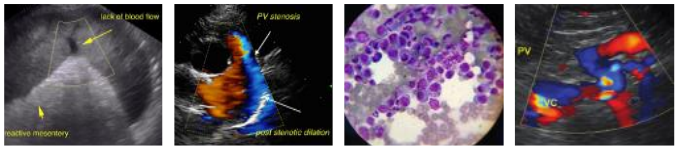
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Ebdo Cullity

SPECIES
Canine

BREED
Miniature Schnauzer

SEX
Male Neutereded

AGE
5 months

WEIGHT
17lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Karen Ebersole, DVM, DABVP

HOSPITAL NAME
Scanvet

REFERRING VET
Dr. Norman

INVOICE
32107

DATE
8/2/23

PRESENTING CLINICAL SIGNS
History: Grade 3-4/6 heart murmur.

ECHOCARDIOGRAM FINDINGS
2D, m-mode, color flow and doppler imaging is available. Normal MV leaflets with no obvious prolapse. Trivial mitral regurgitation. Normal left atrial dimension. Normal LV diameter with adequate myocardial function. Normal LV wall dimensions. The tricuspid valve appears subjectively normal with trivial tricuspid regurgitation. The right heart is normal. No overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. No obvious aortic abnormalities identified, however the LVOT velocity is mildly elevated. Laminar flow. Pulmonic outflow velocities are mildly elevated. The pulmonic valve is unremarkable. No aortic and trace pulmonic insufficiency. No obvious congenital shunts. 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	1.3	44	77	0.12
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	1.9	1.9	7.7	1.7	2.5	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)
**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)
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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
The only cause of a murmur identified is mildly increased flow velocity through both great vessels. Neither valve appears significantly abnormal and no sub or supravalvular narrowing is visualized. In the absence of structural abnormalities this is considered a benign flow murmur. This should be monitored as this young dog grows. This type of outflow abnormality is heart rate dependent and will vary with hydration/volume changes as well. Baseline labs are recommended. No obvious congenital shunts or defects are observed in this study; however, it is important to note that small abnormalities are easily missed without advanced diagnostics.

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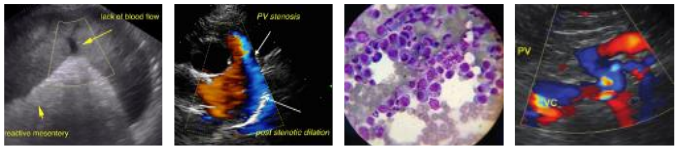

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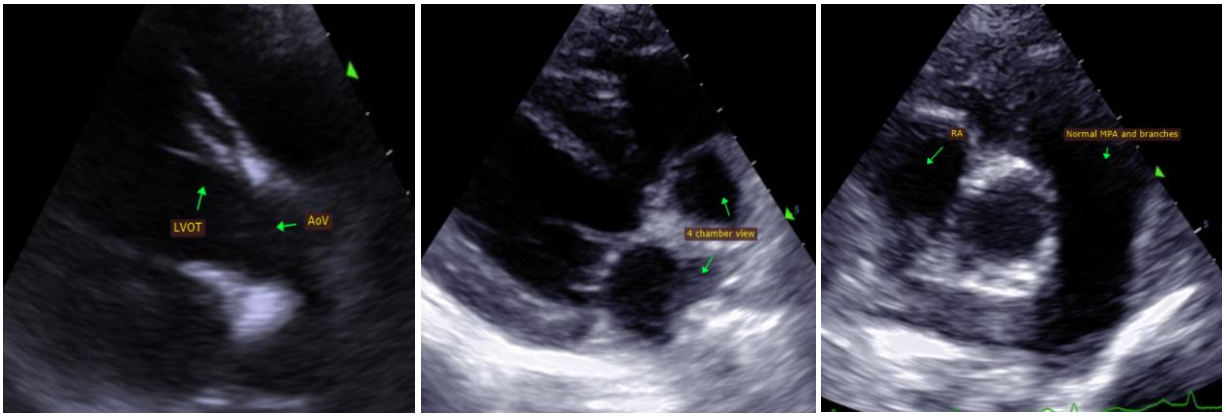
No cardiac medications are indicated at this time. Monitor for any development of cough, labored breathing or exercise intolerance.

No cardiac contraindication for general anesthesia is seen.

PLAN
Baseline lab work and BP recommended.

Assuming the murmur persists, recommend recheck echocardiogram in 6-12 months to ensure no progressive issues are seen, sooner if any clinical signs arise in the interim.

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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com