



PATIENT PRESENTING CLINICAL SIGNS

Mona Linares

severe painful/firm abdomen by palpation shaking , difficulty breathing, snoring very heavy, rapidly as per O owner said her son kick her in abdomen by mistake yesterday night. thyro tabs(o.4mg/ 1 tabs/ BID), dexamethasone (0.5mg/ 2 tabs/ EOD) , ketoconazole (200mg/ 1/4 tab BID)

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: RETIC-HGB 21.9 pg 22.3 - 29.6 LOW 21.1 pg NEU 14.39 x10⁹/L 2.95 - 11.64 HIGH LYM 0.97 x10⁹/L 1.05 - 5.10 LOW PCT 0.47 % 0.14 - 0.46 HIGH GLOB 47 g/L 25 - 45 HIGH ALT 197 U/L 10 - 125 HIGH 70 U/L ALKP > 2000 U/L 23 - 212 HIGH 548 U/L GGT 14 U/L 0 - 11 HIGH

BREED

Cocker Spaniel

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

SEX

FS

AGE

8 years

WEIGHT

19.6 kg

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Beatties PH Stoney
Creek

REFERRING VET

Dr. Salib

INVOICE

13114

DATE

1/19/22

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			1.3	1.43	52.8	87.7	0.4
CANINE	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)
CARDIAC PARAMETERS							
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	146	1.8	1.6		3.4	3.6	

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



PATIENT

free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

Mona Linares

Urinary System

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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

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The area of the aortic trifurcation was free of pathology.

Cocker Spaniel

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 6.2 cm in length. The right kidney measured 6.6 cm in length.

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Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.4 cm length x 0.67 cm width at the caudal pole. The right adrenal gland was indistinctly visualized without overt pathology, subjectively measuring 1.8 cm length x 0.85 cm width at the caudal pole.

WEIGHT

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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/ Gallbladder

The liver presented mild to moderate enlargement. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with mildly prominent to echogenic walls. Anechoic content was primarily present with mild nondependent yet nonorganized debris. The cystic and common bile ducts were normal.

Gastrointestinal

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild, variably echogenic, nonshadowing ingesta most consistent with post prandial presentation without 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.


PATIENT
Pancreas

Mona Linares

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 were evident.

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Free Abdomen

No omental masses, lymphadenopathy or peritoneal effusion were present.

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ULTRASONOGRAPHIC FINDINGS
Primary Findings
SEX

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- Normal echocardiogram
- Hepatomegaly - subjectively benign
- Possible mild chronic cholecystitis

AGE

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
WEIGHT

19.6 kg

No evidence of structural or functional cardiomyopathy including no evidence of systolic dysfunction, left or right heart chamber enlargement or evidence of clinical pulmonary hypertension was present. The normal cardiac presentation indicated that the breathing difficulty in this patient is noncardiogenic in origin. Primary upper or lower airway disease with potential for Pickwickian Syndrome, given the patient's body condition, may be possible. No indication for cardiac medications.

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The appearance of the liver was nonspecific but most consistent with benign hepatopathy. Considerations for the liver may include benign vacuolar hepatopathy in light of the elevated ALP or inflammatory hepatic disease in light of the elevated ALT. No overt evidence of hepatic neoplasia which is considered unlikely. No evidence of post hepatic obstruction was noted. Ultrasound guided FNA of the liver using a 25-gauge needle and assuming normal coagulation parameters would be warranted for screening cytology, primarily to assess for evidence of inflammatory cells and to rule out unlikely neoplasia. Hepatosupportive medications such as Denamarin or Vitamin E as well as Ursodiol due to its antioxidant and immunomodulatory effects within the liver would be warranted, although these medications may not result in decreased hepatic enzyme levels.

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Thorough muscular / skeletal examination, if not done, is suggested to assess for potential referred abdominal pain.

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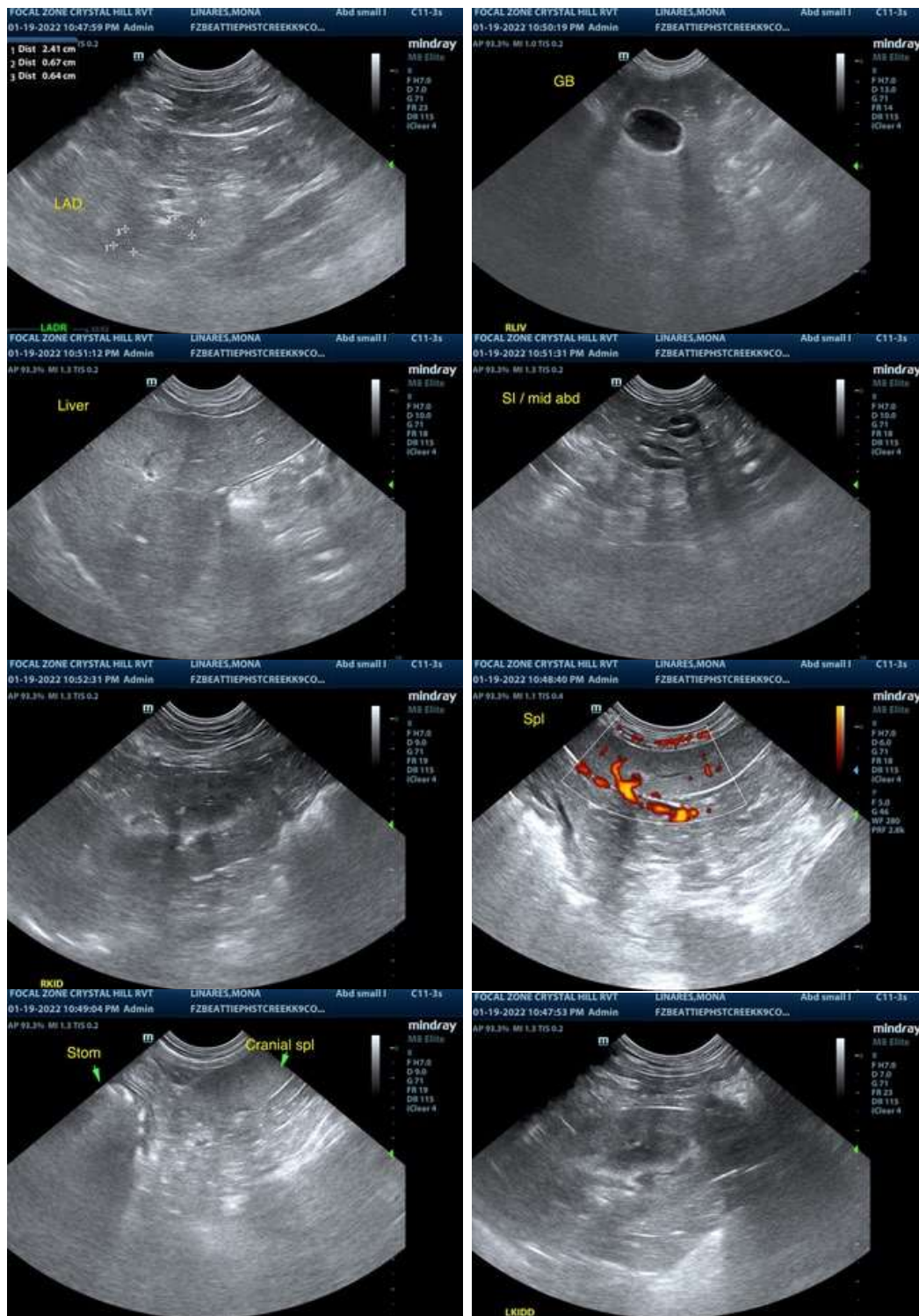
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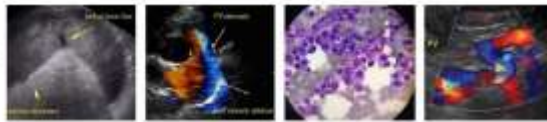
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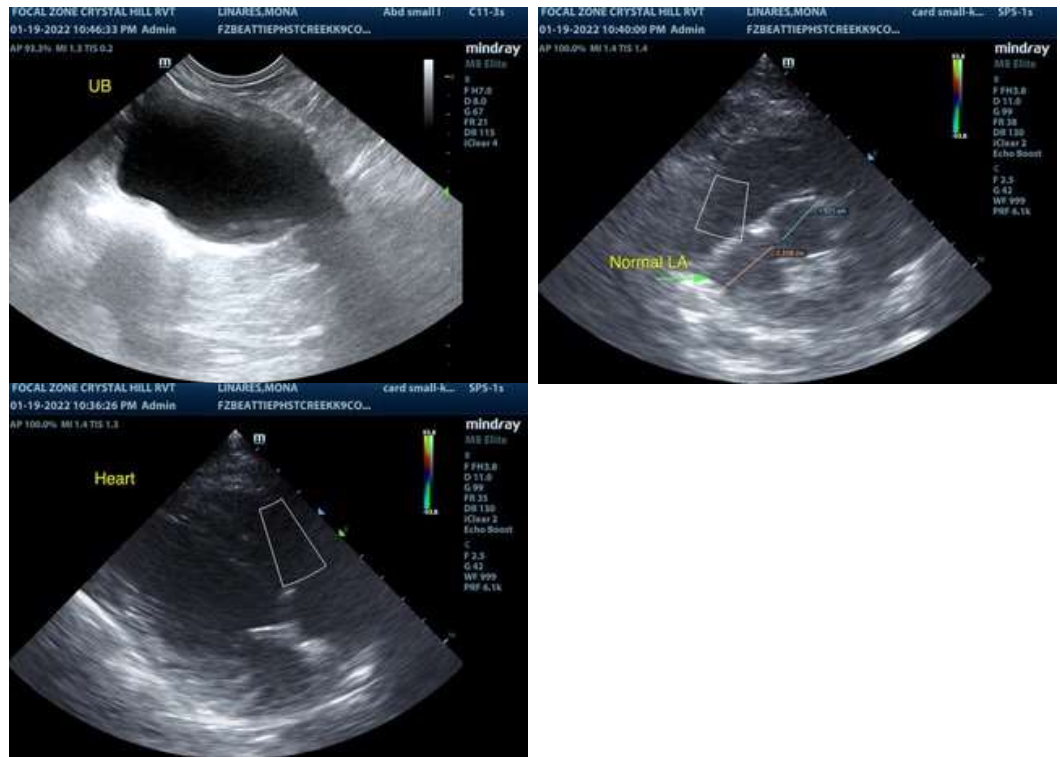
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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