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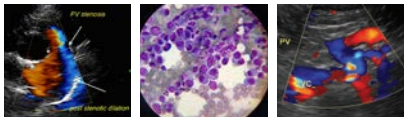

SonoPath

Clinical Sonography & Telecytology

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DATE

1/18/23

PATIENT

Cinnamon Schapiro

SPECIES

Canine

BREED

Pit Bull x

SEX

Spayed Female

AGE

12/18/09

WEIGHT

54 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Stevenson Village VH

REFERRING VET

Dr. Rathbun

INVOICE

44297

PRESENTING CLINICAL SIGNS

Elevated liver values (primarily ALKP) in addition to hypercholesterolemia and hyperlipidemia noted on routine monitoring bloodwork sent out on 11/10/22. O had reported that P did have some degree of pu/pd and P does have a slightly pendulous abdomen, so an ACTH stim test was performed on 11/21/22 to assess for HAC. ACTH stim test did not show evidence of HAC. Following discussion of results and recommendation for an AUS, the O wanted to initially attempt.

some form of empirical treatment and noted that P had an episode of antibiotic-responsive hepatitis at a different clinic years ago, so we did a 3 week empirical antibiotic trial with clavamox and metronidazole. Unfortunately, the recheck chemistry values done after finishing that course on 1/5/23 showed worsening ALKP and ALT elevations and an AUS was recommended. Ideally, we wanted P to still be on these medications when rechecking bloodwork. P has a history of a low grade 2 Mast cell tumor that was completely excised from the right dorsolateral abdomen on 5/31/22. P has had a stable heart murmur (grade III/VI left apical systolic) that was first noted on exam on 12/31/21, but the O has not had this worked up.

Current Medications: None currently; had been on apoquel in the past (recommended that they discontinue after MCT diagnosis) and had more recently finished a 3 week course of amoxi/clav (500/125 mg) - give 1/2 tab, PO, BID x 3 weeks; and metronidazole (250 mg) - give 1 tab in AM and 1/2 tab in PM x 3 weeks.
Lab Results: Aforementioned progressively elevating liver values (primarily ALKP).
Date of Previous IntraPet Ultrasound: No previous.
Sedation: IV Torb.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is mildly distended with anechoic urine. The Bladder wall is diffusely mildly thickened (0.63 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.

The left kidney has a normal shape and size (6.3 cm). Overall echogenicity is normal with adequate 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 (6.19 cm). Overall echogenicity is normal with adequate 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 0.84 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/borderline enlarged, measuring 0.97 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 slightly irregular in appearance in that the caudal pole appears somewhat prominent and hypoechoic. There is no clear evidence of a discrete mass effect, and this could represent anatomic variation, but continued monitoring is warranted. No evidence of vascular invasion is visualized.

Spleen
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.

Liver
The liver is large with rounded margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. 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. Duodenum wall measures 0.37 cm. Jejunum wall measures 0.35 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.

PRIMARY FINDINGS

- Thickened, slightly 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.

- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

- Large, heterogeneous liver with rounded margins – 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.

- 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.

SECONDARY FINDINGS

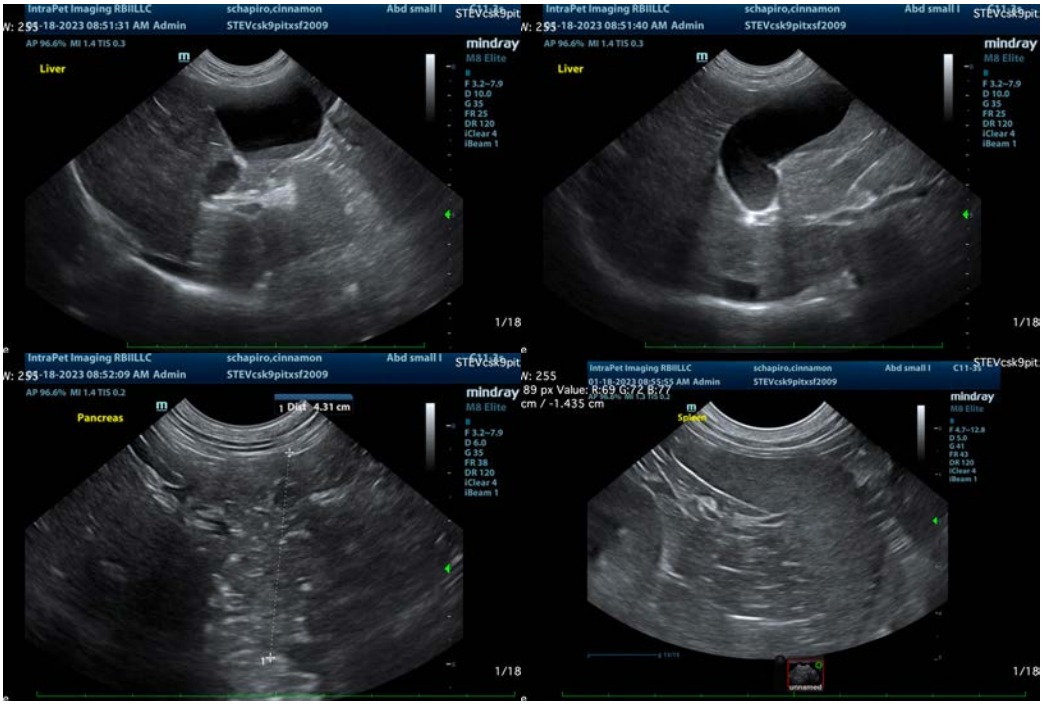
- Borderline adrenomegaly with a slightly atypical appearing right adrenal gland – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended. The significance of this is unclear but recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal lesions are visualized associated with the liver or the biliary tract. The liver is large and heterogeneous with rounded margins. These changes are non-specific but could be consistent with a vacuolar hepatopathy. You could consider a liver function test and a fine needle aspirate of the liver (provided coagulation parameters are normal) to help rule out significant underlying liver disease.

Additionally, both adrenals are slightly prominent, so your concerns for possible pituitary dependent hyperadrenocorticism are valid, and a low-dose Dexamethasone suppression test could be considered, as this is a more sensitive test and may pick up a false negative ACTH stim. Keep in mind that the right adrenal gland appears somewhat irregular but not clearly abnormal, and a recheck of this adrenal gland for any changes is recommended in the next approximately two months.

The urinary bladder wall is somewhat thickened and irregular. This could largely be due to lack of urine distention, but consider a urinalysis and culture to rule out the possibility of a urinary tract infection.



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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