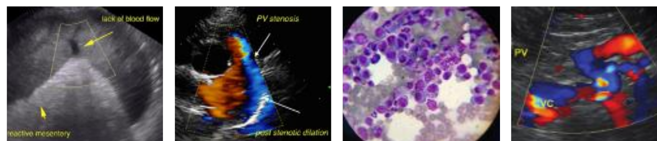


SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Astro Melendez

SPECIES

Canine

BREED

Labrador Retriever

SEX

MN

AGE

12 years

WEIGHT

49 lbs.

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Jessica Miller, RDMS

HOSPITAL NAME

North Jersey AH

REFERRING VET

Dr. Reidel

INVOICE

14813

DATE

8/15/23

PRESENTING CLINICAL SIGNS

Marked cardiomegaly. R/O pericardial effusion / neoplasia / cardiomyopathy, poss/ pleural effusion.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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	<1.3	28-40	40-100	<0.6
PATIENT	5.3	3.4		2.8	40.5	70.4	0.4
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				
PATIENT		1.5	0.7		6.6	5.9	

Cardiac Presentation

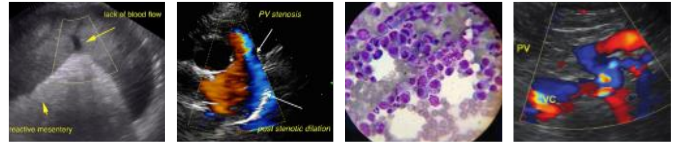
Severe LV dilation with adequate systolic function was present. EPSS was within normal limits with increased LV sphericity. Subjective mild decreased LV wall thickness was noted. Severe left atrial enlargement with anechoic content was present. The mitral valve appeared mildly thickened with lack of normal valvular coaptation. There was no overt evidence of mitral valve prolapse. Moderate eccentric to centralized MR was present on Doppler. The tricuspid valve appeared mildly thickened with concurrent mild to moderate TR on Doppler. Mild increased RA/RV dimension was noted. Overtly normal aortic and pulmonic valves were noted. Normal measured LVOT and RVOT velocities were present. Mild volume pericardial and pleural effusion was noted. Suspect tachycardia. There were no obvious cardiac tumors.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture.

No evidence of pathology in the area of the aortic trifurcation.



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Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.7 cm in length. The right kidney measured 7.3 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.2 cm length x 0.53 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.6 cm length x 0.36 cm width at the caudal pole.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes or splenic masses. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

Liver/ Gallbladder

The liver presented enlarged in size with symmetrical yet swollen contour. The parenchyma exhibited mild parenchymal remodeling with normal echogenicity isoechoic to the spleen and falciform fat. The hepatic vasculature was dilated in appearance, most notable at the level of the hepatic vein / caudal vena cava junction, without evidence of thrombosis. There was no evidence of hepatic intraparenchymal masses. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

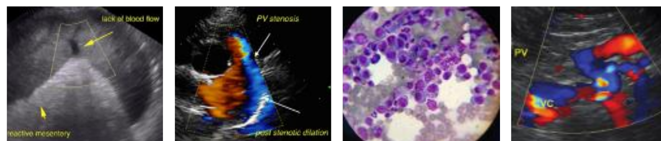
Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

Intermittent mesenteric lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). Small pockets of minor volume ascites were present.



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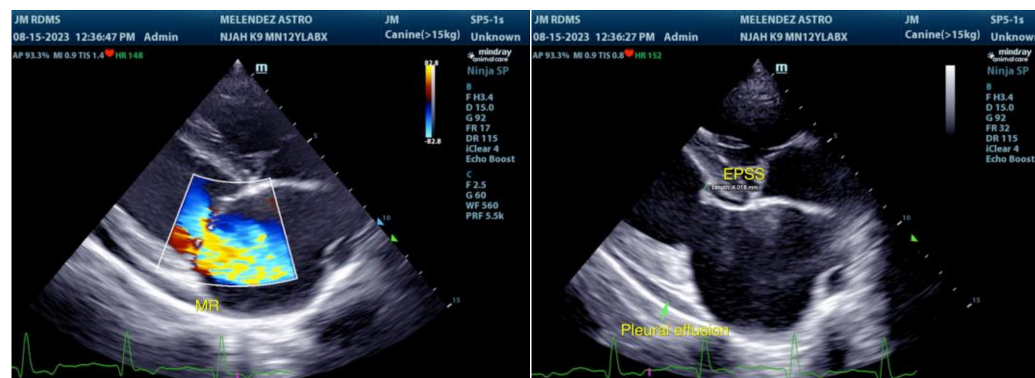
ULTRASONOGRAPHIC FINDINGS

- Severe LA/LV dilation, overtly adequate LV systolic function
- Thickened mitral valve with lack of valvular coaptation
- Moderate centralized to eccentric MR
- Mildly enlarged RA/RV
- Mild TR - Estimated pulmonary pressure gradient consistent with mild pulmonary hypertension
- Mild volume pleural and pericardial effusion
- Congestive hepatomegaly with scant ascites

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although potential for DCM-like cardiomyopathy, the adequate LV systolic function, and thickened mitral valve are suggestive of chronic valvular disease, which has progressed to severe left heart dilation. Concurrent potential for tachycardia. While left-sided chamber enlargement predisposes to left-sided congestion, possible tachycardia and low-grade pulmonary hypertension predispose to right-sided congestion as evidenced by congestive hepatomegaly and scant ascites. There is no overt evidence of cardiac tamponade at this stage.

ECG is recommended to assess for evidence of atrial fibrillation or other arrhythmia. Consider hospitalization with IV diuretic / rate control therapy as needed. Pimobendan 0.3 mg/kg PO BID and Spironolactone / Lasix combination both 1.0-2.0 mg/kg PO BID, is recommended. Assessment of systemic BP is suggested. Monitoring heart rate and renal parameters going forward is advised, as this patient is at severely increased risk for continued episodes of CHF and the development of malignant arrhythmias. An extremely guarded prognosis going forward is indicated. Recheck echocardiogram is suggested in 3-4 months, sooner if progressive signs of congestive heart failure are noted.



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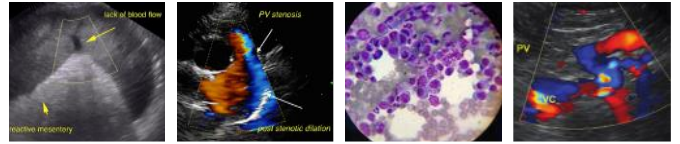

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JM RDMS 08-15-2023 12:41:12 PM Admin MELENDEZ ASTRO NJAH K9 MN12YLABX JM Canine(>15kg) SP5-1s Unknown
TR

JM RDMS 08-15-2023 12:37:14 PM Admin MELENDEZ ASTRO NJAH K9 MN12YLABX JM Canine(>15kg) SP5-1s Unknown
4 Ao Diam 1.63 cm
LA Diam 4.61 cm
LA/Ao 2.82 Left atrial dilatation

JM RDMS 08-15-2023 01:02:47 PM Admin MELENDEZ ASTRO NJAH K9 MN12YLABX JM Canine(>15kg) C11-3s Unknown
LADR
4 Dist 2.20 cm
5 Dist 0.53 cm
6 Dist 0.54 cm

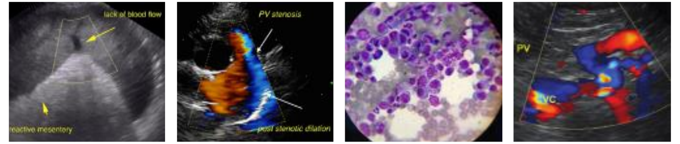
JM RDMS 08-15-2023 01:09:17 PM Admin MELENDEZ ASTRO NJAH K9 MN12YLABX JM Canine(>15kg) C11-3s Unknown
R ADR
4 Dist 2.62 cm
5 Dist 0.36 cm
6 Dist 1.08 cm
Distended CVC

JM RDMS 08-15-2023 01:08:58 PM Admin MELENDEZ ASTRO NJAH K9 MN12YLABX JM Canine(>15kg) C11-3s Unknown
R

JM RDMS 08-15-2023 01:03:04 PM Admin MELENDEZ ASTRO NJAH K9 MN12YLABX JM Canine(>15kg) C11-3s Unknown
L

JM RDMS 08-15-2023 01:04:42 PM Admin MELENDEZ ASTRO NJAH K9 MN12YLABX JM Canine(>15kg) C11-3s Unknown
L
Spl

JM RDMS 08-15-2023 01:07:42 PM Admin MELENDEZ ASTRO NJAH K9 MN12YLABX JM Canine(>15kg) C11-3s Unknown
R
Liver
Hepatic vein



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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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
info@sonopath.com