SonoPath
Clinical Sonography & Telecytology
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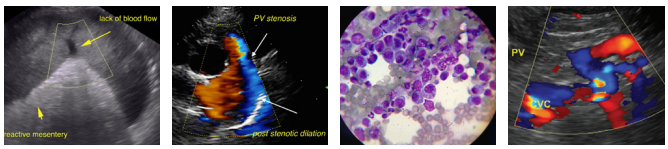

SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Luca Ocampo

SPECIES

Canine

BREED

West Highland Terrier

SEX

Neutered Male

AGE

11 Years

WEIGHT

27.5 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Summit Dog & Cat Hospital

REFERRING VET

Dr. Traci Volger

INVOICE

36794

DATE

4/6/22

PRESENTING CLINICAL SIGNS

Liver values elevated Current meds: Vet SAMe 225mg
Abnormal PE/Chem/CBC/UA Results: ALKP 215, ALT 123, Chloride 101, TBil 0.4, Trig 720, PSL LIPA 150, Platelets 422

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 (0.48 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 (5.59 cm) Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal. There is a scant rim of hypoechoic perinephric effusion visualized.

The right kidney has a normal shape and size (5.8 cm) Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal. There is a scant rim of hypoechoic perinephric effusion visualized.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.72 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 .68cm 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. No focal parenchymal abnormalities are visualized.

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.

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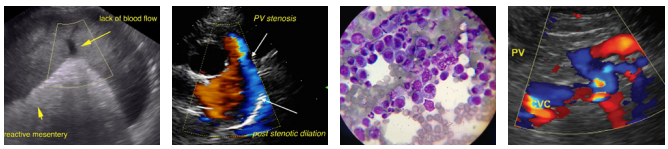

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Gastrointestinal

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 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 measured 0.27 cm. Jejunum wall measures 0.25cm. Visualized peristalsis appears appropriate. The proximal duodenum at the level of the gastroduodenal junction appears somewhat thickened and hyperechoic, measuring 0.54 cm.

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

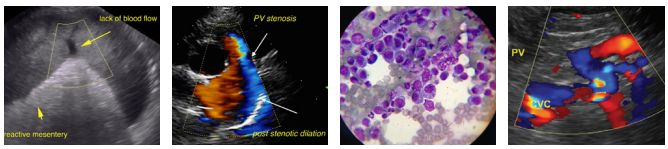
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Decreased corticomedullary distinction in both kidneys with a scant amount of perinephric fluid – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. An obvious cause for the fluid is not clear based on the history. Possible considerations are acute renal failure due to Leptospirosis, pyelonephritis, infarcts, underlying neoplasia (seems less likely), etc.
- 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.
- Mild gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Subjectively thickened hyperechoic region of proximal duodenum at the gastroduodenal junction –This is likely an indcidental finding but should be monitored

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver is large and heterogeneous. This is a non-specific finding. No focal lesions were identified and liver enzyme elevations were mild . In this situation, I would consider:



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- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history (particularly with renal changes visualized.
- If not already done, consider pre and post prandial bile acids to evaluate liver function

If liver enzymes continue to rise despite denamarin etc.. you could consider:

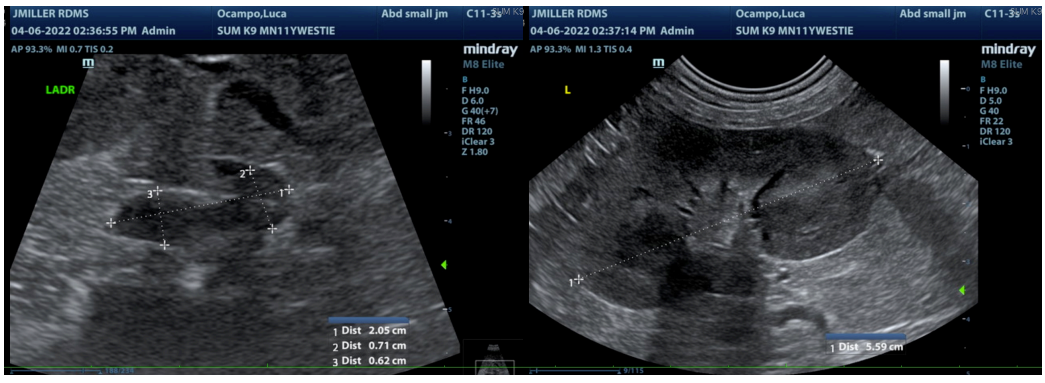
If symptoms consistent with cushings are present, consider adrenal function testing (ACTH stim)

- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)
- If no response to medical care (denamarin, antibiotics,+/- ursodiol etc...) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

Surprisingly, there is a scant amount of free fluid surrounding both kidneys. This is most commonly seen with acute renal failure, occasionally pyelonephritis, neoplasia, etc. These kidneys appear relatively normal other than having poor corticomedullary distinction. If bloodwork is not current, recommend rechecking renal values. Recommend urinalysis,culture and blood pressure evaluation.

Considering the concurrent liver enzyme elevation, recommend Leptospirosis testing. Additionally, I would consider a urine protein/creatinine ratio and continued monitoring of this area with ultrasound if a cause cannot be identified.

The proximal portion of the duodenum has a focal hyperechoic region that appears somewhat thickened. This is not typical for a significant GI lesion (typically a hypoechoic wall with loss of layering). This lesion can be seen in older pets, and is typically asymptomatic, but I recommend continued monitoring of this area, particularly if vomiting becomes an issue.



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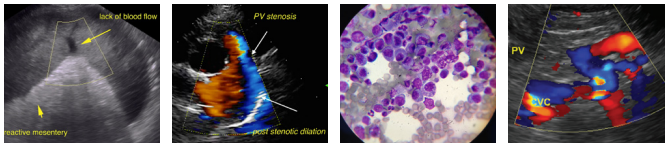

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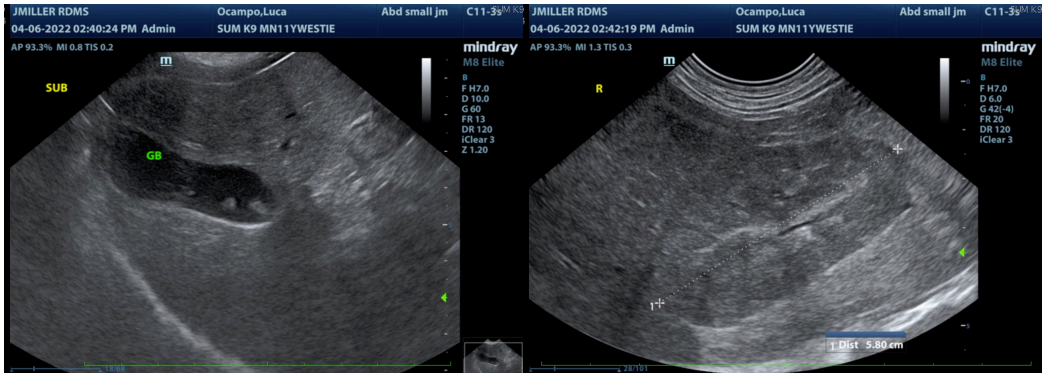

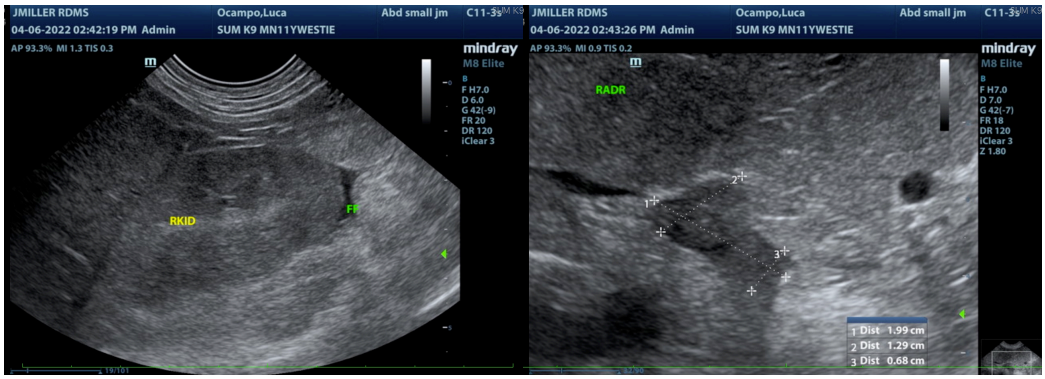

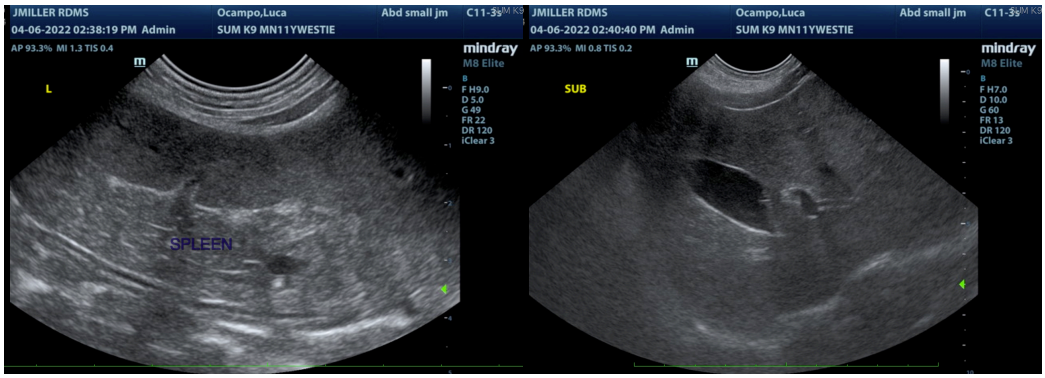

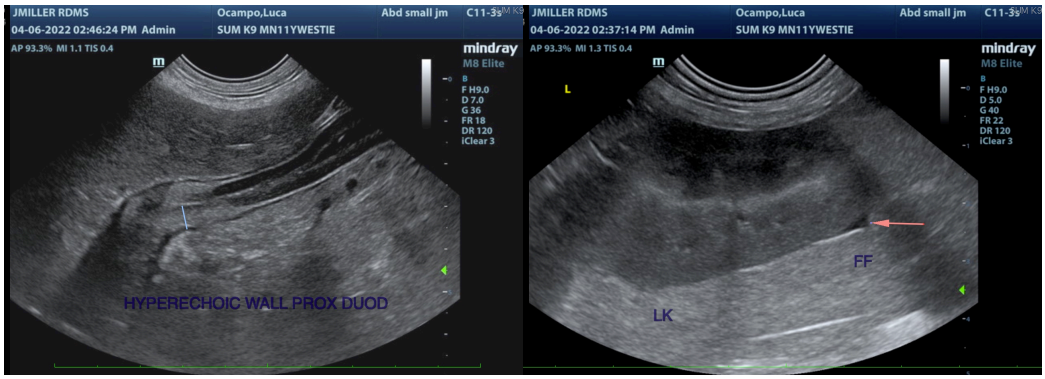

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology

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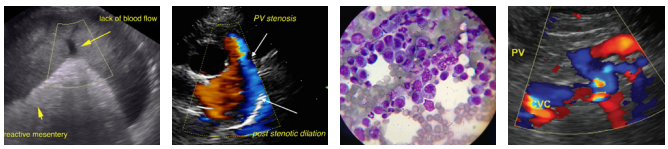

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that was not visible in the image/video clips provided.

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.

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kathleen.sennello@sonopath.com