SonoPath
Clinical Sonography & Telecytology
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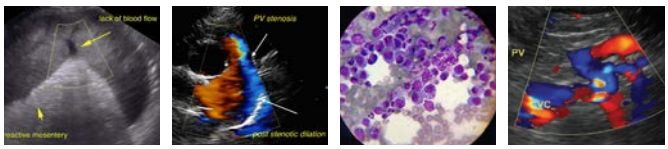

SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Sheba Coleman

SPECIES

Canine

BREED

Spaniel X

SEX

Spayed Female

AGE

12.75 Years

WEIGHT

33 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Emily Kirk

HOSPITAL NAME

Shiloh AH

REFERRING VET

Dr. Audra Alley

INVOICE

45837

DATE

3/9/23

PRESENTING CLINICAL SIGNS

Anorexia, chronic soft stool. Hx of parathyroid sx and chronic hypocalcemia. Goal of the ultrasound is to look for causes of why she is not eating.

Abnormal PE/Chem/CBC/UA Results: Recently hospitalized. Emergency hospital was able to get calcium back up to a more normal range, but patient is still not eating. ALP 1400 (5-160). Other liver enzymes wnl. X-rays unremarkable.

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, or masses. In the dependent portion of the urinary bladder, there is a linear band of focal shadowing hyperechoic material most consistent with numerous small stones or sandy debris.

The left kidney has a normal shape and size (5.27 cm) with pinpoint non-obstructive nephroliths. 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, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.39 cm) with pinpoint non-obstructive nephroliths. 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, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.53 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 region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

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 large in size, and normal in 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 parenchyma is very irregular, and there are numerous variably sized poorly defined hypoechoic nodules throughout the parenchyma, examples of which measure 1.27, 0.59, and 0.98 cm. There is a larger hypoechoic nodule visualized measuring 2.1 cm x 2.85 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 mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

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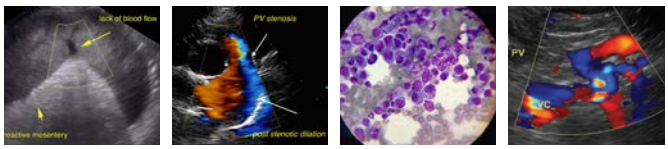

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Gastrointestinal

The stomach 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 0.47 cm. Jejunum wall measures 0.40 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 hypoechoic as 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.

RIMARY FINDINGS

- Shadowing hyperechoic material in the dependent portion of the urinary bladder – Findings are most consistent with small stones or sandy debris. Correlate with abdominal radiographs. Recommend urinalysis and culture.
- Large, severely heterogeneous liver with ill-defined hypoechoic nodules – 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. The appearance of the nodules visualized trends towards a more benign etiology, but underlying neoplasia cannot be ruled out.

SECONDARY FINDINGS

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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An obvious cause for the anorexia and diarrhea reported is not observed. It is possible that is secondary to recent stress of treatment, etc., and treatment for acute gastroenteritis would be an option, including probiotics. If more chronic GI signs are present, then there is the possibility of a primary enteropathy, as these do not always have significant ultrasonographic changes. You could consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to further evaluate the pancreas and small intestine.

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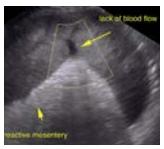
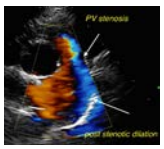
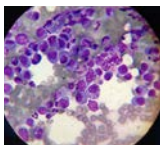
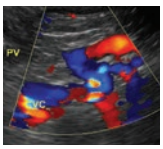

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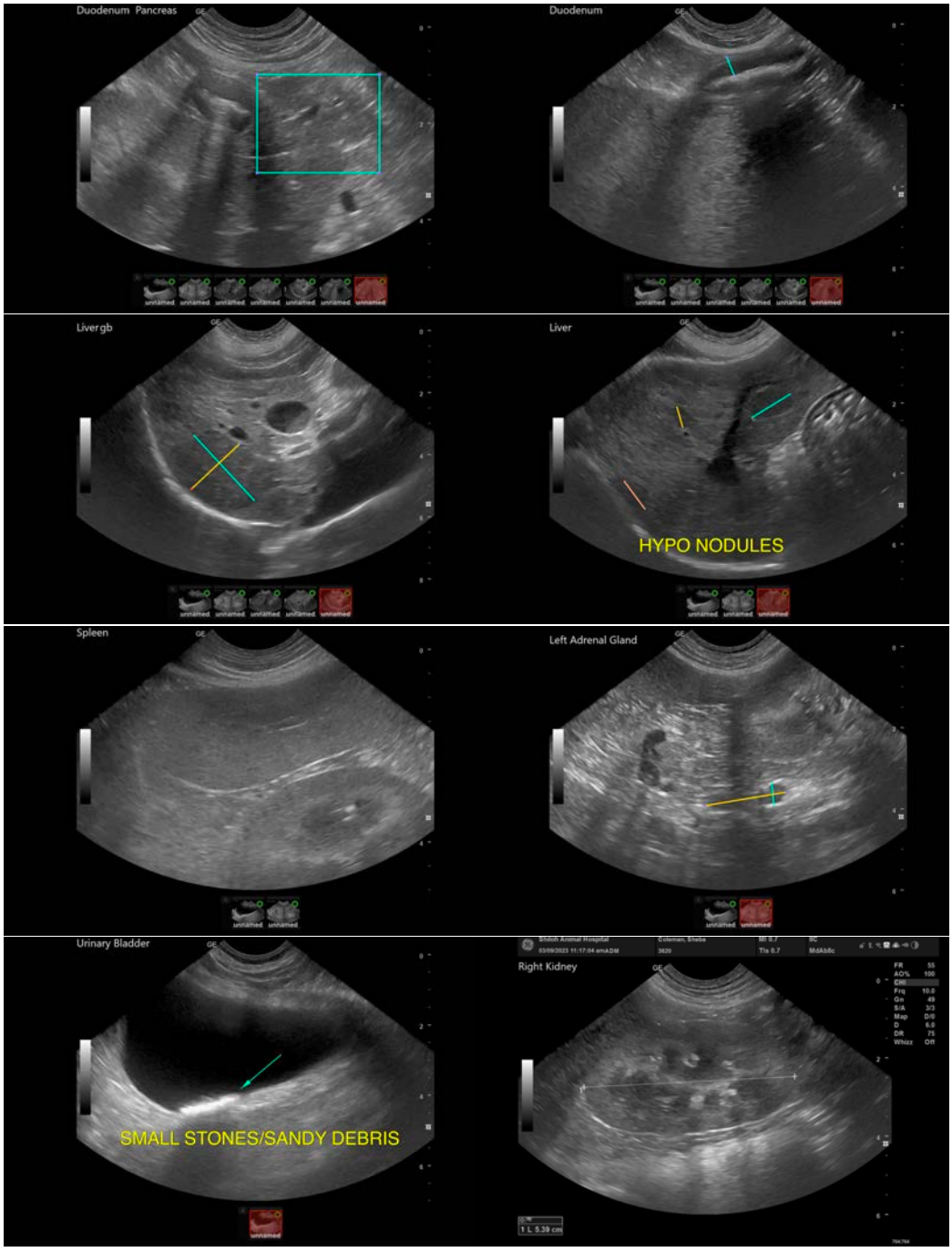
The liver is large and significantly heterogeneous with ill-defined hypoechoc nodules. These are most consistent with benign regenerative nodules, but an underlying neoplastic process cannot be ruled out. Consider pre- and post-prandial bile acids, looking for any evidence of liver dysfunction, and consider a fine needle aspirate of the liver (provided coagulation parameters are normal).

There is a small amount of dependent mineralized debris in the urinary bladder. I suspect this is small enough to pass. Correlate these findings with abdominal radiographs, and urinalysis and culture, and recommend continued monitoring.



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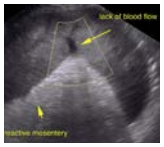
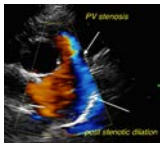
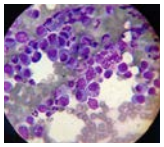
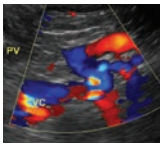

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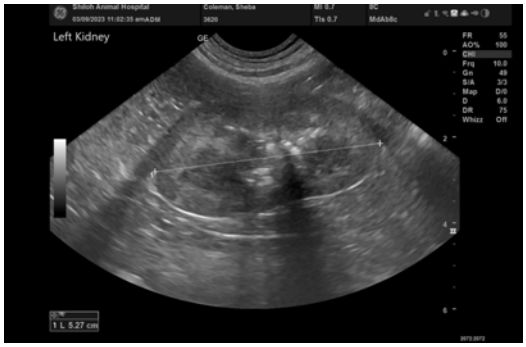

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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