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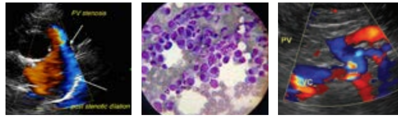

SonoPath

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DATE

5/25/22

PATIENT

Reese Remington

SPECIES

Canine

BREED

Bernese Mtn Dog

SEX

Spayed Female

AGE

2/28/12

WEIGHT

111.5 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Stephanie Pearce RDCS, RVT

HOSPITAL NAME

Northwind AH

REFERRING VET

Dr. Miller

INVOICE

37942

PRESENTING CLINICAL SIGNS

In inappetence since 5/13/22. Hx of vomiting 5/13-5/15- resolved with Cerenia, lethargy.

Current Medications: None.
Lab Results: ALT 124, AST 74, ALP 1774.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Telazol IV.
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 (6.28 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 (5.66 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 borderline large in size measuring 1.08 cm at the cranial pole, 0.87 cm at the caudal pole, and 3.39 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in appearance in that the mid body area between the cranial and caudal pole of the adrenal gland is enlarged with an ovoid, slightly hyperechoic mass effect/nodule measuring 1.0 cm x 0.97 cm.

The right adrenal gland is normal in size measuring 0.67 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. There is a small hypoechoic nodule visualized within the parenchyma measuring 1.18 cm x 0.77 cm.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral 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 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

A brief view of the heart was submitted. No significant pericardial effusion was seen.

ULTRASONOGRAPHIC FINDINGS

- Irregular, hyperechoic lesion in the mid body of the left adrenal gland – This could represent a benign or neoplastic lesion (adenoma, carcinoma, pheochromocytoma, hyperplasia, etc.).

- Hypoechoic splenic nodule – There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

- Heterogeneous 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

There is a focal hyperechoic irregularity involving the left adrenal gland. This lesion is relatively small and doesn't have any obvious evidence of vascular invasion. These nodules can be benign or malignant and can secrete hormones or be non-active. Options moving forward include:

- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)

- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)

- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma.

- If no symptoms of cushings are present, consider either referral for surgery or continued monitoring with ultrasound (in 4-6 weeks).

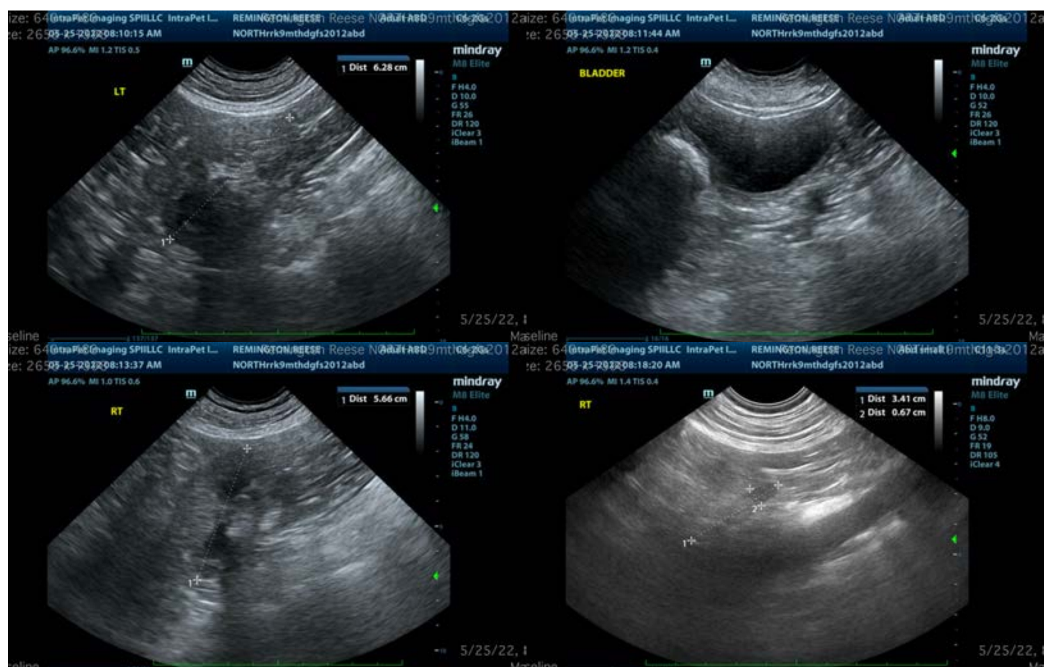
- Many of these nodules can be benign and incidental in nature, unfortunately that is difficult to determine with a single ultrasound.

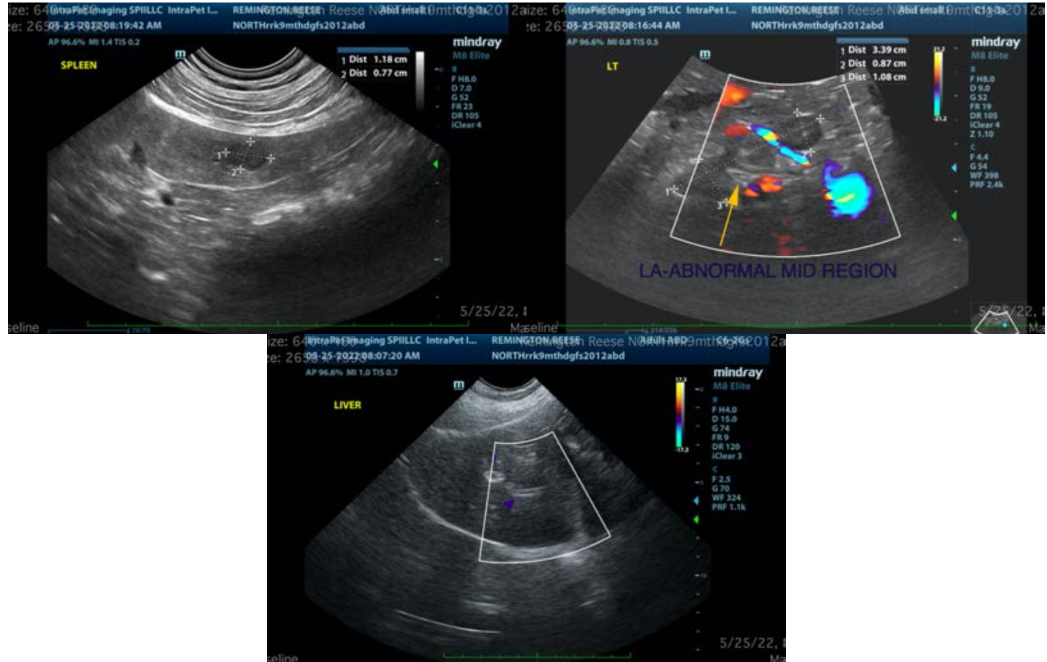
Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

No focal lesions are observed in the liver, nor abnormalities involving the biliary tract. The ALP elevation could be secondary to the adrenal lesion if cortisol is being secreted. Otherwise, consider a liver function test and fine needle aspirate of the liver.

There is a focal hypoechoic lesion in the spleen. Based on this breed's predilection for splenic based neoplasms, consider a fine needle aspirate of the splenic nodule.

An obvious cause for the reduction in appetite and vomiting is not noted, as I suspect these lesions are relatively early in nature and unlikely to have significant symptoms associated with them. If primary gastrointestinal disease is suspected, you could consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to look harder for more evidence of possible underlying pancreatic or small intestinal disease. Recommend symptomatic therapy for gastroenteritis/pancreatitis while collecting information on these other issues and monitoring the patient closely.





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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