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DATE PRESENTING CLINICAL SIGNS

4/27/23 P presented on 4/17/2023 with complaints of PU/PD. Lab work performed revealed a significant increase in ALP and GGT; mild increase in cholesterol, alt and platelets.

PATIENT

Kelsey Warner Current Medications: 4/17/23 convenia injection for pyoderma. 4/17/23 cytopoint
Lab Results: ALT 205 (18-121), ALP 1064 (5-160), GGT 62 (0-13), Cholesterol 350 (131-345), Platelets 864 (143-448).

SPECIES

Canine Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

BREED

Maltese

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is mildly distended with anechoic urine. The Bladder wall is diffusely mildly thickened (0.52 cm), and the mucosa is mildly irregular. The trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of severe mucosal irregularities, masses or cystic calculi. Findings are most consistent with bacterial cystitis or lack of urine distension. Recommend urinalysis and culture.

AGE

7/25/09

The left kidney has a normal shape and size (4.03 cm) with mild pyelectasia at 0.25 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

8.5 Pounds

The right kidney has a normal shape and size (4.16 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is large, measuring 0.71 cm at the cranial pole, 0.95 cm at the caudal pole, and 2.46 cm in length. 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.

HOSPITAL NAME

Northwind AH

The right adrenal gland is large/prominent, measuring 0.71 cm at the cranial pole, 0.83 cm at the caudal pole, and 2.26 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is somewhat abnormal in appearance in that there is hyperechoic mesentery surrounding the adrenal gland with no evidence of vascular invasion visualized.

REFERRING VET

Dr. Wilson

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. There are pinpoint hyperechoic foci throughout the splenic parenchyma, most consistent with dystrophic mineralization.

INVOICE

46997

Liver

The liver is large in size with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

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 minimal luminal contents. 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 measures 0.27 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 prominent and hypoechoic as compared to the surrounding isoechoic 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.

ULTRASONOGRAPHIC FINDINGS

- Subjectively thickened/irregular urinary bladder wall – The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient.
- Bilateral adrenomegaly with hyperechoic mesentery surrounding the right adrenal – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended. Recommend reimaging of the right adrenal in approximately 8 weeks to reevaluate.
- Decreased corticomedullary distinction in both kidneys with left-sided pyelectasia – The bilateral renal findings are consistent with age-related change. Pyelectasia of the kidney(s) could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Pinpoint hyperechoic foci visualized within the spleen and kidney – Findings are most consistent with dystrophic mineralization.
- Prominent, hypoechoic left and right limb of the pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Large, hyperechoic liver – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-

mediated disease, infiltrative neoplasia, or other hepatopathy.

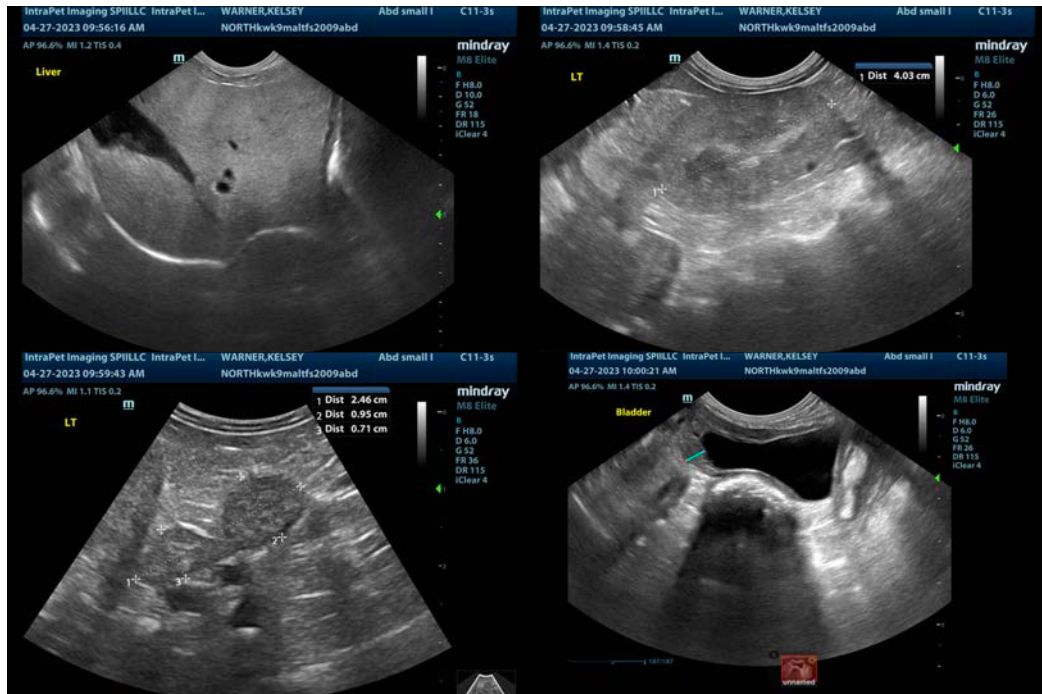
- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

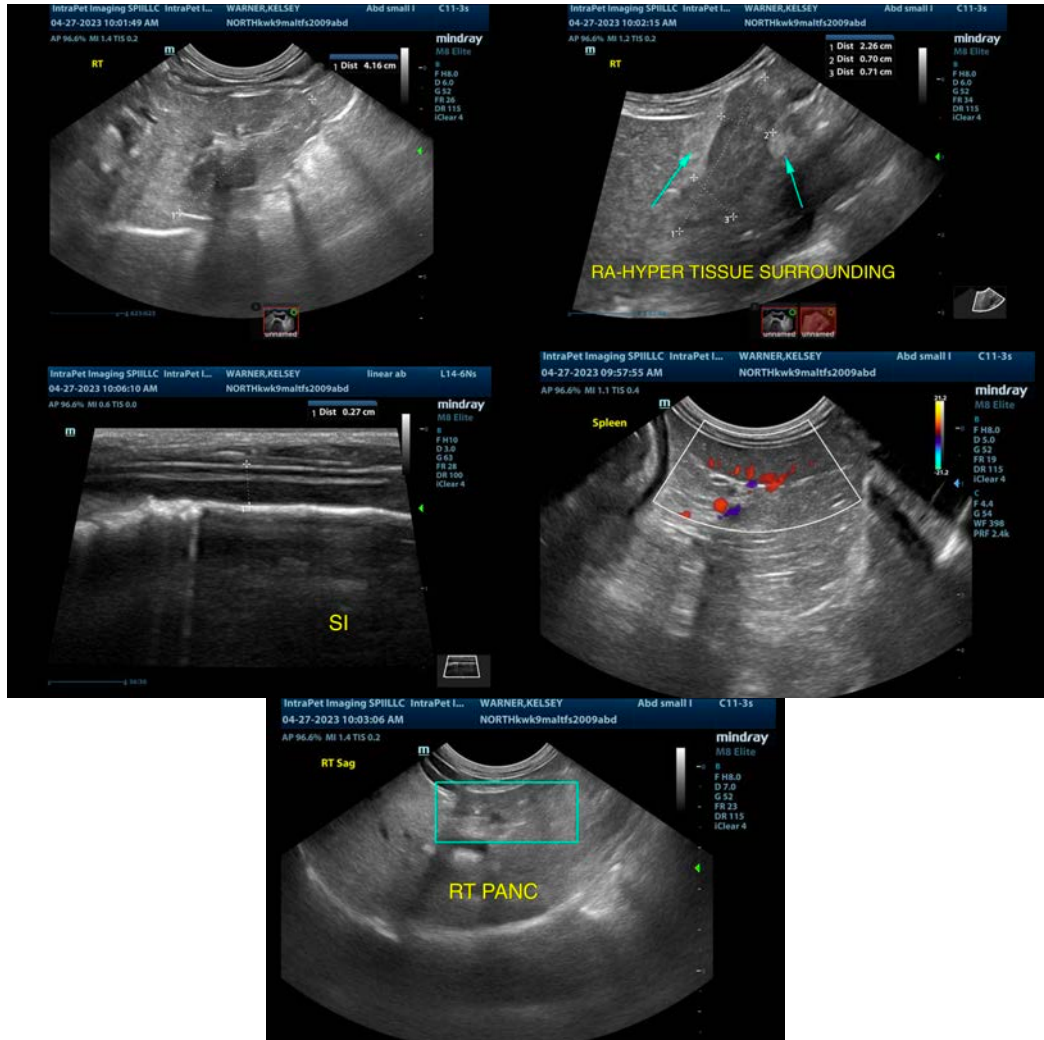
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The combination of the large adrenal glands, the large bright liver, the significant ALP elevation, and the PU/PD are concerning for possible pituitary dependent Cushing's disease. Recommend adrenal function testing, blood pressure, and urinalysis. The right adrenal has hyperechoic mesentery surrounding it. A cause for this is not clear. Consider reimaging this adrenal in approximately 8 weeks, looking for any changes that might indicate vascular invasion, a mass effect, etc.

The pancreas is prominent and hypoechoic. This could represent mild current inflammation or previous episodes of pancreatic inflammation.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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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