

**PATIENT**

Juice Damp

SPECIES

Canine

BREED

Pitbull

SEX

Male Intact

AGE

4 months

WEIGHT

21lbs

INTERPRETED BYMaggie Machen Lamy,
DVM, DACVIM
(Cardiology)**IMAGING
PERFORMED BY**

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Van Noy

INVOICE

23599

DATE

4/12/22

PRESENTING CLINICAL SIGNS

History: Heart murmur. BP: 110, 112, 110mmHg.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mildly hypertrophied (1.0cm globally). There is a mildly hyperechoic endocardium. Papillary muscles are mildly hypertrophy. The left atrium is normal. The right atrium is normal in size. The right ventricle appears normal. The anterior leaflet of the mitral valve is thickened and dysplastic, with abnormal closure. An LVOTO due to the abnormal mitral valve is suspected, although not captured on doppler or 2D imaging. There is mild mitral regurgitation associated with this abnormal motion. Trace tricuspid regurgitation. Normal velocity. Blood flow through the LVOT and RVOT is normal in velocity. No aortic and trace pulmonic insufficiency noted. No obvious shunts. No evidence of cardiac tumors or metastatic lesions on this scan. No pleural or pericardial effusion seen.

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
PATIENT	4.8	2.3	NM	1.2	47	80	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
PATIENT	86	1.5	1.1	9.5	2.1	2.8	1.46	
*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 cause of the murmur is presumed to be mitral valve dysplasia causing an LVOT obstruction and mitral regurgitation. This is similar to SAM in a cat, with hypertrophy of the LV secondary to pressure overload. The obstruction through the LVOT is not captured; however, is presumed to be significant. The left atrium appears normal indicating the risk for complication is currently low. No additional defects are seen; however, small abnormalities are easily missed in juvenile animals. Consider referral in this severe case for life-long management by an Attending Cardiologist.

If referral is declined, life-long heart rate control with Atenolol is recommended once the puppy reaches 6 months of age. The dynamic nature of the obstruction will be reduced at lower heart

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svsmobileimaging.com 309-737-3070



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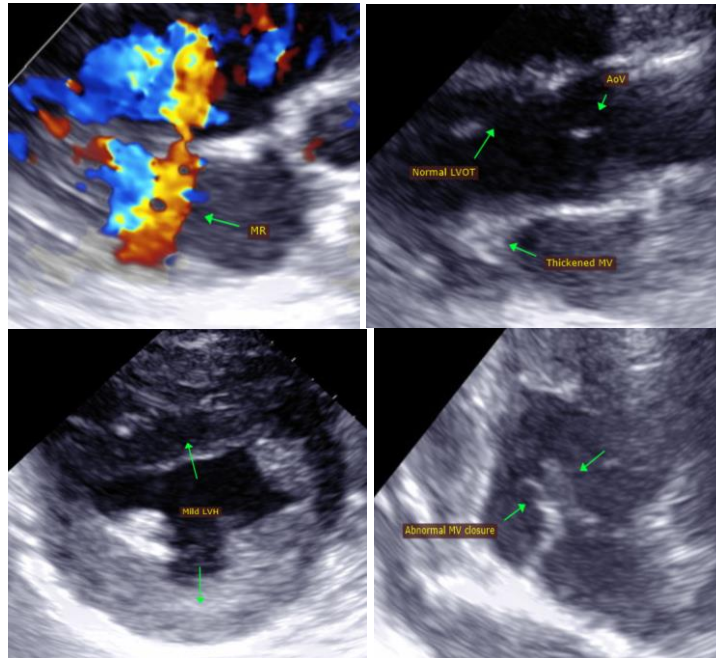
rates. No other medications are indicated at this juncture. Life-long activity restriction is advised. Monitor at home for any respiratory signs or clinical lethargy/collapse. Prognosis is poor long term given the severity of disease at such a young age. That being said, some cases of MVD will improve on atenolol and serial monitoring is advised. Patient will always be at risk for collapse, left-sided CHF and/or sudden death going forward.

PLAN

Recommend referral in this case. If declined, initiate Atenolol (at 6 months of age), 25mg tablets; Give ¼ tab twice daily. Recheck heart rate in 1-2 weeks with target stressed rate of <130bpm, increase as needed until target reached.

If referral is declined, recommend recheck echocardiogram at 1 year of age to screen for progression and/or improvement with Atenolol.

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. 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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