SonoPath
Clinical Sonography & Telecytology
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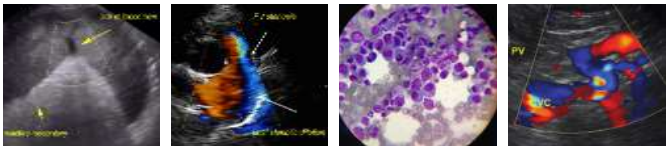


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

GG Adams

SPECIES

Feline

BREED

DSH

SEX

F

AGE

13 Years

WEIGHT

13.5 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Rockaway

REFERRING VET

Dr. Maniar

INVOICE

47223

DATE

8-31-21

PRESENTING CLINICAL SIGNS

Increased RR, abdominal pain on palpation.
Abnormal PE/Chem/CBC/UA Results: nsf

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		184	0.73	0.84	0.54	64.3	97.2
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE** (Sisson)	**LA** 2D 4-chamber long axis AS to FW (Sisson) (cm)		**LVOT VEL.** (m/s)	**RVOT VEL.** (m/s)	**IVRT** (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.29	1.3	1.4		1.1	0.82	NM

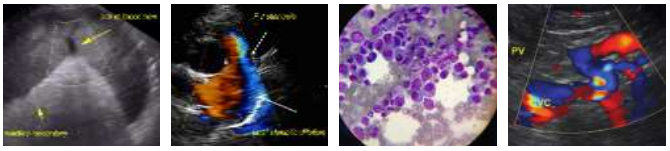
Adapted from June Boon,Veterinary Echocardiography,1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics.. The **left ventricle** presented mild interventricular septal hypertrophy with sonographically normal free wall with maintained left ventricle linear contour and without evidence of left ventricle dilation or restriction. 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 and angles 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 or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. 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 or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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 were noted.



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

Normal size and margination was 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 3.8 cm in length. The right kidney measured 4.2 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 0.42 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.36 cm width.

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. The spleen measured 0.87 cm width.

Liver/ Gallbladder

The liver was subjectively normal in size, structure, and contour. 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. 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 gastric body wall measured 0.25 cm width.

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. The duodenum wall measured 0.24 cm width and the jejunum wall measured 0.24 cm width.

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

Pancreas

The left limb of the pancreas presented normal in size and contour with mild hypoechoic parenchyma compared to adjacent nonreactive peripancreatic omentum. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

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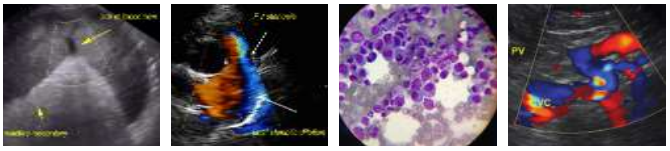

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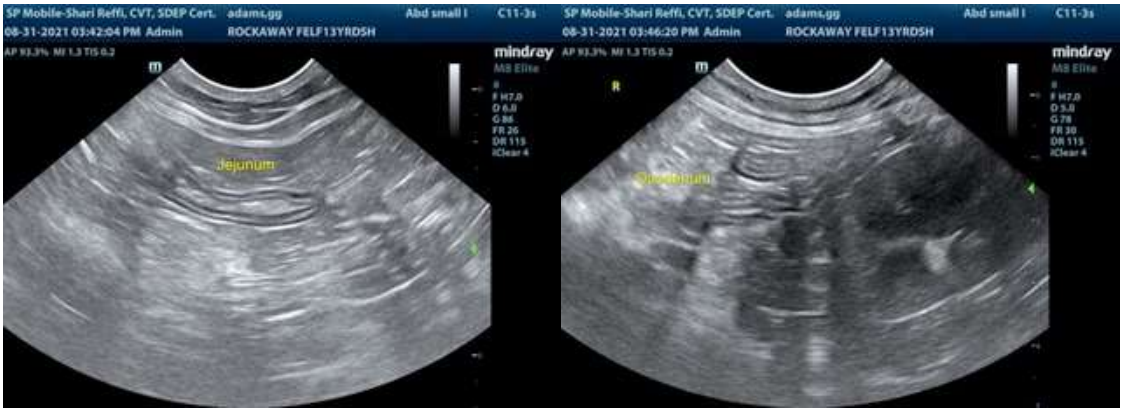
ULTRASONOGRAPHIC FINDINGS

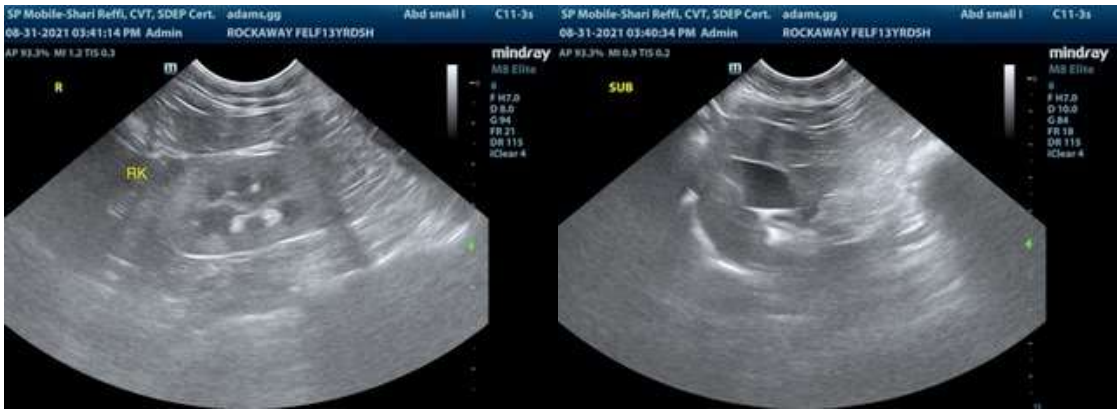
- Mild interventricular septum hypertrophy
- Normal left atrium.
- Mildly hypoechoic left pancreas - potential for low grade chronic active pancreatitis.
- Mild age related kidneys.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac function without evidence of left or right heart chamber enlargement, systolic dysfunction, or clinical pulmonary hypertension as potential cause of the patient's increased respiration rate. The mild septal hypertrophy is of unlikely clinical significance at this time given the lack of left or right chamber enlargement. This may be a normal patient variant or potentially indicative of emerging hypertrophic disease, assuming normal hydration, blood pressure, and T4 levels. Regardless, clinical signs associated with the heart are not expected indicating noncardiogenic cause of increased respiration rate. No indication for cardiac medications. Recheck echocardiogram may be considered in 6-9 months primarily to assess for progressive hypertrophic left ventricular changes.

Potential for low grade chronic active pancreatitis would be suspected if evidence of cranial abdominal or subxiphoid discomfort or pain on palpation. Correlation with a spec fpl suggested. Otherwise, no overt evidence of intraabdominal pathology as an obvious cause of abdominal pain. Thorough musculoskeletal examination suggested to assess for potential referred abdominal pain.





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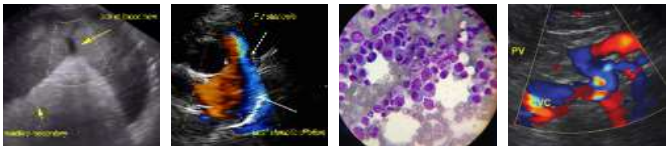

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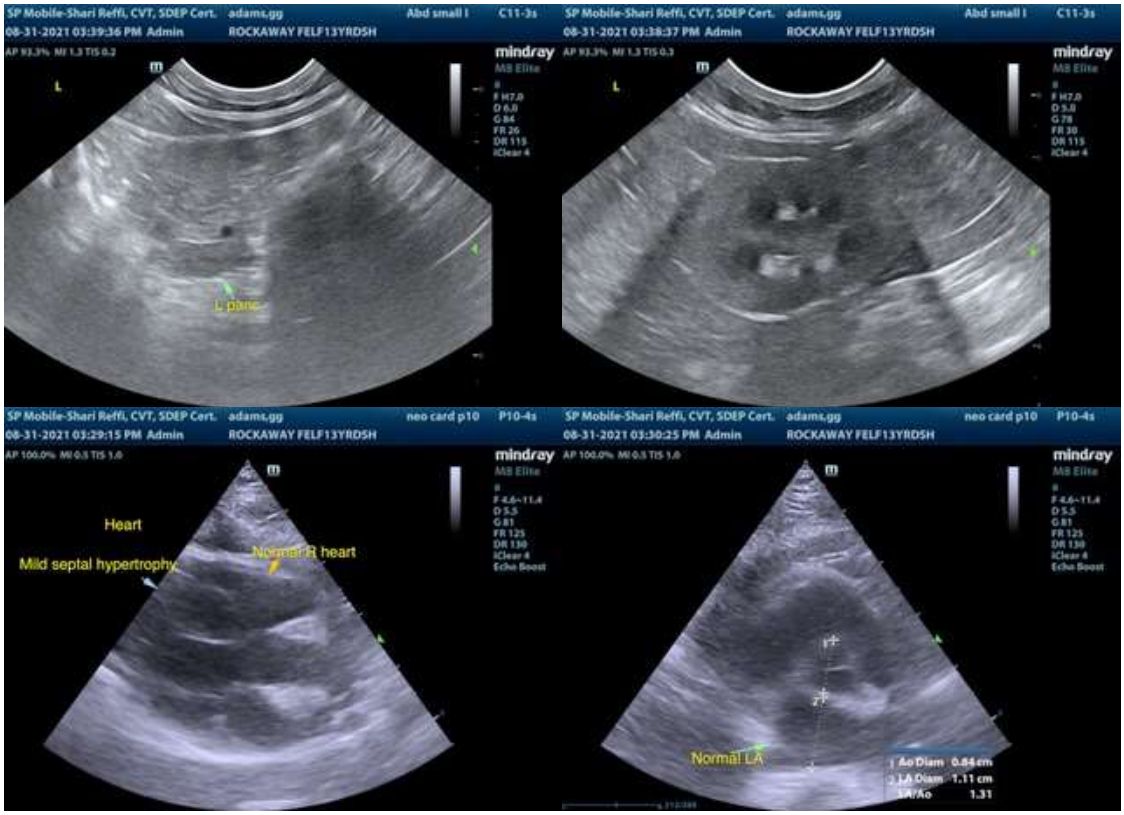

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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