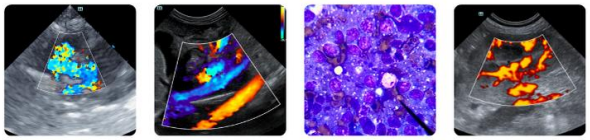

PATIENT

Willow Browning

SPECIES

Canine

BREED

French Bulldog

SEX

Female Spayed

AGE

7 years

WEIGHT

30.6lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Sang Han, DVM

HOSPITAL NAME

Oso Pet Care Center

REFERRING VET

Dr. Sang Han

INVOICE

47578

DATE

4/15/26

PRESENTING CLINICAL SIGNS

History: Grade 2/6 heart murmur.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

Possible slight right-sided cardiomegaly; however, a normal variant is possible. No obvious evidence of CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild thickening of the mitral valve leaflets with no obvious prolapse into the left atrial lumen. No mitral regurgitation is identified. Normal left atrial dimension. On a single long axis loop there is some concern for a small ASD; however, this is certainly not definitive nor confirmed from ancillary views. Normal LV diameter with adequate myocardial function. The tricuspid valve appears subjectively normal, with no significant tricuspid regurgitation. The right heart is normal (subjective). No overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. No aortic abnormalities identified; however, the LVOT velocity is mildly elevated. Normal pulmonic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

CARDIAC CHART

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	1.3	1.2	51	84	0.5
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	1.69	1.2	13.9	1.6	2.8	1.4
*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)
Note: All measurements based upon multi-modal images and methods. An average value is reported.				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)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac dimensions and function. The only cause of a murmur identified is increased flow velocity through the LVOT/aortic root. No obvious subaortic narrowing or valvular

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abnormalities are visualized, and in the absence of structural issues this is considered a benign flow murmur. If the murmur persists or progresses, it is reasonable to monitor periodically via recheck echocardiography in the future. Additionally screening for fluid status abnormalities (dehydration, anemia, etc.) is recommended through routine lab work as volume changes can make this finding more prevalent. No significant valvular insufficiencies were noted and no structural issues identified. In the long axis view, color flow is somewhat suggestive of an ASD; however, this is certainly not definitive nor confirmed from ancillary views. Even if present, this would be considered hemodynamically insignificant.

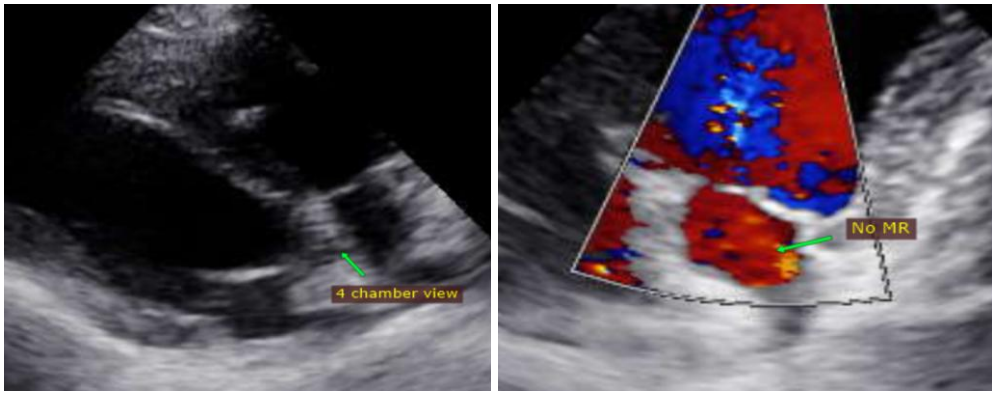
No cardiac medications are indicated. Prognosis is open.

No cardiac contraindication for general anesthesia.

Monitor for any development of cough, labored breathing or exercise intolerance.

Recommend recheck echocardiogram in 12-18 months to screen for development of concurrent cardiac disease that the preexisting murmur may mask.

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
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