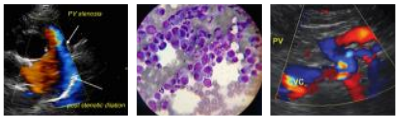
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonopPath.com

PATIENT

Ranger Burky

SPECIES

Canine

BREED

Cocker Spaniel

SEX

MN

AGE

2009

WEIGHT

35lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME

Stay Pet Veterinary

REFERRING VET

Dr. Klimovitz

INVOICE

21176

DATE

9/22/21

PRESENTING CLINICAL SIGNS

History: Recheck echo. Recent onset labored breathing, wheezing, and exercise fatigue and intolerance. Had a lot of exercise Saturday, coughing up phlegm, and still has not normalized from that like he usually does. Will also wake up in the night and seem to have wheezing.
-Sedation used: Not needed.
-Pertinent previous ultrasound results (1/6/21 MML): Trace/mild MR, mild LAE, normal LV, mild TR: 2.7m/s. AV max: 2.1, LA: 2.4, LV: 3.5.
-STAT: Not requested.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Trace/mild eccentric mitral regurgitation with mild left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Mildly elevated velocity consistent with early pulmonary hypertension. Normal right atrial and ventricular diameter and morphology. The pulmonic and aortic valves are normal in morphology and mobility. Mildly elevated LVOT velocity with laminar flow. Normal pulmonic outflow velocities with laminar flow. No obvious aortic or 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	5.8	3.0	NM	1.5	36	66	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	103	2.0	1.2	15.9	2.2	3.6	2.3
*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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Largely unchanged disease with mild mitral and tricuspid regurgitation. The left heart is stable with no progression in dimensions or function. The only difference identified is a slight increase in pulmonary pressures, which is likely secondary to respiratory signs in this patient. No additional issues are identified.

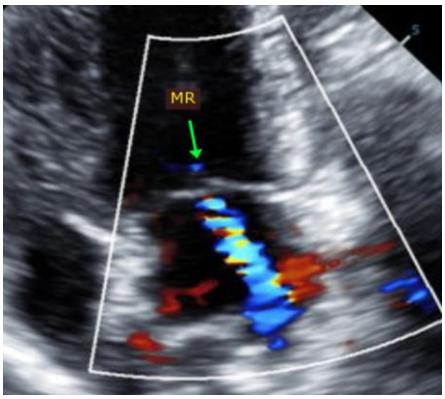
These findings would certainly suggest the respiratory changes are non-cardiac in origin. The prior history mentions possible lower airway disease on the chest radiographs and reassessing the films is highly recommended. It is important to note that pulmonary hypertension doesn't typically cause these types of signs; rather respiratory disease leads to its development.

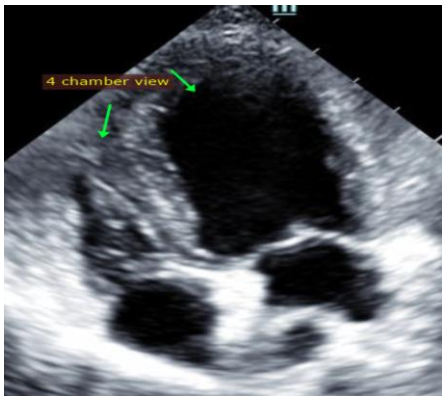
Given these findings, no cardiac medications are clearly indicated. Continued assessment of progression in the future will help predict long term prognosis, which remains highly variable at this stage (B1). Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

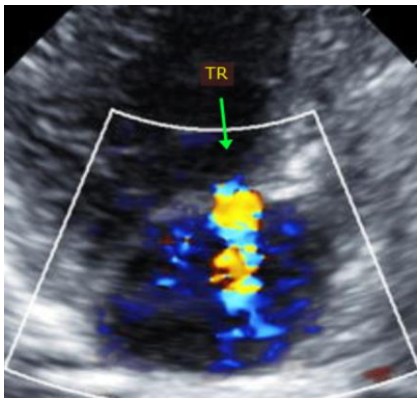
Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

Recommend conservative monitoring with a recheck echocardiogram in 6-12 months, sooner if any development of clinical signs.

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