



PATIENT

Ash Madison

PRESENTING CLINICAL SIGNS

History: Grade 4/6 heart murmur. Asymptomatic.

SPECIES

Canine

BREED

Miniature Australian doodle

SEX

Male

AGE

12 weeks

WEIGHT

7lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Sands Hill Mobile
Veterinary Ultrasound

HOSPITAL NAME

Sands Hill Mobile
Veterinary Ultrasound

REFERRING VET

Dr. Rubendall

INVOICE

28214

DATE

1/10/23

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. Trace mitral regurgitation. No left atrial dilation. Mild LV dilation in both systole and diastole (LVIDdN: 1.92, LVIDsN: 1.25). The tricuspid valve appears mildly thickened with trace tricuspid regurgitation present. No significant right atrial dilation. No significant RV enlargement or hypertrophy. Elevated velocity through the pulmonary artery, suspected to be at the level of the valve, consistent with a moderate stenosis. Significant post-stenotic dilation of the main pulmonary artery and peripheral branches. Moderate pulmonic insufficiency. The pulmonic valve appears thickened and tethered. The aortic valve appears to have normal morphology and mobility. Normal LVOT velocity. A small perimembranous VSD is seen on color flow imaging. The flow appears left to right. No pericardial or pleural effusion noted.

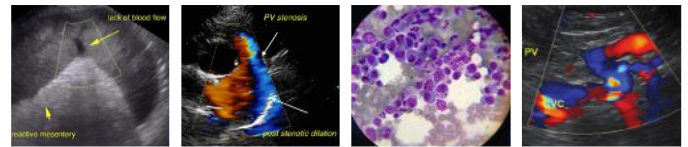
CARDIAC CHART

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	NM	NM	NM	1.1	33	60	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	126	0.9	4.4	3.2	1.4	2.7	1.8
*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)

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

The cause of the murmur is elevated flow velocity through the pulmonary artery, consistent with moderate valvular stenosis. The right heart is not significantly enlarged, although this puppy is very young and this may develop in the future. Additionally, a small VSD is seen, which is likely comparatively insignificant. That being said, the LV is mildly enlarged, which should be monitored going forward. No other congenital abnormalities were visualized; however, small shunts or defects can be difficult to identify in juvenile animals.



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Given the young age of the patient, no medications are indicated at this time. My main concern in a 12 week puppy is progression as the puppy ages, as this will dictate prognosis. Highly recommend referral to a local Cardiologist for advanced assessment, as surgical intervention may be warranted in this case.

SPECIES

Canine

Prognosis is guarded long term based upon what is seen here, as patient may be at risk for progression to right-sided CHF, development of arrhythmias, blood clot events, and/or sudden death in the future.

BREED

Miniature Australian doodle

Elective anesthesia is not advised prior to follow up exam.

SEX

Male

Monitor for development of associated clinical signs (collapse, abdominal distention, cough, labored breathing). Mild exercise restriction is advised.

AGE

12 weeks

PLAN

Recommend referral to a local Cardiologist for advanced imaging and surgical consultation. If declined, once 6 months of age, institute Atenolol 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of <140bpm 12-24 hours post-administration. Increase as needed until target reached.

WEIGHT

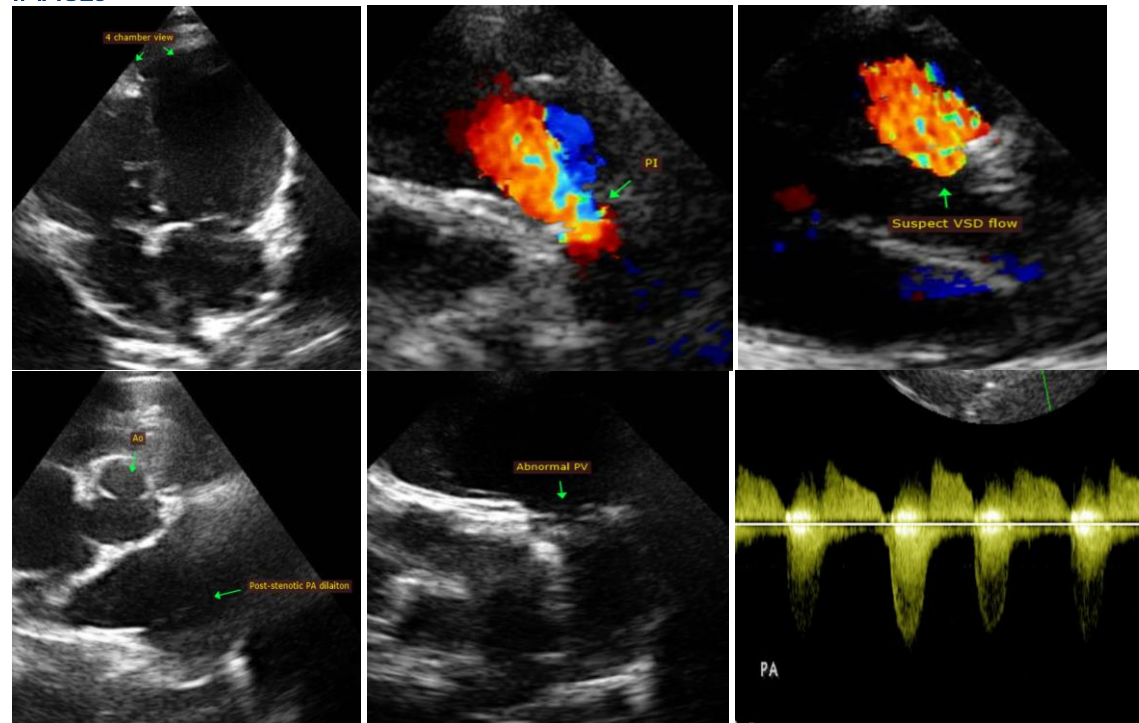
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Recommend recheck echocardiogram in 6 months.

IMAGES

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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.

BREED

Miniature Australian
doodle

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

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Male

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