


**PATIENT**

Perfect Koepfel

**PRESENTING CLINICAL SIGNS**

collapsed after coming in from a walk, just had abd u/s on 10/1

**SPECIES**

Canine

**BREED**

Standard Poodle

**SEX**

FS

**AGE**

9

**WEIGHT**

87

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

 Rockaway Animal  
 Hospital

**REFERRING VET**

Dr. Maniar

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**DATE**

10/04/2022

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND RECHECK 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	<1.3	28-40	40-100	<0.6
PATIENT				1.2	42.4	76.9	0.45
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	NM	1.2	0.8		3.5	3.3	

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal left atrial size based on 3 separate methods of LA evaluation. The cranial and caudal mitral valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The left ventricle presented thicknesses with linear contour and was not dilated nor restricted. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. Contractility of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. 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. Tricuspid valvular assessment demonstrated adequate linear morphology and kinesis. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonary outflow 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 and extra-cardiac regions were free of masses in the visible window. No overt arrhythmia noted.

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra 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 were noted.

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present.



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The left kidney measured 6.9 cm in length. The right kidney measured 6.5 cm in length.

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The area of the aortic trifurcation was free of pathology.

The area of the iliac trifurcation was free of pathology including no evidence of medial, iliac or sublumbar lymphadenopathy.

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Standard Poodle

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.79 cm width at the caudal pole and 2.7 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.81 cm width at the caudal pole and 2.8 cm length.

**SEX**

FS

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

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**Liver**

The liver exhibited subnormal size, symmetrical capsule contour and generalized non-uniform to remodeled parenchyma including intermittent discrete parenchyma nodular changes. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion.

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The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.

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**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.

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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.

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**Pancreas**

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

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**Free Abdomen**

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

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**ULTRASONOGRAPHIC FINDINGS**



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- Normal echocardiogram without overt arrhythmia
- Mild age-related renal changes
- Chronic hepatopathy exhibiting mildly non-uniform nodular parenchyma

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Overtly normal structure and function without overt evidence of arrhythmogenic disease. No indication for cardiac medications used to treat structural cardiomyopathy. No evidence of DCM criteria. ECG assessment or ideally Holter monitor is recommended if continued episodes of collapse.

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Previous hepatic recommendations are still applicable. Screening BP recommended to assess for evidence of hypertension.

**SEX**

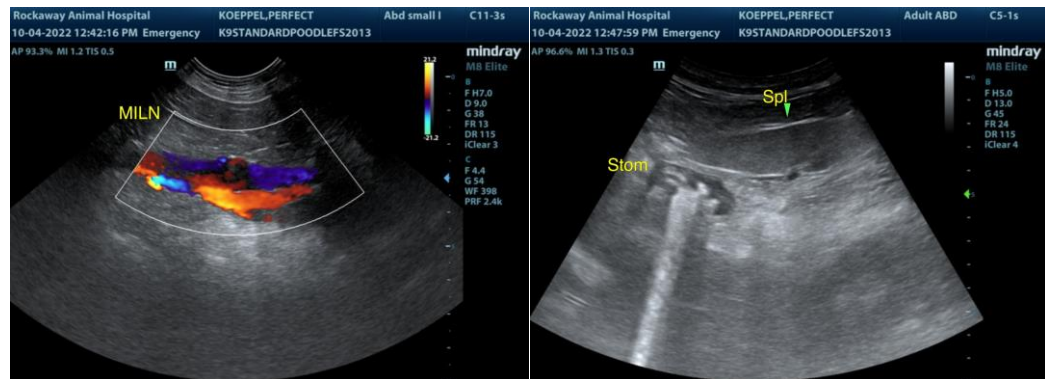
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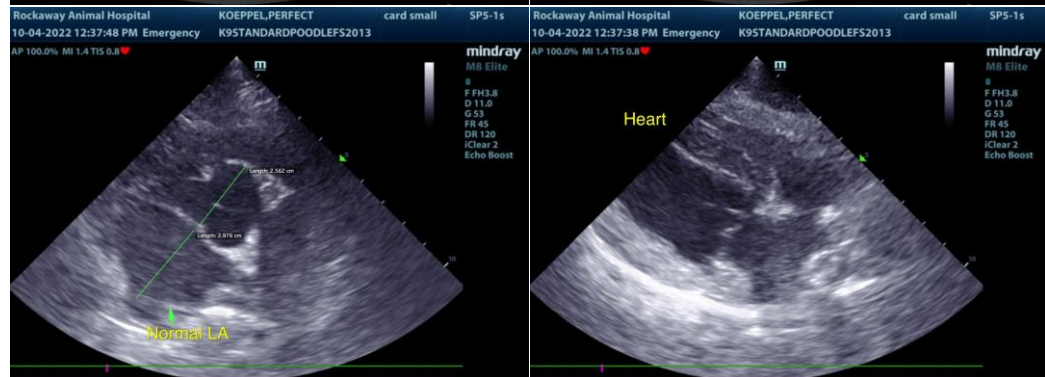


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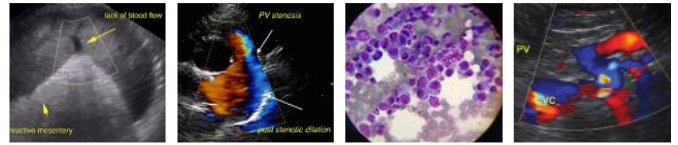
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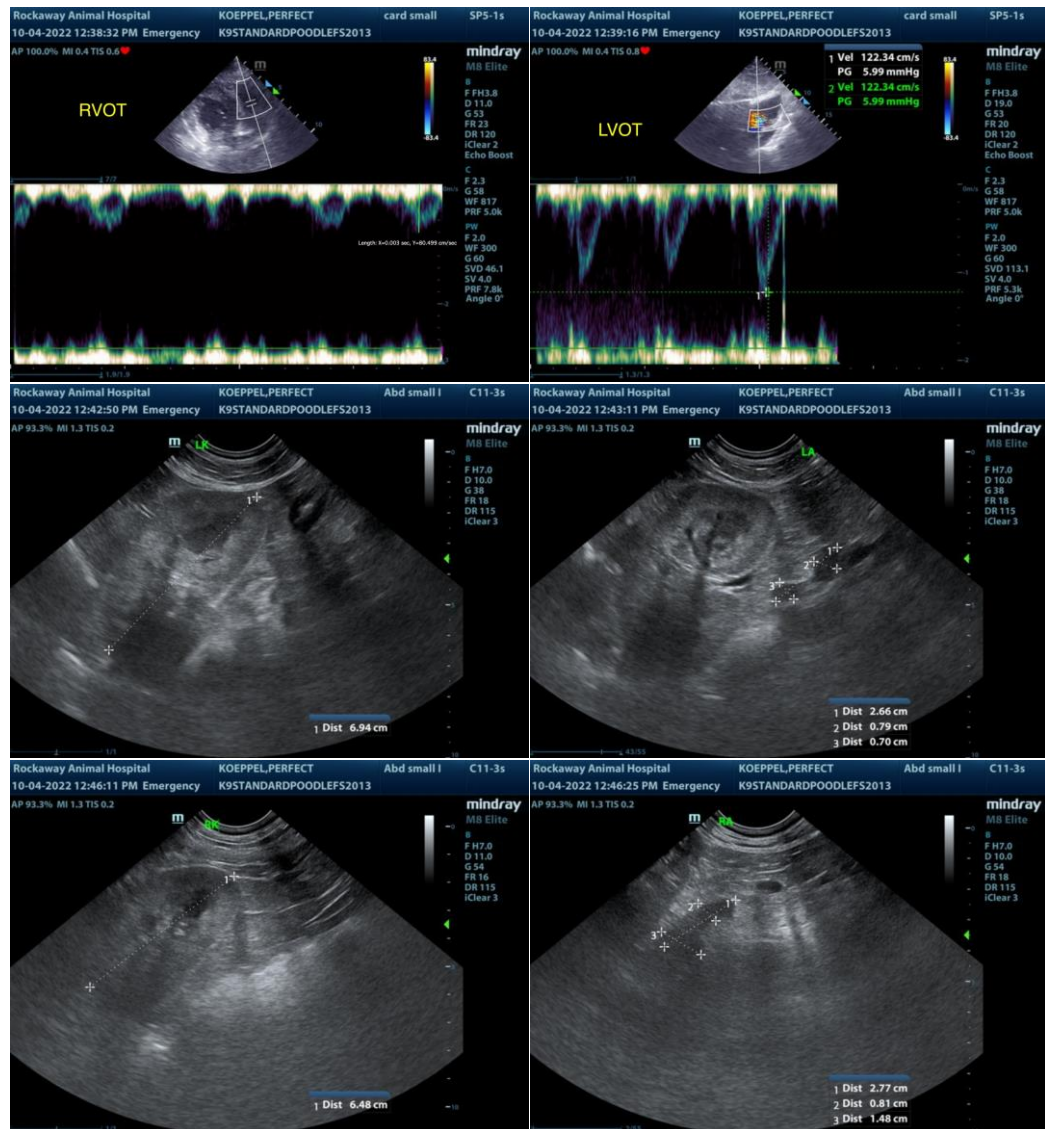
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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