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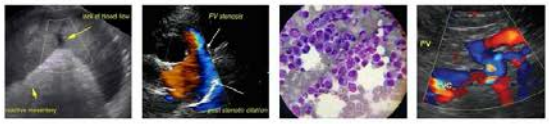

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Digby Patton

SPECIES

Canine

BREED

Terrier X

SEX

Neutered Male

AGE

9 Years 7 Months

WEIGHT

20.6 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

HOSPITAL NAME

MountainView AH

REFERRING VET

Dr. Bridget Landon

INVOICE

26005

DATE

9/30/21

PRESENTING CLINICAL SIGNS

Chief Concern / Provisional Diagnosis: hepatomegaly and splenomegaly on abdominal radiographs - concern for Cushing's, rule out neoplastic concerns Relevant Medical History and Physical Exam findings: Digby presented on 9/17 for vomiting/diarrhea for 2-3 days. PE showed mild dehydration ~5%, no abdominal discomfort, cranial organomegaly appreciated, and severe dental tartar/gingivitis. CBC/Chem 17/spec CPL/fecal were performed with abdominal radiographs. Bloodwork and radiographs were consistent with possible endocrinopathy and secondary gastroenteritis (Cushing's suspected). Given hepatomegaly and splenomegaly seen on abdominal radiographs, recommend abdominal ultrasound to rule out infiltrative disease or possible neoplasia. Owner was on board with this. Patient responded well to medical management with Cerenia, Metronidazole and Famotidine for about 1 week. He did develop some soft stools again and was maintained on a bland diet with 5 more days of famotidine. Recent Diagnostics: Relevant Labratory Results / Abnormalities: CBC: WBC 3,990 (L), NEU 2,760 (L), LYM 740 (L) Chem: ALKP 258 (H), BUN 9 (N), Creat 0.9 (N), ALT 84 (N), AMYL 393 (L) spec CPL: negative Fecal: negative Current medications (include full name, dosage and frequency): Pepcid 5mg BID Relevant Radiograph Findings(email radiographs if available): hepatomegaly and splenomegaly

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 (0.72 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 (4.7 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 (5.52 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 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 right adrenal gland is normal in size measuring 0.41 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 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.

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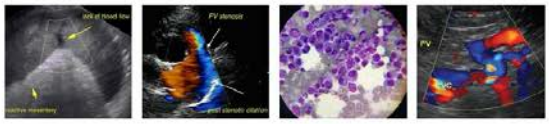

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No focal parenchymal abnormalities are visualized. The spleen is somewhat folded over on itself, which may create an abnormal appearance on radiographs.

Liver

The liver is large in size, and normal in 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 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 amount of non-organized echogenic debris. 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

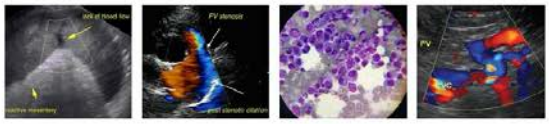
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

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.

ULTRASONOGRAPHIC FINDINGS

- Large, 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 gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Mildly mottled 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. The splenic changes are mild and it is somewhat folded over on itself, creating an abnormal appearance,



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which could be normal for this individual.

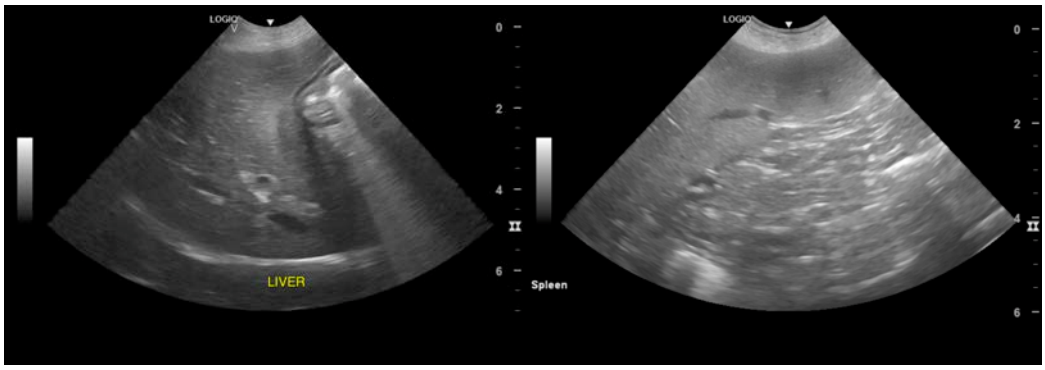
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

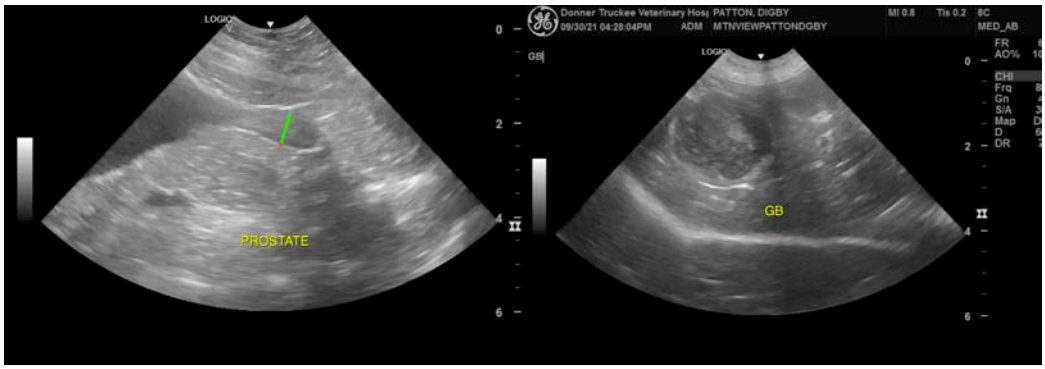
The changes observed in the liver and spleen are somewhat non-specific, and the splenic changes are fairly mild. The ALP elevation may be hard to interpret. With the recent illness, it could be a reactive hepatopathy. Consider conservative supportive care to start, potentially Denamarin and Ursodiol, and consider rechecking the liver values in a few weeks. If they are persistently elevated, I would consider a liver function test and possibly a fine needle aspirate. Additionally, if signs of Cushing's are present, you could consider adrenal function testing, although the adrenals are not overtly enlarged, and the ALP elevation is relatively mild.

The spleen is mildly mottled and folded over on itself, creating a likely abnoral silhouette on radiographs. Depending on the level of concern, you could consider a fine needle aspirate to make sure there is no evidence of infiltrative disease.

There is a large amount of debris in the gallbladder. The wall does not appear overtly inflamed, but you could consider starting Ursodiol as a preventative measure.

Recommend rechecking the CBC to make sure the white blood cells lines normalize. There are no focal mass lesions observed.





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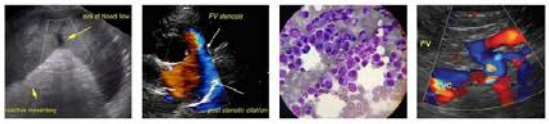

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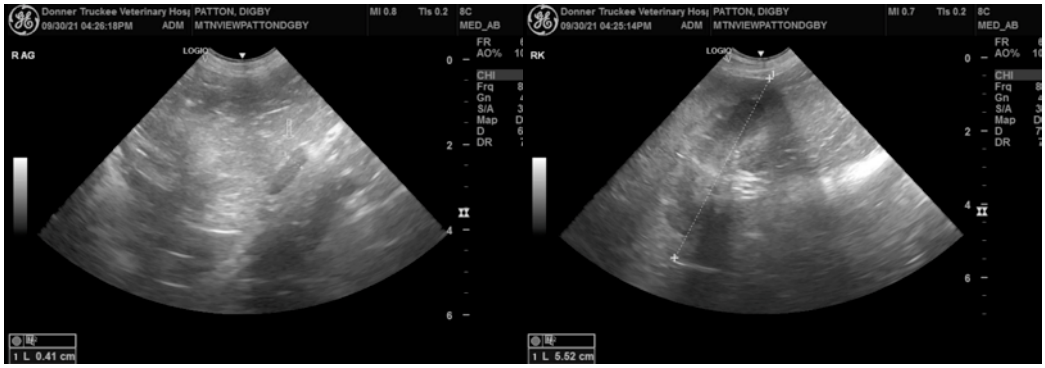

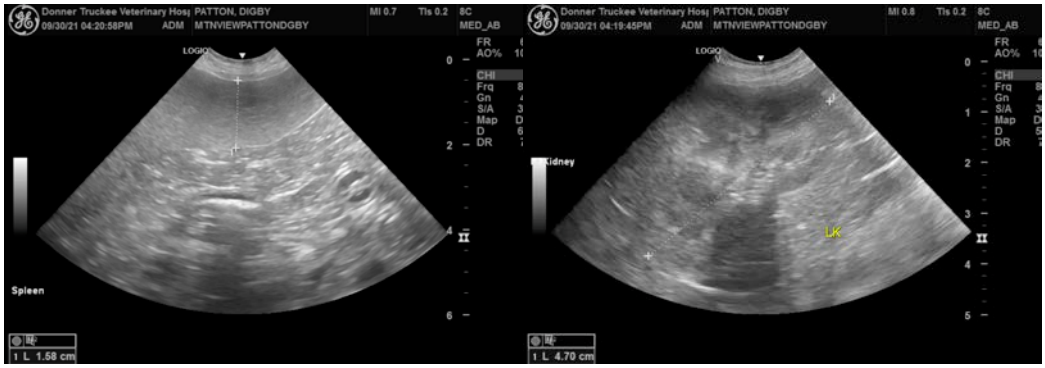

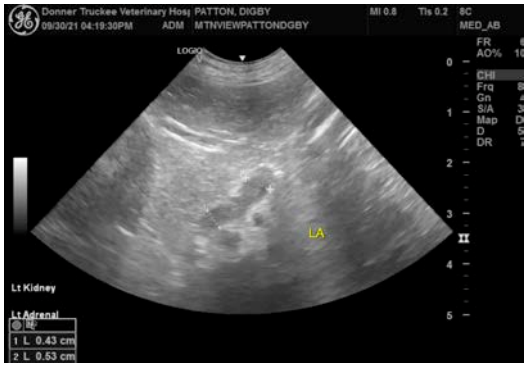

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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