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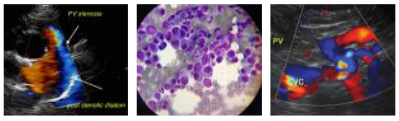

SonoPath
Clinical Sonography & Telecytology
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PATIENT
Buffy Keith

SPECIES
Canine

BREED
Shih Tzu

SEX
Female Spayed

AGE
3.15.12

WEIGHT
10.34lbs

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

HOSPITAL NAME
Bayside Animal Medical Center

REFERRING VET
Dr. Oliver

INVOICE
23385

DATE
3.31.22

PRESENTING CLINICAL SIGNS

History: Increased respiratory effort, new heart murmur, history of megaesophagus and aspiration pneumonia.
-Current medications: None current.
-Blood pressure:
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Not requested
-Imaging performed by: Andi Parkinson, RDMS.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental information only.

Normal cardiac silhouette. No obvious evidence of CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild mitral valve thickening with no obvious prolapse into the left atrial lumen. No mitral regurgitation; normal left atrial dimension. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with mild TR. Velocity consistent with early pulmonary hypertension. Mild right heart prominence. Mild RV hypertrophy. No significant MPA or branch dilation. The pulmonic and aortic valves are normal in morphology and mobility. Normal LVOT/RVOT velocity. No aortic and mild pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac tumors 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	<0.6
PATIENT	NA	3.2	NM	1.1	35	68	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	NM	0.7	0.7	4.7	1.4	1.6	1.0
*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 **Note: All measurements based upon multi-modal images and methods. An average value is reported.* 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				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
				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 only abnormality identified is mild pulmonary hypertension with a small tricuspid leak. Mild right heart prominence supports this finding. This is likely developing secondary to described respiratory issues and monitoring is advised. It is important to note that PAH develops secondary to primary respiratory signs if poorly controlled, rather than being a primary cause. Regardless, a lack of significant right heart changes indicate little concern at this time and primary respiratory disease should continue to be addressed. The left heart is essentially normal without significant pathology.

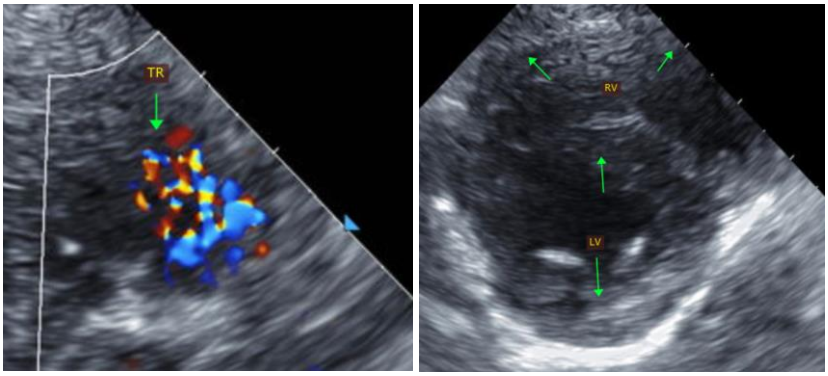
These findings would certainly suggest that the respiratory issues are noncardiac in origin. Further evaluation/treatment of respiratory disease is recommended, depending on response to current regimen. Options include, Theophylline, Hydrocodone, a course of Baytril or similar, anti-inflammatory prednisone, etc. If refractory, TTW/BAL may be necessary.

No cardiac medications are indicated. The best approach to early PAH is adequate cough control, as continuing inflammation within the airways leads to its development.

Monitor for signs of PAH at home, including exertional syncope and/or dyspnea.

A recheck echocardiogram is recommended in 1 year, or if clinical signs of PAH develop (exertional syncope, etc.).

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.

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