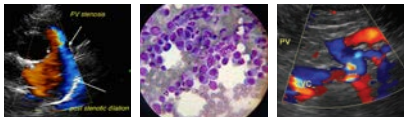
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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DATE

6/10/22

PATIENT

Kimchi McCane

SPECIES

Canine

BREED

Boxer

SEX

Spayed Female

AGE

6/18/13

WEIGHT

91 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Stephanie Pearce RDCS, RVT

HOSPITAL NAME

Banfield Abingdon

REFERRING VET

Dr. Simpson

INVOICE

38662

PRESENTING CLINICAL SIGNS

6/7/2022 - Kimchi an 8Y11M FS Boxer presents for Lethargy/Other. O states that they came for an appointment on 5/25/22 due to diarrhea and was prescribed propectalin. O states all was well until a couple of days ago when bloody stools started again, so they administered
what was left from Propectalin. O states she woke up this morning to eyes twitching, head tilt, diarrhea. O states P did not get into anything she wasn't supposed to.

Current Medications: Denamarin Advanced Large Canine bottle (30 chewable tablets), Zeniquin 100mg tablet (Q:14).
Lab Results: CBC- MON 0.05 LOW (0.20-1.50), RBC 5.17 LOW (5.50-8.50), HGB 11.3 LOW (12.0-18.0), HCT 35.20 LOW (37.0-55.0). IOF- ALKP HIGH 251 (23-212), ALT HIGH 379 (10-125), CHOL HIGH 404 (110-320), GLOB HIGH 6.9 (2.5-4.5), TP HIGH 9.2 (5.2-8.2)
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 (8.09 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 (6.77 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 0.54 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 0.60 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 heterogeneous and mottled with pinpoint bright shadowing foci, which could be consistent with pinpoint mineralizations. The splenic capsule appears smooth with no irregularities. Blood flow through the hilus and splenic parenchyma appears normal. No large focal lesions are observed. ,

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a small hyperechoic lesion visualized on the left side measuring 0.82 cm x 1.07 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains mild fluid. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

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 0.29 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.

ULTRASONOGRAPHIC FINDINGS

- Mottled spleen with diffuse hyperechoic foci – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis. The significance of these hyperechoic lesions is uncertain and trends slightly towards a more benign process. Consider a fine needle aspirate.

- Hyperechoic nodule visualized within the liver – The hyperechoic appearance of this nodule trends towards a more benign appearing nodule. Consider a fine needle aspirate or continued monitoring with ultrasound.

- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No large focal lesions are visualized on today's scan to explain the symptoms described. The spleen is somewhat mottled with diffuse hyperechoic pinpoint foci. I suspect this represent mineralizations and a benign process, but a fine needle aspirate would be necessary to determine this. Additionally, there is a small hyperechoic nodule in the liver. Hyperechoic nodules tend towards a more benign nature. A fine needle

aspirate or continued monitoring with ultrasound could be considered.

Unfortunately, there are many causes for elevations in liver enzymes that cannot always be diagnosed by ultrasound alone. These are my recommendations for further evaluation of liver enzyme elevations:

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...

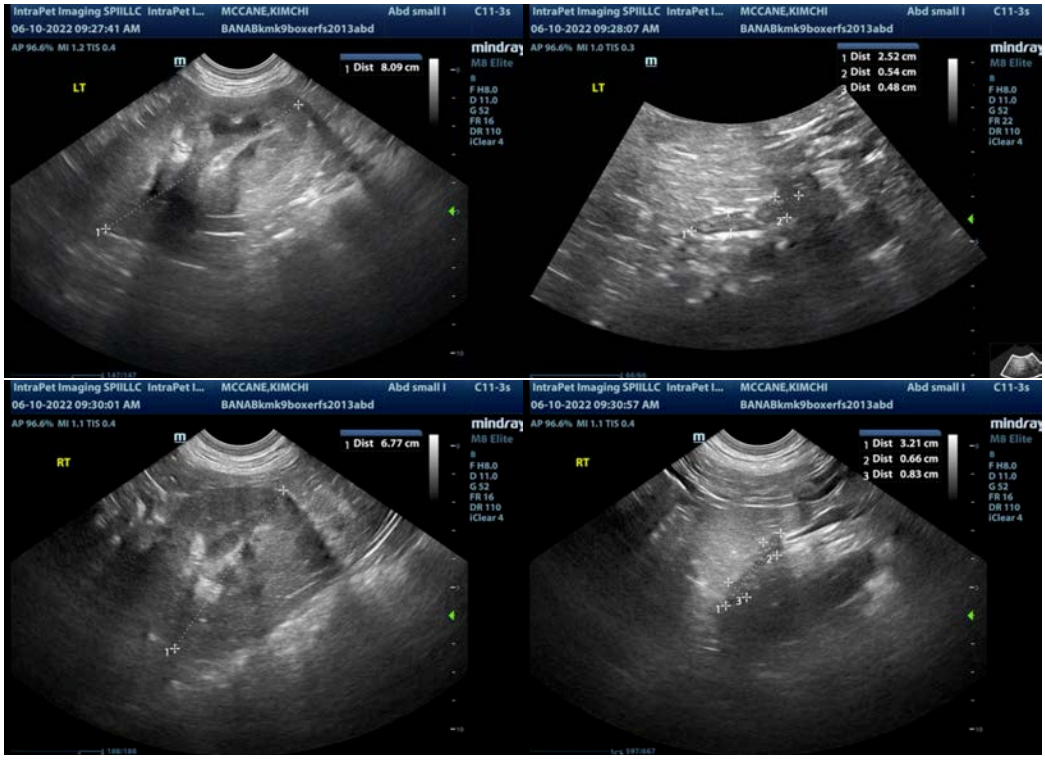
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history

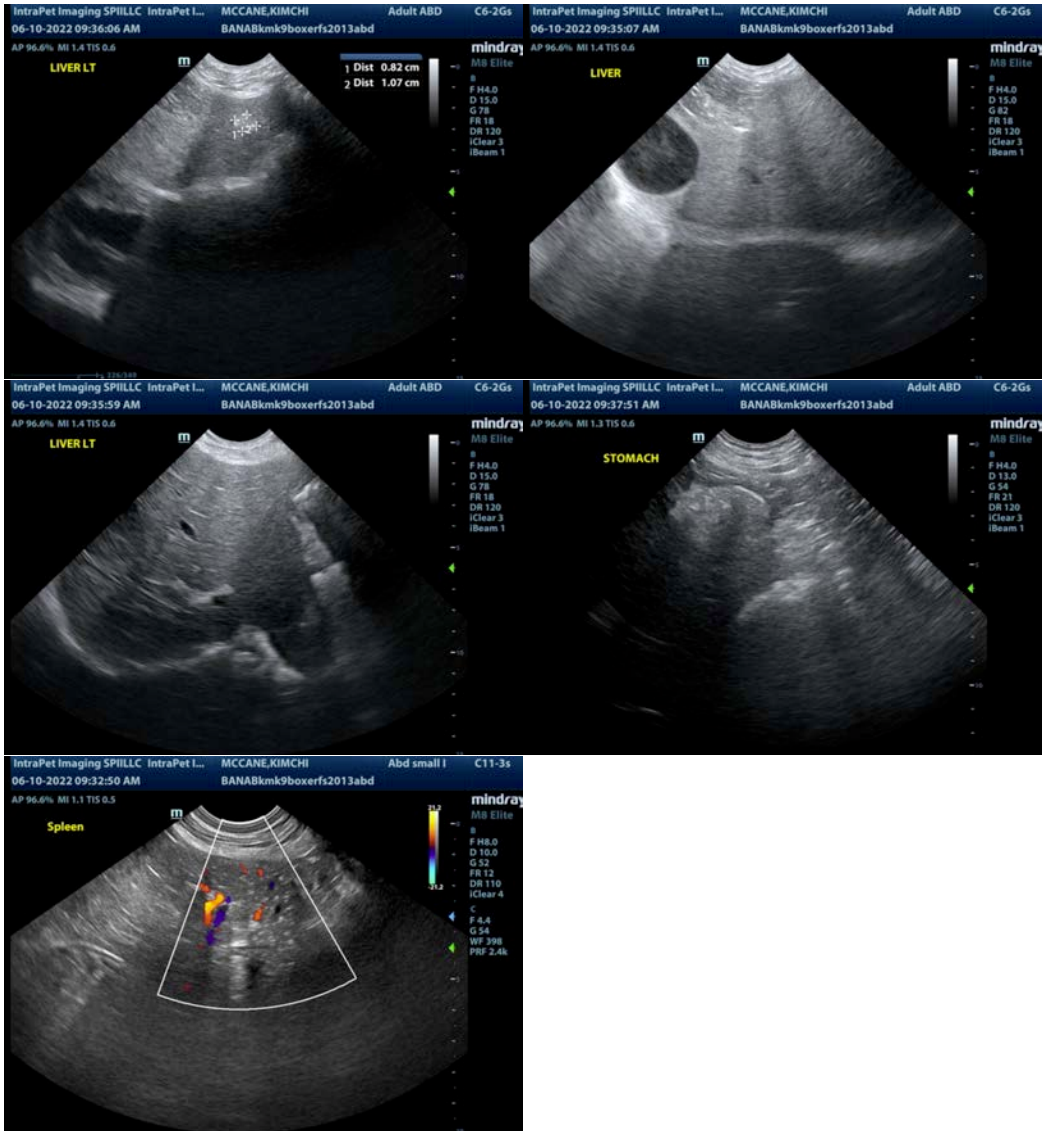
- If not already done, consider pre and post prandial bile acids to evaluate liver function

- 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.

Based on all that's going on, I think it is possible that the liver enzyme elevations are reactive secondary to the GI inflammation, possible vestibular signs(?). I would recommend symptomatic treatment for acute gastroenterocolitis and reevaluation of globulin levels with rehydration. If they remain persistently significantly elevated, a protein electrophoresis and thoracic radiographs may be warranted.





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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