



PATIENT

Charlie Levitt

SPECIES

Canine

BREED

Shepherd Mix

SEX

Male Neutered

AGE

1.4.10

WEIGHT

67.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Andi Parkinson, RDMS

HOSPITAL NAME

Chadwell Animal Hospital

REFERRING VET

Dr. Gold

INVOICE

22673

DATE

2.18.22

PRESENTING CLINICAL SIGNS

History: Expiratory strider, nasal congestion for the last 3 months.

-Pertinent abnormal PE/Chem/CBC/UA Results: NSF.

-Current medications: Simplicesf 200mg (2/9/22) hydroxyzine 50mg TID (2/8/20) Cerenia 160mg 1 tab EOD (2/9/22).

-Blood pressure: 140mmHg

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results: No previous IntraPet scans.

-STAT: Offered and declined.

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

Minimal cardiomegaly. No obvious evidence of CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal 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 trivial tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. No obvious tumors associated with the right atrium, AV groove or auricular. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic and trivial pulmonic insufficiency. Scant pericardial effusion. No 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			NM	1.0	40	72	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	130	1.0	0.9	30.6	2.4	3.1	1.9
*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

Unusual case. The only abnormality identified is scant pericardial effusion of unknown origin. The cardiac dimensions and function are normal, ruling out CHF as the cause. No obvious cardiac or extra-cardiac tumors are identified; however, it must be considered that it is difficult to perform a thorough extra-cardiac scan, and this does not entirely rule out small masses. Suspicion is low in this case as visualization is excellent. A thoracic CT scan or MRI would be necessary to fully evaluate the surface of the heart and lungs and to screen for mediastinal abnormalities. The amount of effusion is hemodynamically insignificant and is considered an incidental finding at this time. No additional issues are identified.

Given these findings, no cause of the effusion is identified, nor have we identified a cause for the patient's current respiratory signs. These are not suspected to be related and further upper respiratory evaluation is advised.

Ideally the next step in this case would be a diagnostic pericardiocentesis to determine the type of effusion present. A hemorrhagic effusion would suggest a small tumor or bleeding disorder, versus a transudate may support an infectious or inflammatory etiology, etc. Submitting the fluid for cytology and potentially a culture may also be useful as there is no clear answer at this time. The amount of effusion is limiting however, as this amount is unlikely to be obtained safely. As an alternative, full systemic evaluation should also be considered to screen for additional abnormalities including advanced imaging as discussed. If elected referral to a multi-specialty center may be indicated particular should systemic evaluation be of low yield.

Prior to further diagnostics, cardiac medications are not recommended.

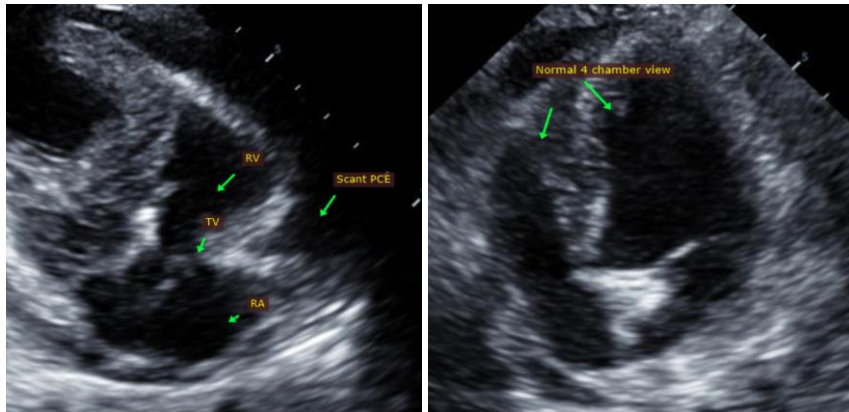
Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

Consider referral as discussed; next steps including a potentially a diagnostic pericardiocentesis if the volume increases, abdominal ultrasound, thoracic CT/MRI and/or advanced echocardiography/thoracic ultrasound.

Follow up dictated by results of additional diagnostics/therapy.

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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