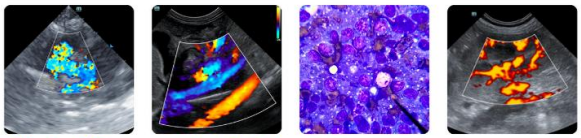


DATE

1.13.26

PATIENT

Elias Smith

SPECIES

Canine

BREED

Pitbull Mix

SEX

MN

AGE

3.23.18

WEIGHT

101.9lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME

Chadwll AH

REFERRING VET

Dr. Weeks

INVOICE

46423

PRESENTING CLINICAL SIGNS

History: Presented 12/20 for unknown length of duration for difficulty walking and breathing. Was being taken care of by a family member and not getting proper diet/medications. Pale gums, unable to auscultate heartbeat, increased RR and effort, Quiet. VHS 14, severe cardiomegaly with deviation of trachea
-Pertinent abnormal PE/Chem/CBC/UA Results: moderate non regenerative anemia, chol high.
-CXR: severe cardiomegaly, VHS 14, deviated trachea, air in intestines, liver large vs spleen, limited visibility of abdomen.
-Current medications: Vetmedin 10mg - 1 + 1/4 BID, Lasix - 1 + 1/2 BID Enalapril 20mg - 1 QD Thyroid tabs 0.8 1 in AM and 1/2 in PM #120, Purina joint care, Zesty paws skin supplement.
-Blood Pressure: Doppler 130mmHg.
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Not requested.
-Imaging performed by: Andi Parkinson, BS, RDMS.

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

Significantly cardiomegaly; specifically, right sided. Concern for right-sided CHF and ascites.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The LV chamber is mildly enlarged with mildly depressed myocardial function. Normal LV wall thickness. No left atrial enlargement. The mitral valve appears mildly thickened with no prolapse into the left atrial lumen. Mild central mitral regurgitation; normal velocity. The tricuspid valve is normal with moderate tricuspid regurgitation. Normal velocity. Severe right atrial and ventricular dilation. The RV function is depressed. The aortic valve is normal in morphology and mobility. No subvalvular ridge present; decreased LVOT velocity. No aortic insufficiency. Normal pulmonic valve with mild pulmonic insufficiency seen. No pericardial or pleural effusion. No obvious cardiac tumors.

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	4.8	2.3	NM	1.3	24	40	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	170	1.0	0.7	46.2	3.0	5.0	3.9
*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 *Note: All measurements based upon multi-modal images and methods. An average value is reported.*				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)

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

The academic diagnosis could be argued in this case. There is significant right heart enlargement and dysfunction present with comparatively mild left heart changes. This is in addition to mild MR and moderate TR, and mild LV dysfunction. This is most likely an atypical form DCM-phenotype with more significant right heart changes (i.e. an RV cardiomyopathy). Alternative explanations could include ARVC, a tachycardia-induced cardiomyopathy depending on the history, etc. Regardless, what is seen here is significant and right-sided CHF is present.

Full cardiac support is warranted lifelong as below. If the patient is or becomes unstable, immediate reevaluation and hospitalization is recommended. Additional removal of the effusion should be considered if the patient is tachypneic or uncomfortable.

Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home. Cough suppression to improve QOL can also be considered (hydrocodone, 0.2-0.4mg/kg up to q4-6h PRN) for any residual mechanical cough in the face of normal sleeping respiratory rates. The average survival time of canine patients with active CHF is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period. Patient will always be at risk for recurrent right or left-sided CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

Elective anesthesia, fluid or steroid therapy should be avoided lifelong.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for acute progression of the cough, labored breathing, exercise intolerance or collapse episodes in the future.

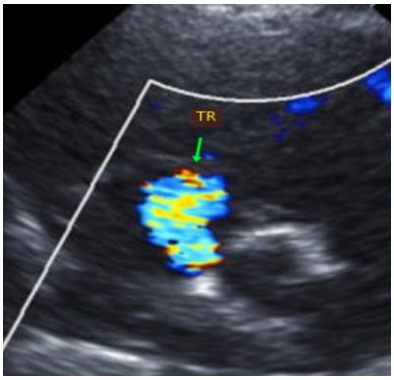
PLAN

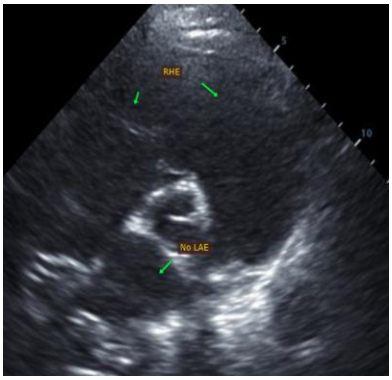
Baseline BP and ECG are recommended. Consider hospitalization/centesis if indicated. Administer Pimobendan 0.3mg/kg PO q12h. Administer Furosemide 1-2mg/kg PO q8h. Institute spironolactone 1-2mg/kg PO q12h. Administer Benazepril (pending BP assessment) 0.5mg/kg PO q12h. Monitor SRRs at home.

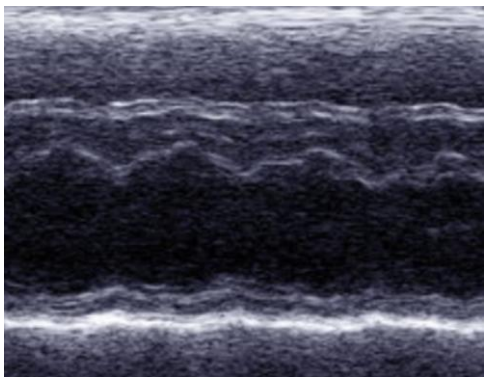
Monitor renal values and BP in 10-14 days, then every 3-4 months while on diuretics. Consider hydrocodone if needed for QOL.

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

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