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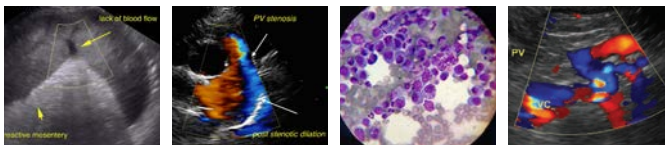

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Kanubi Perez

SPECIES

Canine

BREED

Pit Bull

SEX

Neutered Male

AGE

10 Years

WEIGHT

72 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ferrer

HOSPITAL NAME

Paseos Vet Center

REFERRING VET

Dr. Maria Martes

INVOICE

42680

DATE

11/9/22

PRESENTING CLINICAL SIGNS

Patient was presented for acute history of vomiting and diarrhea. Owner noticed it this morning. Patient was doing well yesterday. Owner noticed feces had a hard material. He is prone to eating rocks. Has a history of cutaneous HSA. He does not have access to toxins.

Abnormal PE/Chem/CBC/UA Results: CBC - leukocytosis 17.57; neutrophilia 15.74; eosinopenia 0.04 chemistry - azotemia (creatinine 2.3 and BUN 34); did not read ALT fecal - negative radiographs - spondylosis at L7-sacrum U/A: USG": 1.021

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 (0.84 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 (7.62 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 (7.73 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 0.70 cm at the cranial pole, 0.53 cm at the caudal pole, and 2.75 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat abnormal in appearance in that there is a hyperechoic nodule in the cranial pole measuring 0.74 cm x 0.58 cm. This does not significantly deform the adrenal margins and there is no evidence of vascular invasion visualized.

The right adrenal gland is normal in size measuring 0.55 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 large. 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 numerus ill-defined, hypoechoic, coalescing nodules visualized within the parenchyma, varying in size from 0.75-1.5 cm. These do not appear to deform the splenic capsule.

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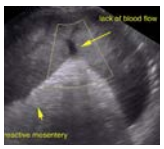
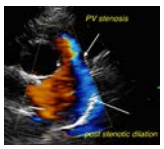
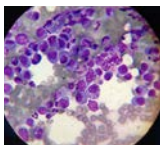
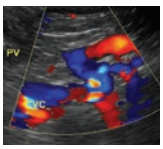

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Liver

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.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of 0.38 cm 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. Jejunum wall measures 0.37 cm. Duodenum wall measures 0.45 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

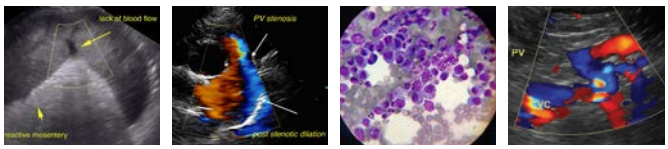
The pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

There is a small to moderate amount of free abdominal fluid. The medial iliac lymph nodes are prominent and isoechoic, measuring 1.3 cm in width on the right and 0.85 cm in width on the left. The omentum is hyperechoic in the cranial abdomen.

PRIMARY FINDINGS

- Hyperechoic nodule visualized in the cranial pole of the left adrenal gland – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Large, mottled, nodular spleen – 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.
- 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.
- Small to moderate amount of free abdominal fluid and cranial abdominal mesenteric inflammation



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- Mildly prominent medial iliac lymph nodes – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

SECONDARY FINDINGS

- 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The spleen appears large with hypoechoic, ill-defined, coalescing nodules. Recommend a fine needle aspirate (a fine needle aspirate was imaged and being performed during the study).

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

There is a hyperechoic nodule visualized in the cranial pole of the left adrenal gland. This is likely an incidental finding and could represent a benign or neoplastic lesion and could be active or not secreting hormone. These are some recommendations to consider:

- 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 3-4 months).
- Many of these nodules can be benign and incidental in nature, unfortunately that is difficult to determine with a single ultrasound.

For now, I would consider continued monitoring with ultrasound and a blood pressure evaluation, as adrenal function testing is unlikely to be helpful when this patient is not feeling well.

The pancreas is mildly mottled and slightly prominent. This is most likely consistent with previous episodes of pancreatic inflammation.

The liver appears somewhat heterogeneous – is it possible the ALT didn't read because it is too high? Recommend rerunning the ALT. If this is significantly elevated, recommend testing for Leptospirosis, a liver function test, and a fine needle aspirate, provided coagulation parameters are normal.

An obvious cause for the acute vomiting and diarrhea is not readily observed. This could be related to the spleen or could be unrelated.

Consider such differentials as food allergy/dietary intolerance, GI parasitism, pancreatitis, dysbiosis, recurrent dietary indiscretion, IBD and less likely neoplasia, etc….

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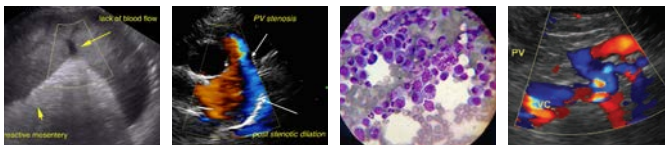

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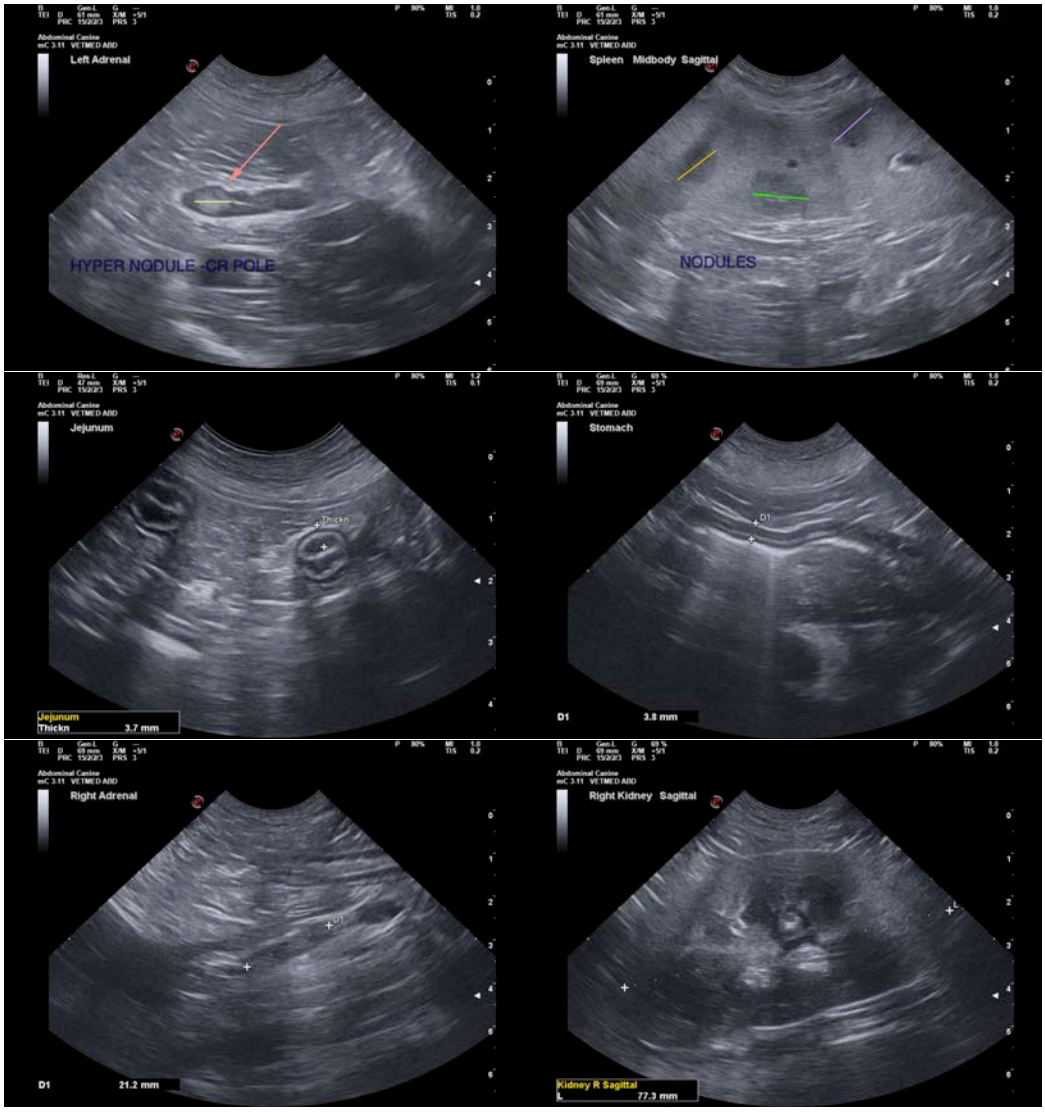
- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Recommend chronic probiotic therapy.
- Recommend symptomatic treatment for acute gastroenteritis/pancreatitis.
- If symptoms persist, recommend serial radiographs, as I cannot definitively rule out the possibility of ingested foreign material, and possibly reimaging or obtaining GI biopsies.



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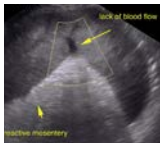
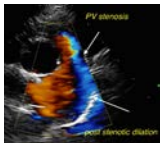
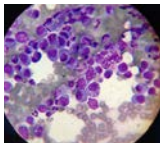
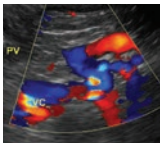

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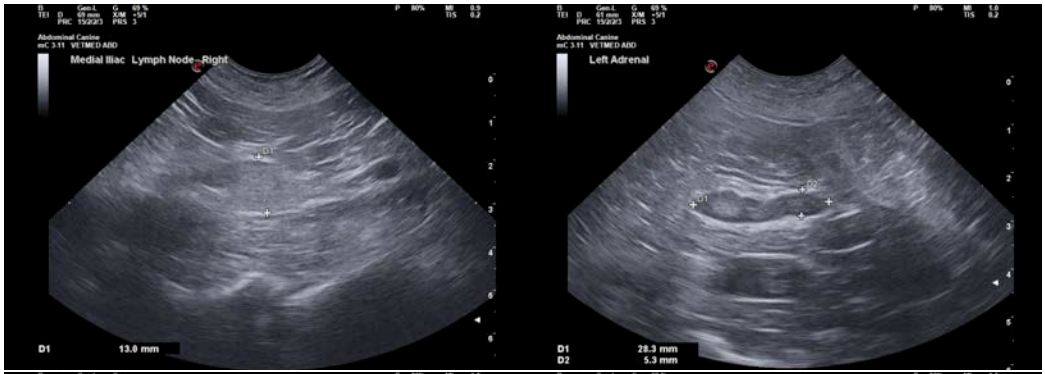

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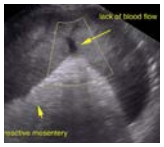
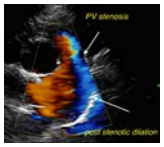
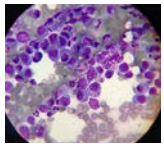
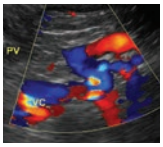

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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