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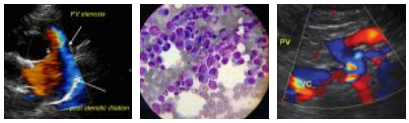

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DATE

7/6/23

PATIENT

Lights Out Bawiec

SPECIES

Canine

BREED

English Bulldog Mix

SEX

Neutered Male

AGE

12/16/11

WEIGHT

61.8 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Martinoli

INVOICE

23177

PRESENTING CLINICAL SIGNS

History: Referral for continued care and diagnostics History from O: He has not wanted to eat for the past two days. His liver and kidney values are abnormal. His blood glucose is also high. He was on 18 units until February and then the vet increased it to 21 units. He only has had 6 units today. His glucose at lunchtime was 430, that was when O gave 6 units. He has been a diabetic for 2 years. This was the first time he has not wanted to eat. Monday night his symptoms started. Yesterday he got 6 units at 5:30 pm and am. He usually gets full bloodwork done once a year and a glucose curve done twice a year. Other meds: carprofen and apoquel.

Current Medications: Gabapentin, Buprenorphine, Ondansetron, Humulin R.
Lab Results: ALT – 3038, tBili - 2.8, BUN – 53, Creatinine - 2.1
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

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 2.0 cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (7.04 cm). Overall echogenicity is slightly hyperechoic with mildly reduced 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.

The right kidney has a normal shape and size (7.09 cm). Overall echogenicity is slightly hyperechoic with mildly decreased 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.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.71 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 1.05 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 normal in size and shape. The parenchyma is mildly mottled. The blood flow through the hilus and splenic parenchyma appears normal. There are diffuse hyperechoic lesions throughout the splenic parenchyma, most consistent with a benign process.

Liver
The liver is large in size with smooth peripheral margins. The parenchyma is hyperechoic and heterogenous 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. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal
The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7 cm 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. The duodenum measured as normal (0.43 cm in wall thickness) and the jejunum measured as normal (0.36 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 right limb of the pancreas is prominent and mottled 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

- Mildly reduced corticomedullary distinction in both kidneys. The bilateral renal findings are consistent with age-related change.

- Mildly 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 appearance of this lesion is most consistent with a benign process. Continued monitoring is warranted.

- Prominent mottled right limb of the pancreas. The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- Large hyperechoic/heterogenous liver. 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Many of the changes observed on today's scan are common in a diabetic patient. The changes in the liver could be consistent with a diabetic hepatopathy, although the extreme ALT elevation is not typical of this process. There is no evidence of significant biliary disease. Consider the following:

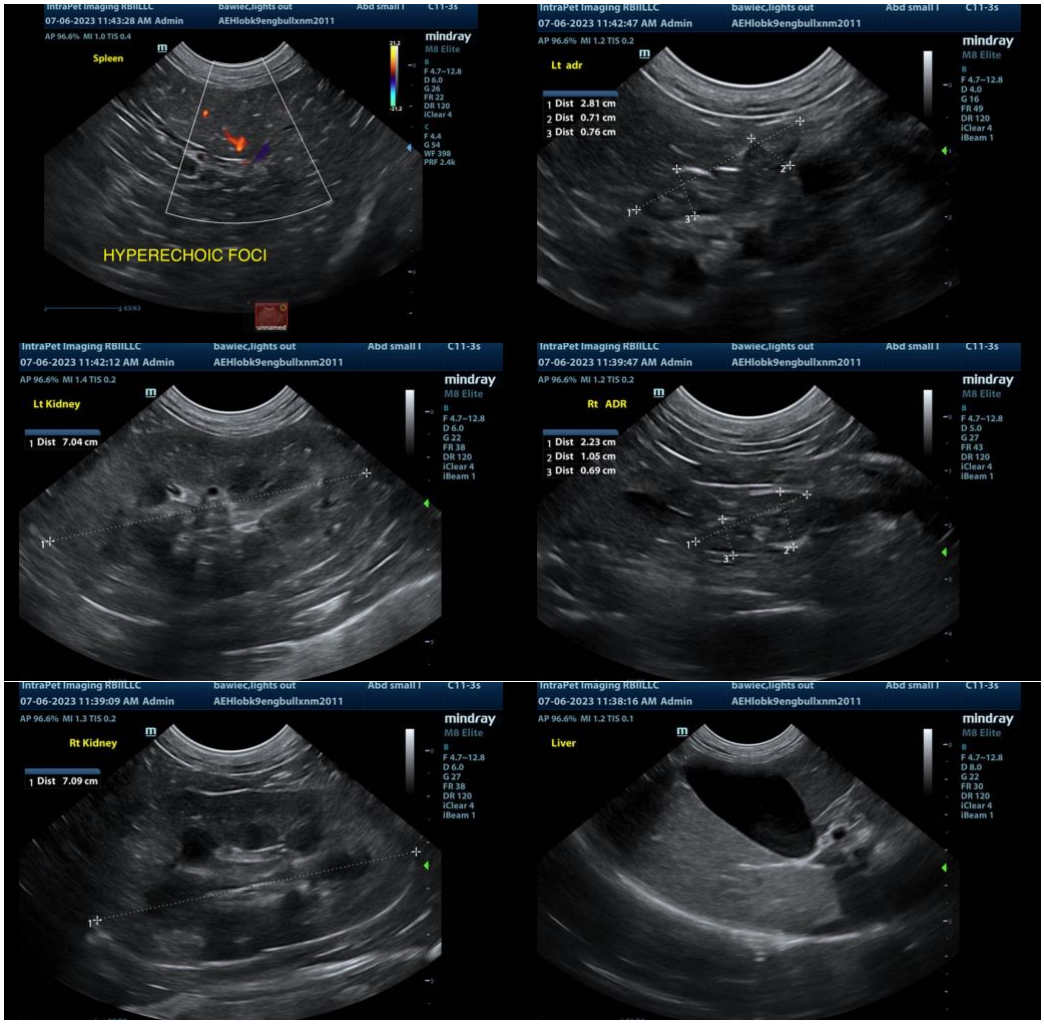
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc.
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history.
- If not already done, consider pre and post prandial bile acids to evaluate liver function.
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with Cushings are present, consider adrenal function testing (ACTH stim)
- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)
- If no response to supportive care (Denamarin, fluids, antibiotics,+/- ursodiol etc.) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

Additionally, confirm there is not significant lipemia or homolysis in the sample that could be contributing to the elevation in bilirubin reported.

The changes in the pancreas are mild and there is no evidence of active inflammatory changes. Correlate these findings with a quantitative PLI level.

Recommend empirical treatment for acute liver injury, and hospital rehydration and stabilization of the blood sugar with regular insulin, screening for ketones and a urinary tract infection, etc., and evaluation of a urinalysis to try and determine if the azotemia is primary or due to dehydration.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.



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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