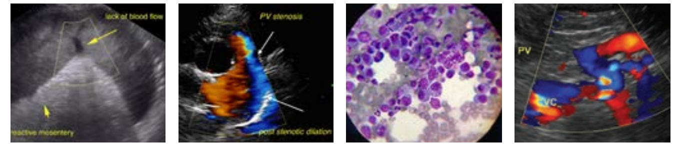
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Gunner Meudt

SPECIES

Canine

BREED

Labrador Retriever

SEX

Intact Male

AGE

8 Years

WEIGHT

118 Pounds

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jill Rumachik

HOSPITAL NAME

Clarity Imaging LLC

REFERRING VET

Dr. Ellen Richardson

INVOICE

41947

DATE

10/10/22

PRESENTING CLINICAL SIGNS

Recent episodes of collapse after mild exercise. BW/4dx WNL. Cardiomegaly on xrays.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	5.0		1.3	1.6	20		1.2
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					5.5	6.1	

Cardiac Presentation

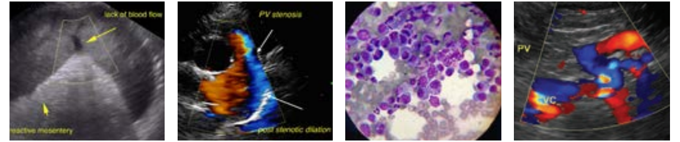
The echocardiogram for this patient presented excessive **left atrial size** expressed in 3 different LA measurement methods. Left atrial content was anechoic. No evidence of "smoke" or thrombotic activity was noted. The atrial septum was deviated owing to volume overload. **Mitral** insufficiency noted with centralized jet. The **left ventricle** demonstrated excessive volume and hypocontractility. Ventricular function was subnormal expressed by the fractional shortening measurement listed below. Myocardium appeared subjectively thin typical of DCM. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. Hepatic veins were dilated, with ascites, consistent with right-sided failure.

ULTRASONOGRAPHIC FINDINGS

- Dilated cardiomyopathy with possible underlying myocarditis or nutritional cardiomyopathy

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Nutritional factors, assessment for clinical cause of myocarditis indicated. Given the myocardial insufficiency noted in this patient Nutritional Cardiomyopathy (Taurine deficiency/grain free diet) and infectious agents should be considered. Infectious agents such as Bartonella, Leptospirosis, Parvo (current or historical), Bacterial sepsis and less likely and regional infectious agents such as Trypanosoma, Toxoplasmosis and Babesia should be considered as underlying clinical players.



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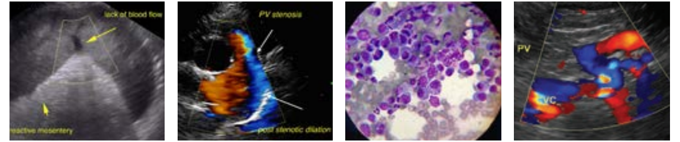
Quadrotherapy warranted with Pimobendan at 0.3 mg/kg BID, Lasix 1-2 mg/kg BID, ACE inhibitor 0.5 mg/kg SID progressing to BID, and Spironolactone at 1-2 mg/kg BID. Thyroid assessment also indicated if not already performed. Recheck echocardiogram in 10-14 days. BUN, creatinine, blood pressures, and sleeping respiratory rate are all crucial factors in this patient. SRR should be <25/min. EKG also indicated if not already performed, as well as radiographs. Tricuspid insufficiency velocities recommended at recheck to gauge for pulmonary hypertension, which is suspected.



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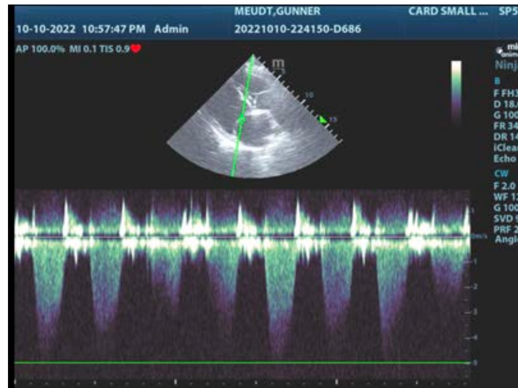

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

info@SonoPath.com