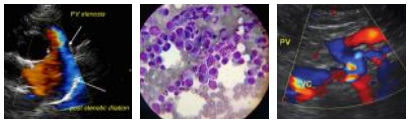
IMAGING PERFORMED BY

IntraPet.com



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DATE

5/3/22

PATIENT

Dakota Anders

SPECIES

Canine

BREED

German Shepherd

SEX

Spayed Female

AGE

9/26/16

WEIGHT

69 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Hickory Vet Hospital

REFERRING VET

Dr. Snyder

INVOICE

37314

PRESENTING CLINICAL SIGNS

Elevated liver enzymes with intermittent GI signs, stomatitis.

Current Medications: Denamarin currently. Started Clindamycin 4/27- was on course of Metronidazole and Amoxicillin 6 weeks ago.
Lab Results: ALT 132, 165 to 512- hyperglobulinemia (stomatitis).
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (7.14 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.06 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.68 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.69 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is an ill-defined hypoechoic nodule visualized within the hepatic parenchyma, measuring 1.13 cm x 1.06 cm.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal
The stomach contains minimal luminal contents. It measures largely at a normal thickness of <0.7cm, but there is some variability and prominence of the rugal folds in some areas where the gastric wall measures up to 0.81 cm. These areas maintain adequate gastric wall distinction, and there is no impression of reduced peristaltic activity. No focal mass lesions are observed. Findings could be consistent with mild gastric wall thickening, or this could be artifact due to lack of gastric distention.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measured 0.25 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Other
A brief view of the heart was submitted. No significant pericardial effusion was seen.

PRIMARY FINDINGS

- Mildly heterogeneous liver with hypoechoic nodule – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The nodule has generally a benign appearance, but an underlying neoplastic process cannot be definitively excluded.

SECONDARY FINDINGS

- Subjectively thickened gastric wall – The stomach wall thickening could be consistent with inflammation, edema, infiltrative neoplasia, imaging artifact due to rugal folds, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No large focal lesions are visualized associated with the liver. There is a small hypoechoic nodule, but I suspect this is incidental fining. Recommend continued monitoring and possibly a fine needle aspirate of this lesions. These are my recommendations for an ALT elevation with a lack of significant lesions:

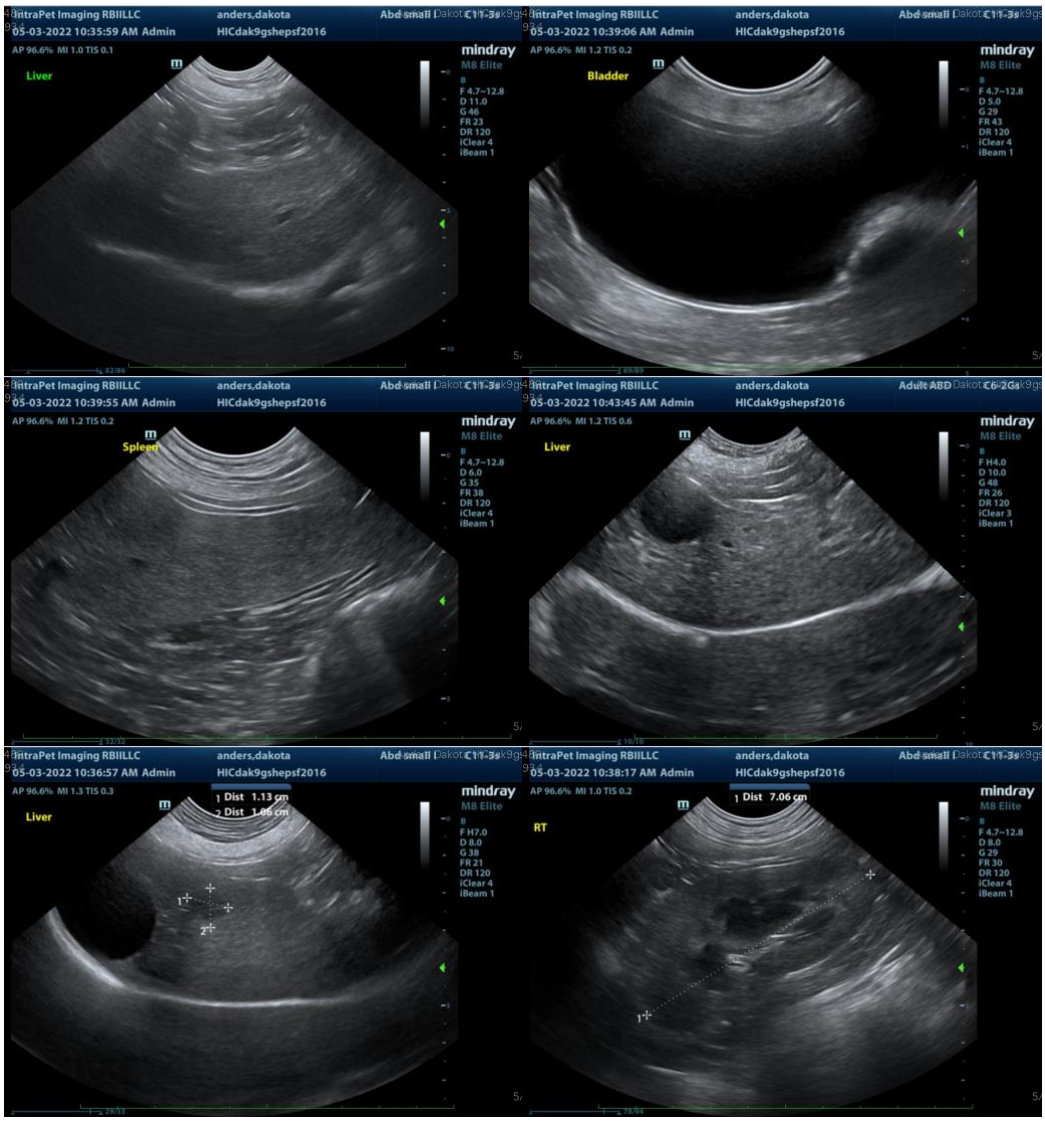
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc... I have seen some patients with ALT elevations while on Clindamycin, so you could consider discontinuing this medication and seeing if the liver enzymes normalize.

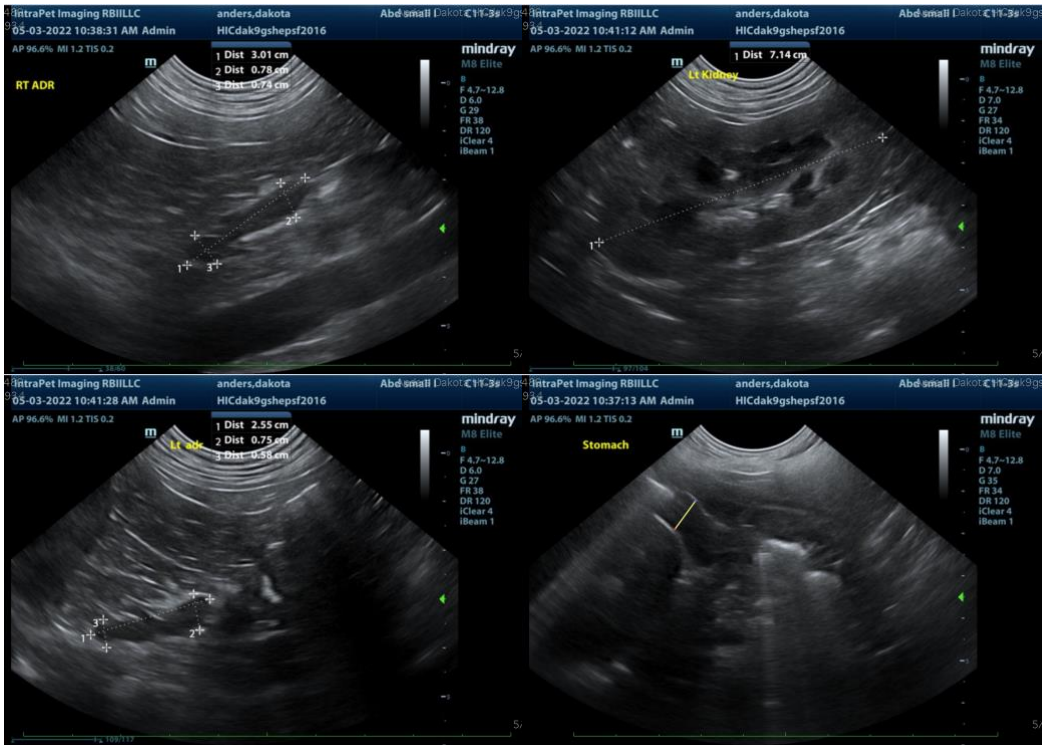
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function

- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)

- If no response to medical care (denamarin, antibiotics,+/- ursodiol etc…) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

In some images, the gastric wall appears somewhat prominent. It maintains normal gastric wall layering, so I would suspect this is either mild gastritis or artifact due to imaging plane, etc. Recommend continued monitoring. If anorexia or vomiting develops, then you could consider obtaining GI biopsies. Additionally, consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to further evaluate the GI tract for dysbiosis, exocrine pancreatic insufficiency, etc.





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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