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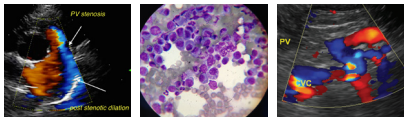

SonoPath
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DATE

3/23/22

PATIENT

Biggles Burke

SPECIES

Canine

BREED

American Hairless Terrier

SEX

Neutered Male

AGE

10/4/09

WEIGHT

19.1 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Andi Parkinson RDMS

HOSPITAL NAME

Paradise AH

REFERRING VET

Dr. Halpern

INVOICE

36392

PRESENTING CLINICAL SIGNS

P presented for history of PU/PD, significant hepatomegaly, progressive liver enzyme elevation.

Current Medications: On Denamarin >1 year, Apoquel, Cytopoint.
Lab Results: ALT 270, ALP 300, Na/K 27.
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 prostate is normal in size (0.79 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.1 cm). Overall, there is good corticomedullary distinction, but the cortex appears hyperechoic with no evidence of perinephric inflammation. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.72 cm). Overall, there is good corticomedullary distinction, but the cortex appears hyperechoic with no evidence of perinephric inflammation. 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 0.64 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.65 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 severely heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. The severe heterogeneous nature in some areas appears prominent enough to be consistent with ill-defined, coalescing hypoechoic nodules. A larger hypoechoic nodule is visualized on the left side of the liver, measuring 1.84 cm x 2.2 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 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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

There is a moderate sized solid iso- to hyperechoic structure visualized caudal to the spleen in the abdomen. No attachment is noted to this structure, although a splenic lesion cannot be 100% ruled out. Suspect intraabdominal lipoma. Recommend fine needle aspirate. The structure measures 4.13 cm x 5.4 cm.

ULTRASONOGRAPHIC FINDINGS

- Heterogeneous, nodular 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.

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

- Iso- to hyperechoic isolated abdominal mass – No apparent association with an abdominal structure is noted. Consider possible intraabdominal lipoma. Recommend fine needle aspirate.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver appears diffusely heterogeneous with an ill-defined hypoechoic nodule. Suspect a primary hepatopathy, as there is no evidence of significant biliary disease present.

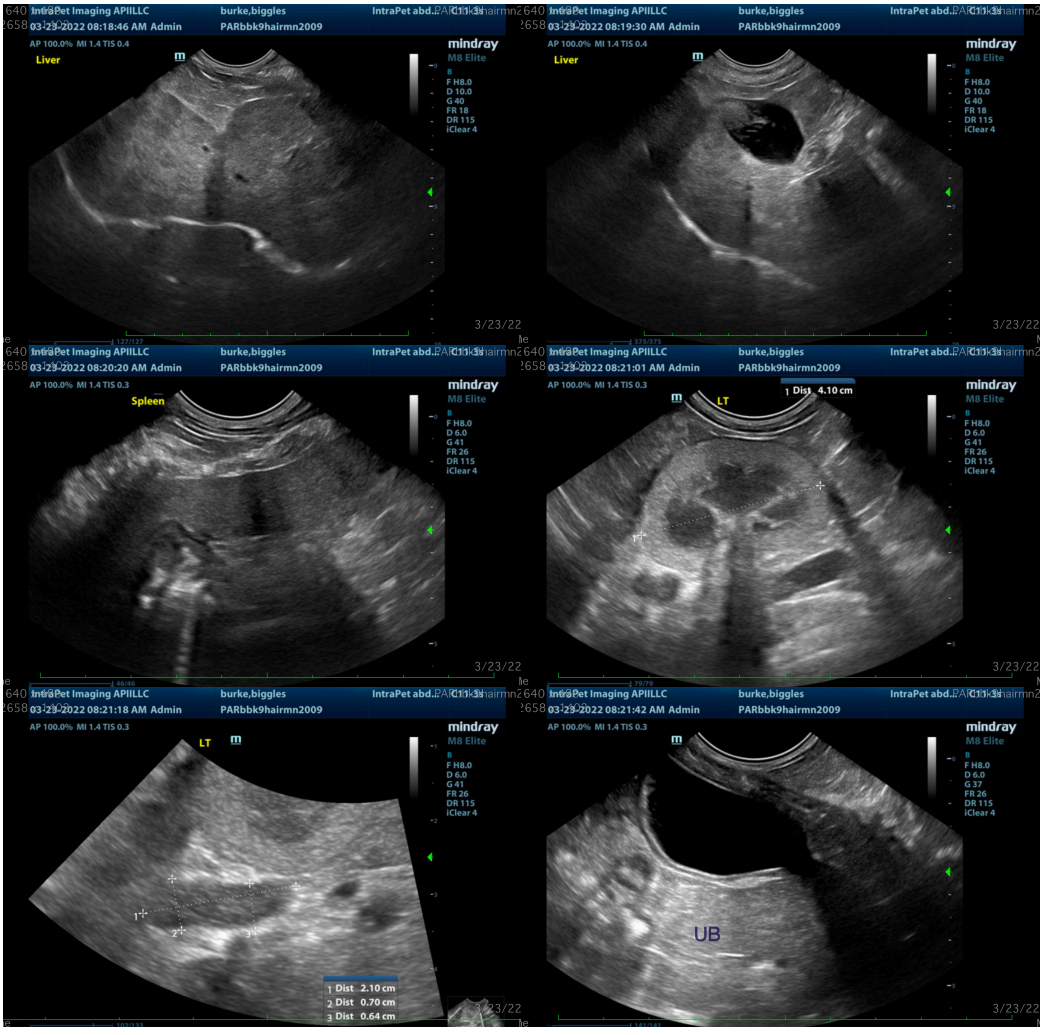
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...

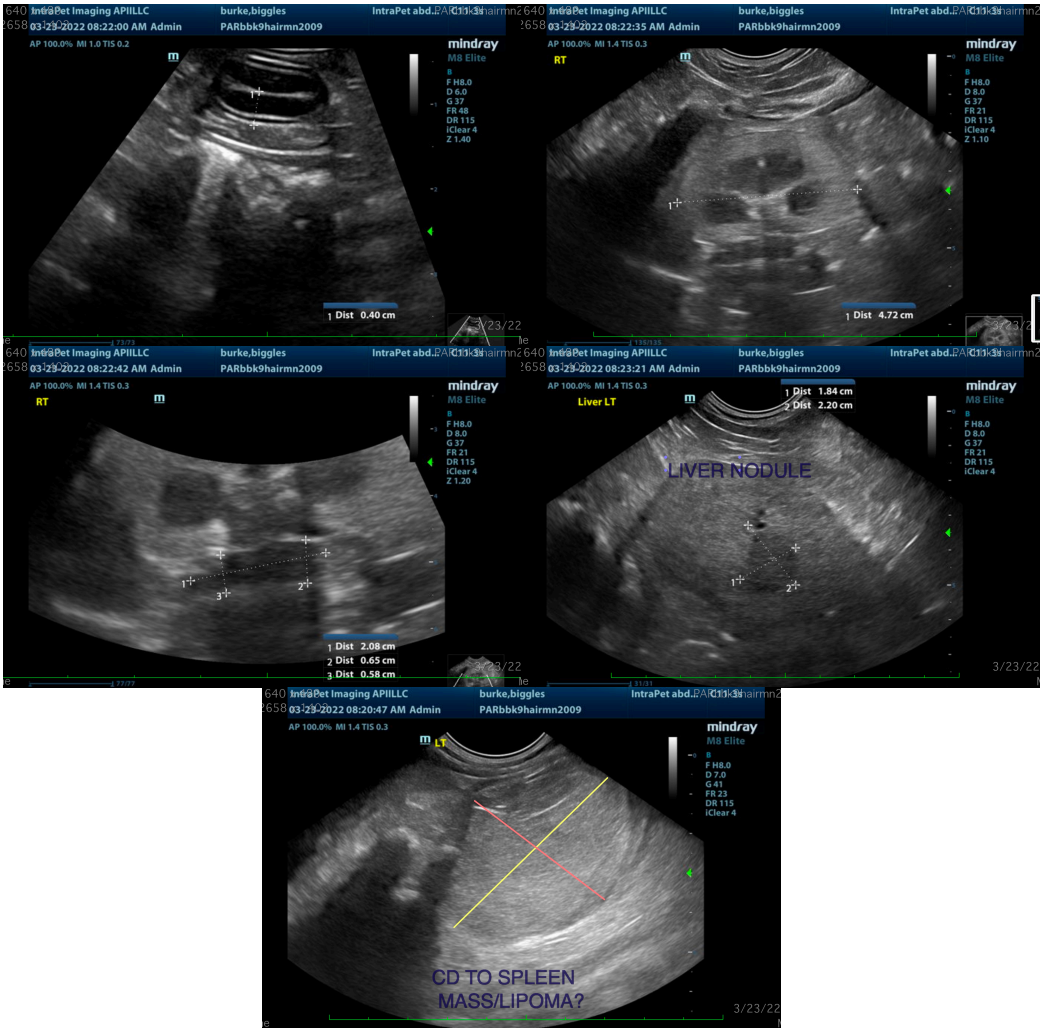
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history

- 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)
- Recommend Fine needle aspirate of the liver to evaluate for neoplastic change, inflammation, etc. (25-gauge 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.

Additionally, there is a mass effect visualized caudal to the spleen. I do not see a direct attachment to other structures, but this is possible. Recommend a fine needle aspirate of this lesion. Primary differential would be an intraabdominal lipoma, lymph node, other.

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/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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