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Clinical Sonography & Telecytology
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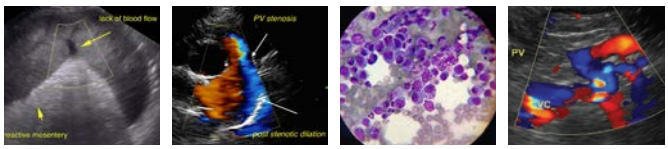

SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Zoe Popeck

SPECIES

Canine

BREED

Shorkie

SEX

Spayed Female

AGE

9 Years

WEIGHT

20 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Elaina Petrone

HOSPITAL NAME

Long Branch AH

REFERRING VET

Dr. Elaina Petrone

INVOICE

45571

DATE

2/28/23

PRESENTING CLINICAL SIGNS

History of IMHA Presented for anorexia, lethargy, dehydration. CBC-elevated nRBCs, platelet clumping, pathology review was consistent with a marked regenerative response without anemia as well as inflammatory changes. Chem: mild ALP elevation

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 (5.06 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(4.95 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 0.50 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 0.57 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. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There are numerous distinct hyperechoic nodules visualized within the spleen, an example measures 0.49 cm x 0.57 cm. The lesions are most consistent with benign myelolipomas.

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 mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

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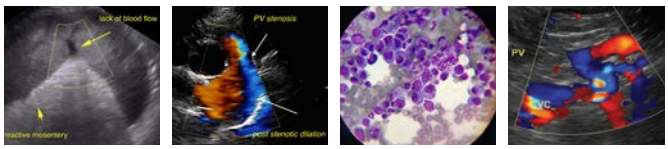

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Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of 0.26cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering 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 0.35 cm. Jejunum wall measures 0.33 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.

ULTRASONOGRAPHIC FINDINGS

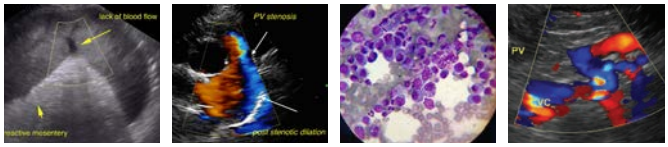
- Mildly mottled spleen with hyperechoic nodules – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis. The distinct hyperechoic nodules are most consistent with benign myelolipomas, but continued monitoring is warranted.

- 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.

- Moderate ingesta within the gastric lumen – Findings are consistent with a non-fasted patient.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I don't see any obvious lesions on today's exam to explain the lethargy, dehydration, and anorexia reported. Recommend general supportive therapy and monitoring of lab work. I would be reluctant to treat this patient for IMHA based on the information provided, although I don't have reports included. A pathologist review of the blood smear should be performed (this may have already been done?). In the absence of spherocytes or an anemia, this seems unlikely to be immune mediated at this time, but continued monitoring is warranted. Often, elevated reticulocyte counts are somewhat ignored in non-anemic patients, but this is typically in a patient that is clinically normal. Additionally, you can see elevated reticulocyte counts with extreme excitement, activity, etc.



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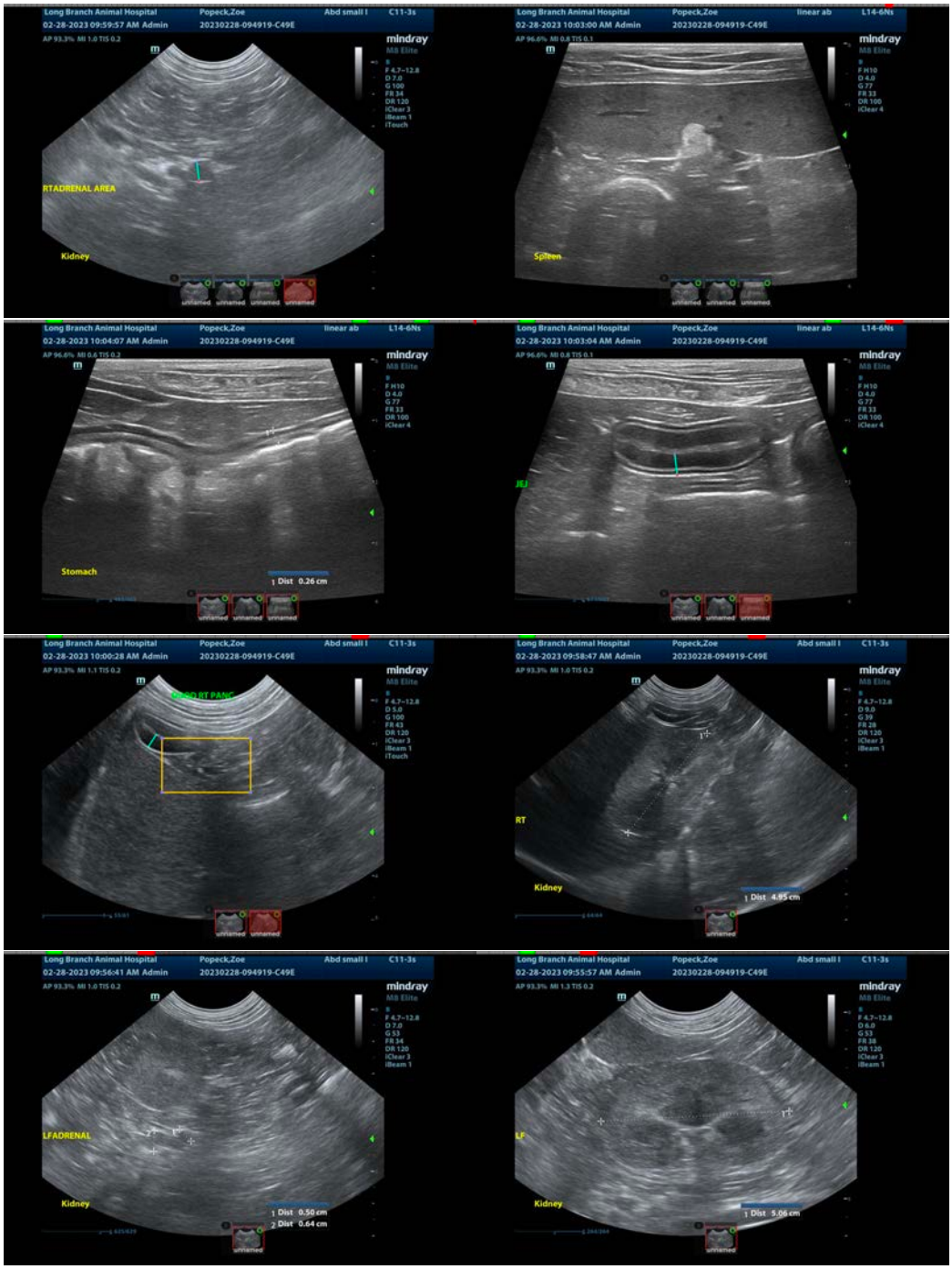
For now, I would address the clinical issues and reevaluate bloodwork once rehydrated, etc. The spleen does appear slightly mottled on today's exam, but this is very mild. If symptoms persist, a fine needle aspirate of the spleen could be considered. If hemolysis is suspected, consider zinc toxicity, onion ingestion, and check stool for melena. Additionally, the liver is somewhat heterogeneous. These types of changes typically are associated with benign type changes (vacuolar hepatopathy, etc.), but this should be monitored. There is no indication for bone marrow aspirate at this time.



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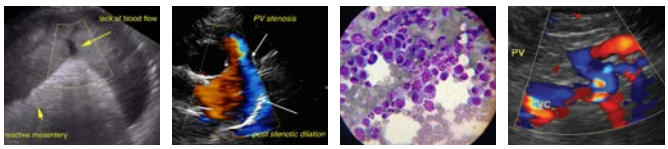

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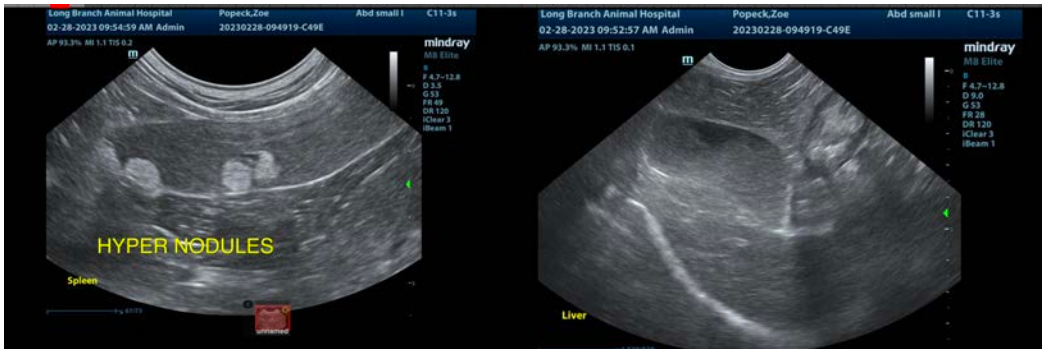

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com