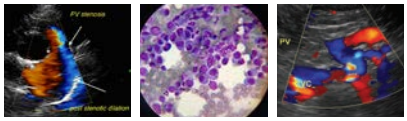
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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DATE

8/10/23

PATIENT

Louie Kohli

SPECIES

Canine

BREED

King Charles Spaniel

SEX

Neutered Male

AGE

10/18/14

WEIGHT

20.4 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Bay Country VH

REFERRING VET

Dr. Smith

INVOICE

44568

PRESENTING CLINICAL SIGNS

Diarrhea intermittent since March. Vomiting starting last weekend, decreased appetite.

Current Medications: Cerenia 24mg SID, Metronidazole 125mg BID.
Lab Results: See attached,
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

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 visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (5.08 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 (4.46 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 0.59 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 0.70 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 an ill-defined hypoechoic nodule visualized within the splenic parenchyma measuring 1.22 cm x 0.86 cm.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. 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/large amount of non-organized echogenic debris. The proximal bile duct appears prominent with a large amount of intraluminal debris measuring 0.72 cm. It is not visualized more caudally in the abdomen.

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 uniform diameter with mild fluid distension and lack of progressive motility in some areas. Wall thickness is increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Duodenum wall measures 0.55 cm. Jejunum wall measures 0.29 cm. There is mucosal fogging and striations visualized. Visualized peristalsis appears appropriate. There are many focal areas of the GI tract that appear thickened and inflamed. There is a loop of severely corrugated thickened bowel in the right cranial abdomen (possibly duodenum) that measures 0.58 cm in thickness, surrounded by hyperechoic mesentery. A focal area of bowel in this region has reduced detail of wall layering.

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 scant amount of free fluid noted. No lymphadenopathy. The omentum is severely hyperechoic around some focal areas of bowel.

Other

The right auricle and pericardium were visualized and were unremarkable. No obvious pathology is visualized. If cardiac function evaluation is desired a full echocardiogram is warranted.

Ringdown artifact is visualized at the level of the diaphragm.

ULTRASONOGRAPHIC FINDINGS

- Hypoechoic nodule visualized within the splenic parenchyma – 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.

- Prominent, mottled right limb of the pancreas with surrounding hyperechoic mesentery – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- Moderate to large gallbladder debris with proximal bile duct dilation and a large amount of intraluminal debris – A large amount of debris is evident in the gall bladder with no evidence of a mucocele or associated inflammation at this time. This could represent an early mucocele or

cholestasis, with minimal evidence of associated inflammation at this time. Continued monitoring of labwork and ultrasound are warranted for progression of this lesion. Ursodiol therapy could be considered.

- Diffuse small intestinal thickening with focal areas exhibiting severe corrugation, thickening, and mucosal irregularities (striations, fogging, etc.). Some areas of small bowel show lack of progressive motility and diminished detail of wall layering. Findings are concerning for infiltrative disease, severe gastroenteritis, IBD, etc.

- Ringdown artifact visualized at the level of the diaphragm – This can be observed with pulmonary parenchymal disease. Recommend 3-view thoracic radiographs.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The general impression is that of severely inflamed loops of small bowel that appear corrugated, surrounded by hyperechoic mesentery, and are showing lack of progressive motility. In some regions there is mucosal fogging and striations evident. In one area in particular there is questionable reduced detail of wall layering. These findings are concerning for severe inflammation/gastroenteritis, but the chronicity of this process is also concerning for a primary enteropathy.

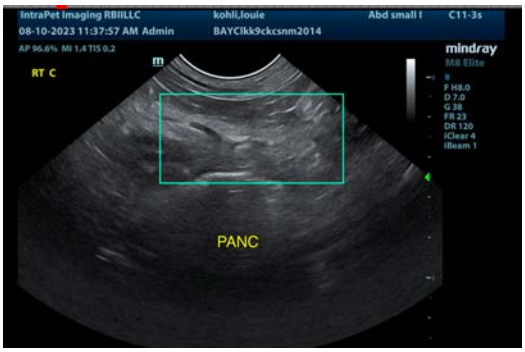
The pancreas is somewhat prominent but not overtly inflamed. Regardless, I would recommend empirical treatment for pancreatitis and acute gastroenteritis. Ideally, surgical biopsies would be considered to better evaluate the situation and to obtain samples for histopathology. Additionally, consider:

- 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.

The gallbladder has a moderate amount of debris and the proximal bile duct appears distended with a large amount of debris. There is the possibility that there is a partial obstructive effect due to the intestinal pathology at the level of the duodenal papilla, but this is not clearly visualized. If liver enzyme elevations develop, Ursodiol therapy should be considered and continued monitoring of the gallbladder.

There is a small, ill-defined hypoechoic nodule associated with the spleen. This does not deviate the splenic capsule. Nonetheless, this could represent a benign or neoplastic lesion. Consider a fine needle aspirate.


RT ADR
Lt Kidney
Lt adr
CORRUGATED/THICK SI
Liver
GB
THICK CORRUGATED SI/MUCOSAL STRIATIONS
REDUCED DETAIL WALL LAYERING-SI



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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