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Clinical Sonography & Telecytology
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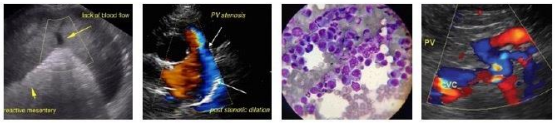


THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Louis Millington

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

10yr

WEIGHT

5.24kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Lynden Animal Clinic

REFERRING VET

Babcock

INVOICE

14194ag

DATE

06/23/2023

PRESENTING CLINICAL SIGNS

Has been on Meloxicam. Has been acting strange, listless, staring off into space, still eating and drinking.

Abnormal PE/Chem/CBC/UA Results: Please see attached rads. Bloodwork unremarkable.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

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		180	0.45	1.8	0.47	45	80
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		1.55	1.4			1.3	

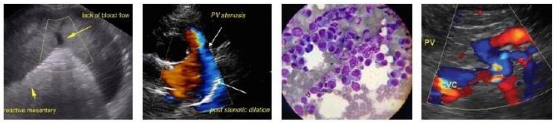
Adapted from June Boon,Veterinary Echocardiography,1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

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. No overt MR present on Doppler. The left ventricle presented normal thicknesses with linear contour and was not dilated nor restricted. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. The 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. Normal measured LVOT velocity was present. 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. No overt TR present on Doppler. 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). Normal measured RVOT velocity was present. 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 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with mild non-dependent particulate 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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Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 4.0 cm in length. The right kidney measured 4.0 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The bilateral adrenal glands were overtly normal in size, position and shape. The left adrenal gland measured 0.42 cm width. The right adrenal gland measured 0.42 cm width.

Spleen

The spleen exhibited normal size with medial folding of the caudal spleen. Finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma was present. 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 spleen measured 0.7 cm in width at the level of the hilus.

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 in 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. No overt ileocolic junction pathology. The small intestine wall measured 0.22 cm in width.

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

Pancreas

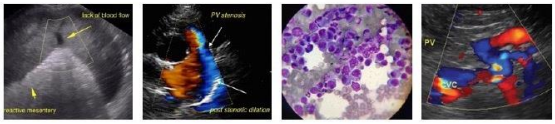
The left limb of the pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia. Minor left limb pancreatic duct dilation was present.

Free Abdomen

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

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram.
- Normal yet folded spleen-not indicative of underlying splenic pathology, likely incidental/patient variant.
- Urinary bladder sediment.
- Mild heterogenous left pancreas- nonspecific.



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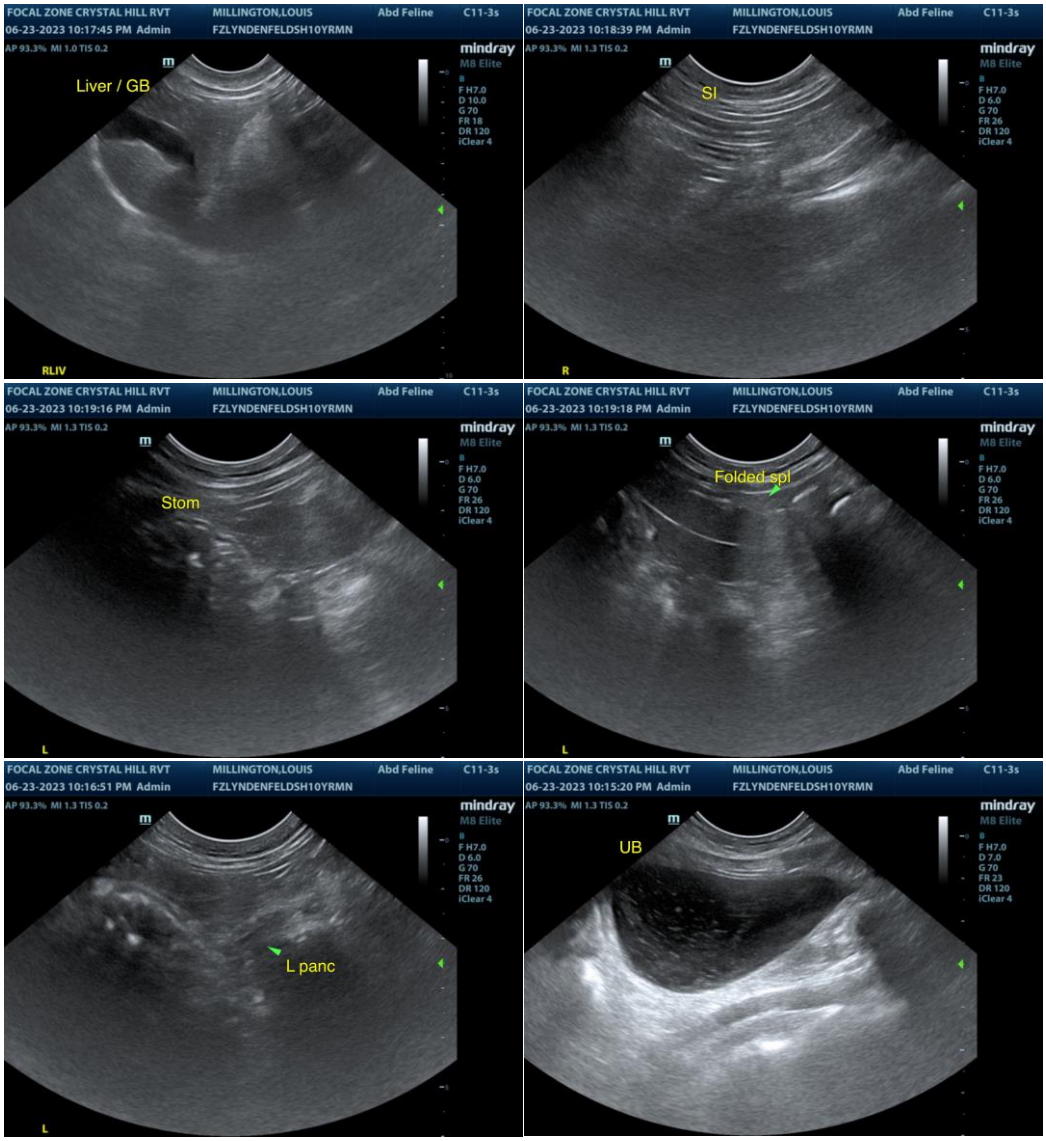
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, there is no overt evidence of significant cardiac or abdominal visceral pathology as a definitive cause of the patient's clinical signs.

The urinary bladder sediment may suggest cellular / crystalline debris or mucus. Cystocentesis for UA +/- C/S if evidence of inflammatory cells is recommended.

A thorough musculoskeletal and neurological examination is suggested if not done. Assessment for evidence of cranial abdominal/subxiphoid discomfort on palpation or abnormal spec fPL which may allude to chronic low grade pancreatitis is recommended. The pancreatic presentation may be incidental given the lack of GI signs.



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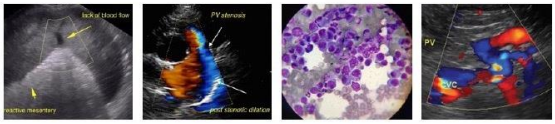

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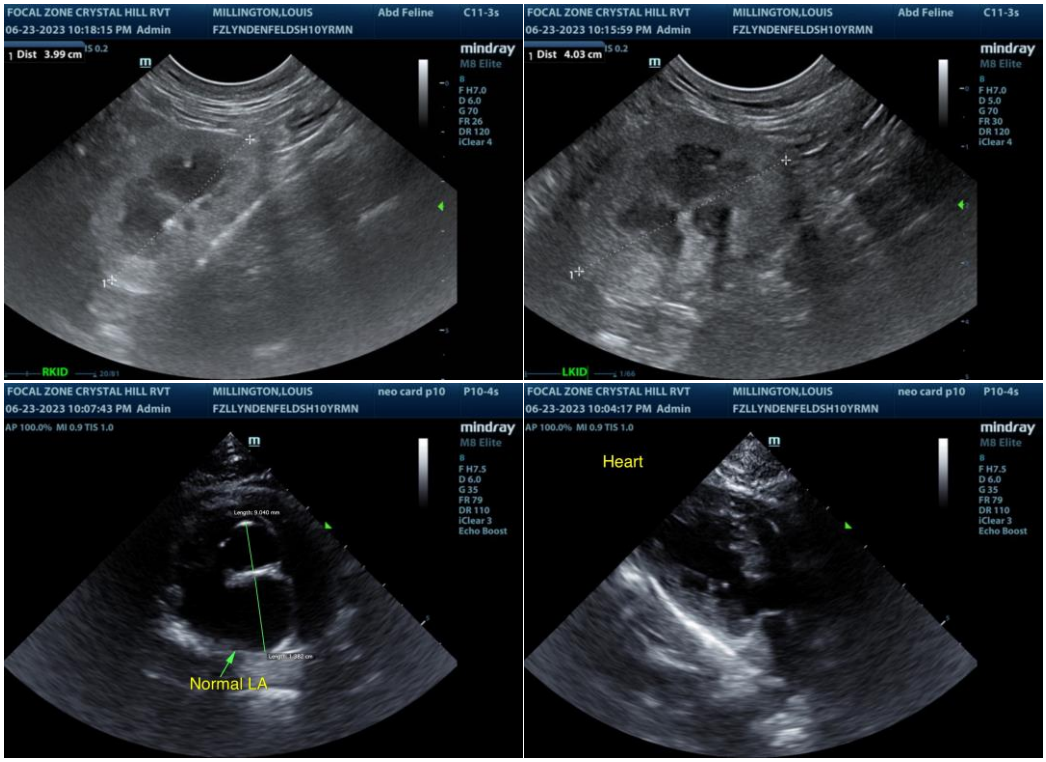

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com