

PATIENT PRESENTING CLINICAL SIGNS

Rosie Poust History: hx of elevated liver enzymes; asymptomatic. On denamarin.
Abnormal PE/Chem/CBC/UA Results: ALT 180 (0-120).

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine **Urinary System**

BREED

Boston Terrier

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

SEX

Spayed Female

The left kidney is normal size (4.41 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

AGE

2.5 years

The right kidney is normal size (4.71 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

WEIGHT

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The left adrenal gland is normal size (0.45 cm at cranial pole) (0.52 cm at caudal pole) (2.21 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

INTERPRETED BY

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The right adrenal gland is borderline enlarged (0.80 cm at cranial pole) (0.73 cm at caudal pole) (1.90 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

IMAGING PERFORMED BY

Diane McFadden

The spleen is normal in size (1.48 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

HOSPITAL NAME

Newton VH

Liver

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

REFERRING VET

Dr. Wyman-Greenwald

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

INVOICE

11140

DATE

6/21/22

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The left limb is visible with minimal deviation from the normal peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. A 0.99 cm medial, iliac lymph node is visualized. The node is normal in shape and echogenicity.

Other

A brief echocardiogram reveals no evidence of pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

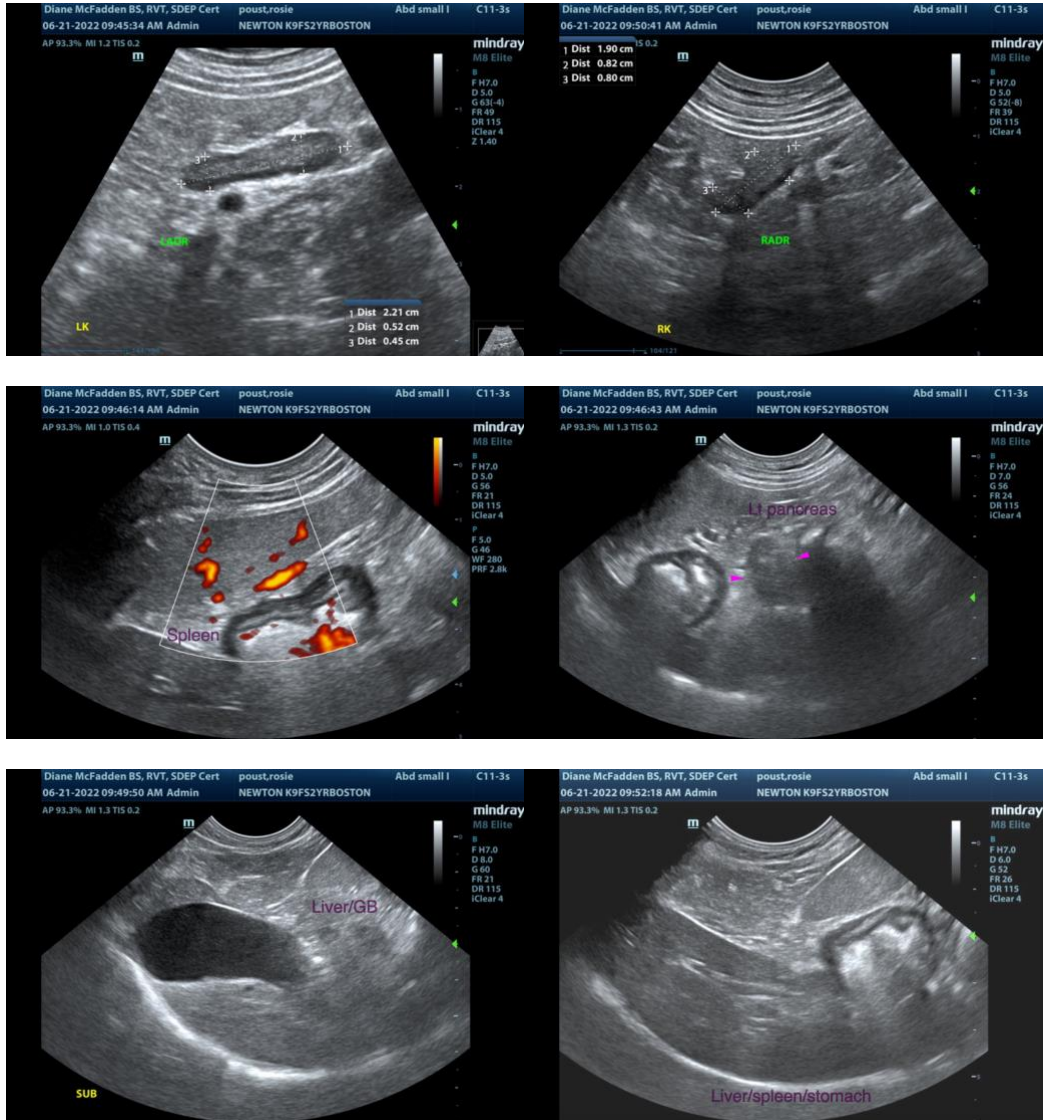
- The pancreatic changes may be a normal variant for this patient or could be consistent with mild, chronic pancreatitis. Correlation with clinical findings is recommended.
- An obvious cause for the elevated ALT is not identified in the study. Considerations include reactive hepatopathy, inflammatory disease (i.e., bacterial cholangiohepatitis), Leptospirosis, congenital disease (i.e., microvascular dysplasia, portosystemic shunt), hepatotoxicosis (i.e., copper), other hepatopathy.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Consider pre-and postprandial serum bile acids, as well as Leptospirosis testing (i.e., blood and urine PCR, serology). If bile acids are substantially elevated, further evaluation for a congenital portosystemic shunt (i.e., contrast CT scan) may be warranted.

Consider hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy). To get a definitive diagnosis, surgical biopsies are preferred in that they are more likely representative of global organ pathology. If pursued, aerobic and anaerobic bile cultures are recommended, as well as acquisition of additional hepatic tissue samples for potential copper quantitation.

If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, +/-metronidazole, Denamarin). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.



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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