SonoPath
Clinical Sonography & Telecytology
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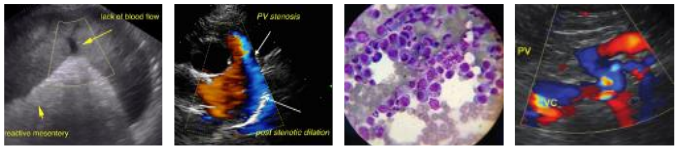

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Cinch Sothern

SPECIES
Canine

BREED
Australian Cattle Dog

SEX
Male Neutered

AGE
1 year

WEIGHT
26.8lbs

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

IMAGING PERFORMED BY
Emily Kalenius, DVM

HOSPITAL NAME
Willamette Veterinary Hospital

REFERRING VET
Dr. Couser

INVOICE
24163

DATE
5/12/22

PRESENTING CLINICAL SIGNS

History: Initially presented midday 5/11 after being outdoors and coming in pale and painful. Temp of 103.5 F. Radiographs showed small area of focal radiolucency over lumbar spine - r/o wound (no evidence on exam). Discharged on cephalexin and Carprofen. Represented in the evening for continued pain and fever. On recheck exam heart murmur and SM LN enlargement also noted. Admitted on IV fluids, Antibiotics.
Abnormal PE/Chem/CBC/UA Results: Pet is BAR, currently afebrile, heavy panting. Lungs clear. ABD slightly tense on palpation (anxious). Normal ambulation and mentation. Possible heart murmur but difficult to auscultate due to heavy panting. CBC - HCT 45.8%, WBC 19.75k, Neut 16.24k, suspect bands, PLT 277k (wnl) Chem10 - ALKP 245, rest wnl EPOC - K 3.4, Na 153, HCT 45%, rest wnl Fecal direct = NEG, no fluke ova seen Fecal OP/G to Antech - pending 4DX = All neg

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. No mitral regurgitation with no left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with no tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. No vegetative lesion seen on the aortic valve. Mildly elevated LVOT and RVOT outflow velocities. No obvious aortic and trace pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	NM	1.4	50	82	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	107	2.5	2.0	12.3	1.8	2.6	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)
				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

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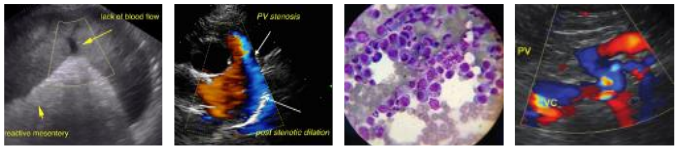

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure and function. The only cause of a murmur identified is mildly elevated flow velocity through both great vessels. This is commonly seen with volume or HR changes, the former of which is suspected in this patient. No significant valvular insufficiencies were noted and no structural issues identified. If the murmur persists, it is reasonable to monitor periodically via recheck echocardiography in the future, particularly should the murmur persist/progress.

These findings would suggest cardiac issues are unlikely to be related to current clinical malaise. Endocarditis is unlikely without obvious valve changes, new insufficiency such as AI or volume changes to the cardiac structures. If there is any question going forward however, blood cultures can be considered. It is important to note that vegetative lesions are not always visualized with endocarditis, and ultrasound is a fairly poor screening tool.

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.

If the murmur persists, recommend a recheck echocardiogram in 12 months to screen for progression or 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. 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

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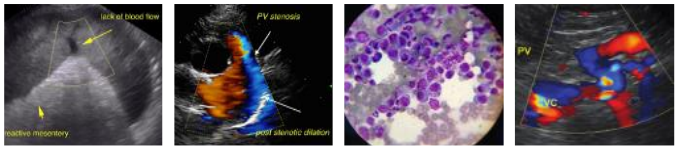

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