



PATIENT

Ramsese Tao

SPECIES

Canine

BREED

English Bulldog

SEX

Male Neutered

AGE

6 years

WEIGHT

68.3lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

C. Belan, DVM

HOSPITAL NAME

Healthy Paws Forward
Animal Clinic

REFERRING VET

Dr. Uribarren

INVOICE

20824

DATE

8/31/21

PRESENTING CLINICAL SIGNS

History: Dependent and anorexic; pendulous abdomen. On a grain free diet. Large volume ascites in the abdomen; 2000ml drained by the attending earlier today. Severe cardiomegaly and right heart enlargement seen on x ray. No murmur heard.

-Current medications: Patient is on furosemide.

ECHOCARDIOGRAM FINDINGS

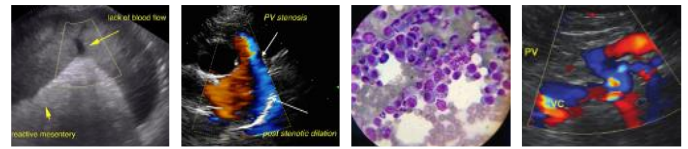
2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Mild central mitral regurgitation with a dilated left atrium. Borderline LV dimension with mildly decreased myocardial function. The tricuspid valve appears normal in morphology, with mild tricuspid regurgitation. Normal TR velocity. The right atrium is markedly dilated. The right ventricle is severely dilated with significant systolic dysfunction. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic and mild pulmonic insufficiency. No significant pericardial effusion. Small pocket of pleural effusion suspected. 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	4.8	2.2	NM	2.0	20	36	0.8
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	136	1.0	0.9	31.0	4.0	4.9	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				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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unfortunately, this patient has suspected right ventricular cardiomyopathy with severe right heart dilation and dysfunction. A tricuspid leak is noted which is mild and considered secondary. The velocity is normal, ruling out typical PAH. The left heart is also affected, with mild LV



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dysfunction and LA dilation which may reflect a true DCM or may be secondary to RV changes. Regardless the findings are severe and confirm CHF as the cause of ascites. It is worth mentioning that this particular breed is extremely difficult to scan and ancillary issues, such as an extra-cardiac mass contributing to these findings is certainly not ruled out.

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Dilation and dysfunction of the right heart specifically can be primary in nature due to a form of ARVC, or may reflect DCM affecting both sides of the heart. The former is suspected in this case given the predisposed breed. Consider contributing issues of systolic dysfunction, including a grain free diet. While difficult to prove at this juncture, a diet change and taurine supplementation is recommended ASAP.

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Immediate lifelong medications are recommended as below. If the patient is unstable or experience collapse or worsening symptoms at home, 24 hours monitoring of the ECG in addition to oxygen support and diuretic therapy should be considered. A baseline ECG is recommended regardless due to high risk for rapid AF or VT in the future.

AGE

6 years

Prognosis is poor at this stage with most dogs succumbing to CHF in less than 6 months. There is high risk for recurrent congestive heart failure, malignant arrhythmias (AF, VT), collapse and/or sudden death in the future even on medications.

WEIGHT

68.3lbs

Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.

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Elective anesthesia is not advised.

Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF going forward.

IMAGING PERFORMED BY

C. Belan, DVM

PLAN

Consider hospitalization for supportive care and ECG monitoring if indicated. Institute Lasix 1-2 mg/kg PO q12h. Institute heart muscle support Pimobendan (Vetmedin) 0.3mg/kg PO q12h. Institute Spironolactone 1-2mg/kg PO q12h (available in 25 and 50mg tablets). Highly recommend ECG/BP as a baseline. Consider hydrocodone with homatropine if needed for quality of life, 0.2 – 0.4 mg/kg PO up to q4-6 hours PRN for cough (available in 5/1.5mg tablets or 5mg/5ml solution). Diet change ASAP. Institute taurine supplementation 1000mg PO q12h.

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Monitor renal values, BP in 1-2 weeks. If doing well and BP is >130mmHg, consider ACE-I 0.5mg/kg PO q12h. Monitor renal values and BP every 3-4 months lifelong.

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

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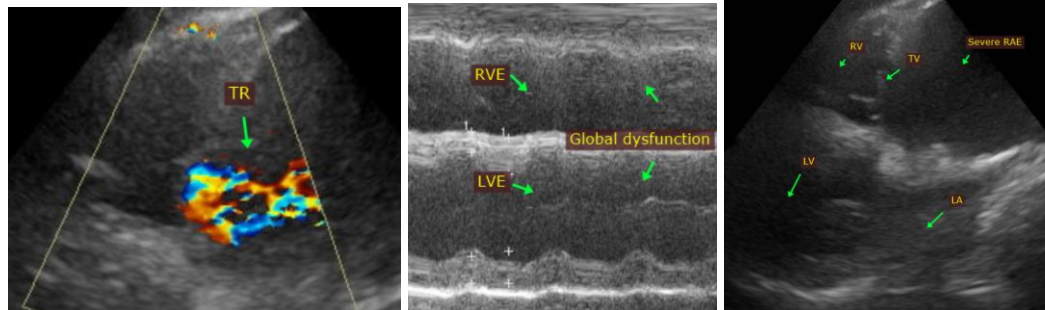
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IMAGES



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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