrial dilation. Mild right ventricular hypertrophy and enlargement, indicative of pressure overload. Pulmonic outflow velocities are severely elevated at 5m/s (PG 100mmHg). The stenosis is near the level of the valve; however, the actual valve morphology cannot be seen in this image set; likely either valvular or an aberrant coronary at the level of the valve. Mild pulmonic insufficiency. There is mild post-stenotic dilation of the main pulmonary artery. The aortic valve appears to have normal morphology and mobility. No obvious cardiac shunts are seen. No pericardial or pleural effusion noted.

BREED

French Bulldog

SEX

Female Intact

AGE

4 months

CARDIAC CHART

WEIGHT

16.4lbs

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	NM	1.3	42	76	0.3
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	NM	1.3	5.0	7.4	1.6	2.6	1.5
*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)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				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)

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Lindsey Daniel, DVM

HOSPITAL NAME

Midland Animal Hospital

REFERRING VET

Dr. Spence

INVOICE

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3/20/23

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is severe pulmonic stenosis. The degree of obstruction is severe based upon the severe pressure gradient across the pulmonic valve, although the secondary right heart changes appear mild at this time. The tricuspid valve is normal without obvious dysplasia. Mild right enlargement suggests pressure overload and the risk for CHF will be elevated going forward. No other congenital abnormalities were visualized; however, small shunts or defects can be easily missed.



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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 valvular) in this study. An aberrant coronary would limit surgical options if present. An angiogram must be performed to rule out this possibility prior to surgery.

If surgery is not elected, this patient's condition will likely limit lifespan, with many severe PS cases developing CHF by mid-life. It is concerning that there is concurrent tricuspid disease, as this is a negative prognostic indicator. Medical management with atenolol is certainly recommended due to severity of disease, however I would not institute this until at least 6 months of age. The goal of the medication is to decrease heart rate and lessen the obstruction as below. Monitor for development of associated clinical signs (collapse, abdominal distention, cough, labored breathing). Mild exercise restriction is advised. Breeding is NOT advised as this is a hereditary condition.

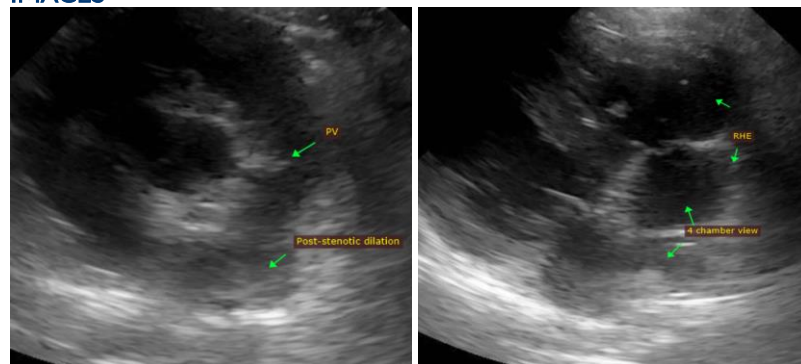
Anesthetic risk is mild to moderate at this time. Avoid heart rate stimulating drugs such as atropine or glycopyrrolate unless absolutely necessary. Avoid vasodilators such as acepromazine. Mild IV fluid restriction is advised.

PLAN

At 6mo of age, institute atenolol to effect: 25mg tabs, ¼ tab PO SID to start (up-titrate to desired effect). Goal is to suppress heart rate <130bpm even with stress/activity. Baseline chest radiographs and ECG are recommended. Referral for angiogram and balloon valvuloplasty ASAP if desired.

If surgery is declined, recommend recheck echocardiogram in 6-8 months (or when full stature) to assess for progression, response to medication.

IMAGES





PATIENT

Suge Phillips

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.

SPECIES

Canine

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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French Bulldog

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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