



PATIENT

Benji Turner

PRESENTING CLINICAL SIGNS

History: Moderate heart murmur. Murmur is described as systolic, not continuous.

SPECIES

Canine

BREED

French Bulldog

SEX

Male

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 borderline myocardial function depending on angle. The LV wall is normal. The tricuspid valve appears normal in form with no obvious tricuspid regurgitation present. No significant right atrial or ventricular enlargement. Mild elevation of pulmonic outflow velocities, suspected to be at the level of the valve although difficult to visualize. The PV is not well visualized and there is no obvious post-stenotic dilation. No obvious pulmonic insufficiency. The aortic valve appears to have normal morphology and mobility. Normal outflow velocity. No obvious congenital shunts. No pericardial or pleural effusion noted.

CARDIAC CHART

AGE

13 weeks

WEIGHT

6.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Lindsey Daniel,
DVM

HOSPITAL NAME

Northridge Vet
Center

REFERRING VET

Dr. Shelton

INVOICE

21633

DATE

10/20/21

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	NM	1.3	38	70	0.27
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	150	1.6	2.5	3.0	1.2	2.1	1.3
*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

The diagnosis is mild pulmonic stenosis (PS); however, the valve itself is not well visualized and other ancillary possibilities should be considered. (coronary anomaly, super valvular stenosis, etc.). The overall right heart does not appear significantly affected supporting a mild abnormality. The LV function is borderline depending on view which is somewhat concerning as this is clearly not explained by simply pulmonic stenosis. No additional obvious issues are identified.

Any congenital case should ideally be offered referral to an attending Cardiologist as the gold standard, in order to confirm the presumptive diagnosis and assess for other small defects that are difficult to identify. This often requires advanced diagnostics such as a bubble study and may alter treatment and prognostic information.



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Assuming the diagnosis remains mild PS, medications nor surgery are typically recommended as the majority of mild dogs will live a normal life span without associated clinical signs and long-term prognosis is good. That being said, this particular disease can progress up to 1 year of age and follow up is advised. Moderate or severe cases may have an improved outcome through surgical and/or medical intervention. Medical management includes drugs that will slow heart rate and lessen the obstruction. The obstruction will worsen at higher heart rates, so maintaining a slow rate can help avoid clinical signs. Commonly, beta blocker medications such as atenolol are used to control the heart rate.

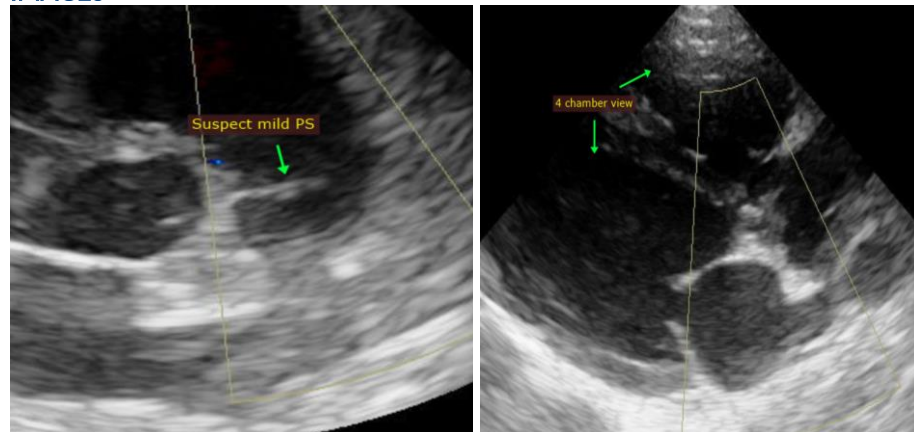
Monitor at home for symptoms including exercise intolerance, difficulty breathing, abdominal distention and/or syncope (fainting). Mild activity restriction is advised lifelong.

Anesthetic risk is considered mild if needed. 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.

PLAN

Recommended referral for advanced evaluation. If declined, recommend recheck echocardiogram once full stature (8-12 months) to assess for progression.

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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