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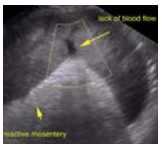
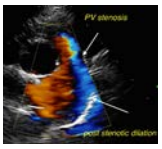
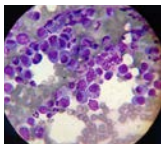
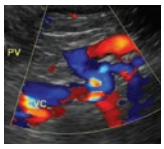

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1-800-838-4268 info@sonopath.com

PATIENT

Daytona England

SPECIES

Canine

BREED

Chihuahua X

SEX

Neutered Male

AGE

10 Years

WEIGHT

6.8 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Alastair Westcott

HOSPITAL NAME

Dr. Alastair Westcott

REFERRING VET

Dr. Alastair Westcott

INVOICE

25462

DATE

9/16/21

PRESENTING CLINICAL SIGNS

Acute onset of lethargy, anorexia, shivering and caution when walking. Has historical cardiac disease for which he is receiving pimobendan twice daily. He did receive his pimobendan this morning. There has been no vomiting or diarrhea and he is drinking water. severe dental disease and associated submandibular lymph node enlargement, grade 5/6 pan systolic murmur PMI left apex with radiation to the right,
Abnormal PE/Chem/CBC/UA Results: Pyrexic, lethargic and anorexic Significant neutropenia, monocytosis, hyperglobulinemia, mod-high ALP Urinalysis: Borderline USG High strip proteinuria

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 (0.58 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 (4.9 cm). Overall echogenicity is slightly hyperechoic with poor 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 (5.17 cm). Overall echogenicity is slightly hyperechoic with poor 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 0.62 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.

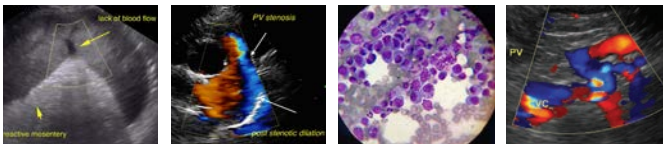
The right adrenal gland is normal/borderline enlarged in size measuring 0.78 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size. 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. No focal parenchymal abnormalities are visualized.

Liver

The liver is large 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. There are numerous ill-defined, hypoechoic nodules measuring between 1.0 and 0.66 cm. Additionally, there is a 0.76 cm hyperechoic nodule visualized.



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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. Duodenum wall measured 0.45 cm. Jejunum wall measured 0.28 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 large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with mild/moderate pancreatitis.

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

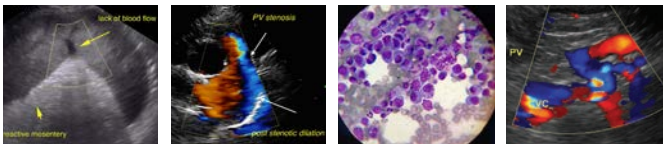
- Large, prominent, hypoechoic pancreas – The pancreatic changes are most consistent with mild/moderate pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.

- Large, heterogeneous liver with occasional ill-defined hypo- and hyperechoic nodule – 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.

SECONDARY FINDINGS

- Borderline bilateral adrenomegaly – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended. For this small of a dog, this could be abnormal if signs are consistent with Cushing's.

- Bilaterally mildly reduced corticomedullary distinction in the kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative



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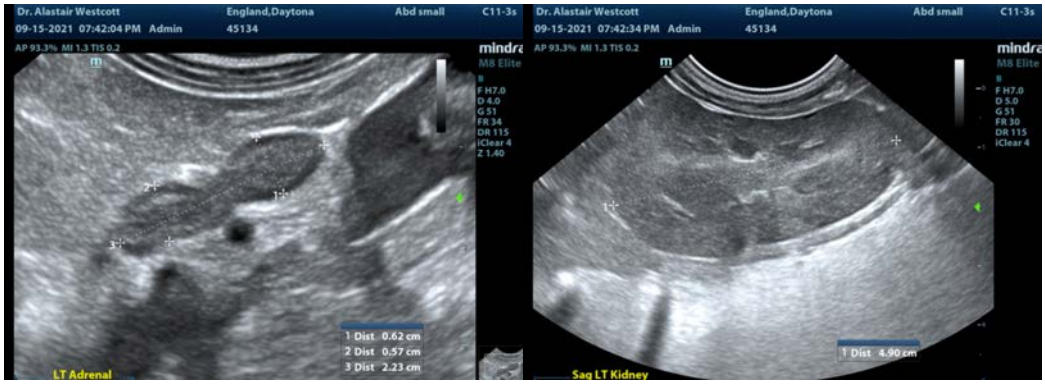
disease or interstitial nephrosis.

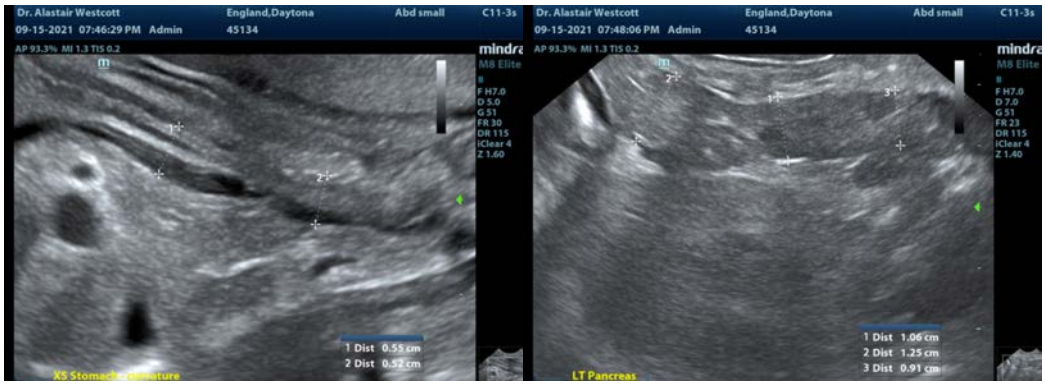
- Moderate gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

- 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Putting together the ultrasonographic findings with the clinical description, the most likely diagnosis is pancreatitis, although no GI signs are reported. Consider a quantitative PLI with B12 and folate to further evaluate the pancreas and small intestine. Additionally, the liver is large and heterogeneous, and the adrenals are borderline enlarged. This could be consistent with a primary hepatopathy or early Cushing's. Consider a liver function test if values are elevated and a fine needle aspirate of the liver (already done). The remaining changes are somewhat non-specific and could be normal for this individual. Consider fine needle aspirate of the spleen (already done), testing for vector borne disease due to the fever, and urinalysis and culture with a blood pressure evaluation. Additionally consider neck/back pain as a differential for the fever and abnormal behavior. Recommend 3-view thoracic radiographs.





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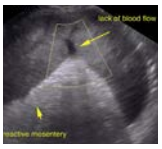
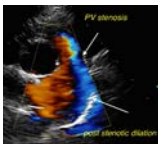
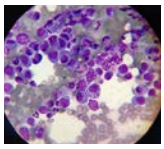
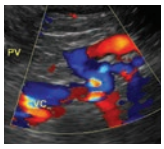

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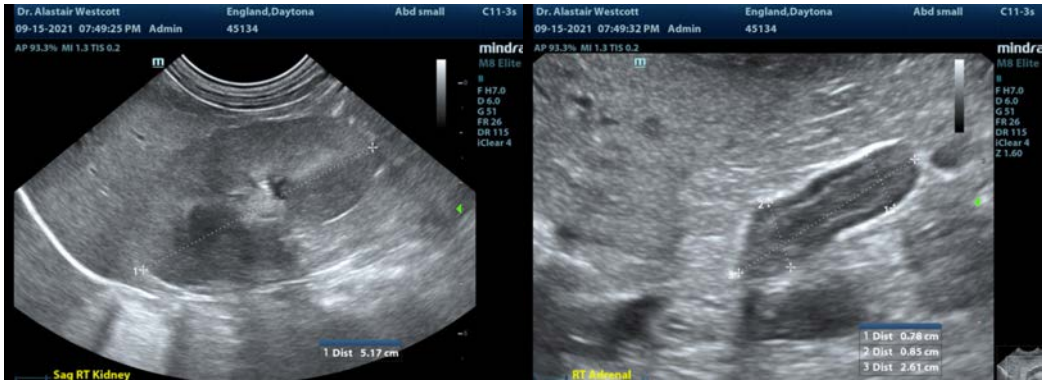

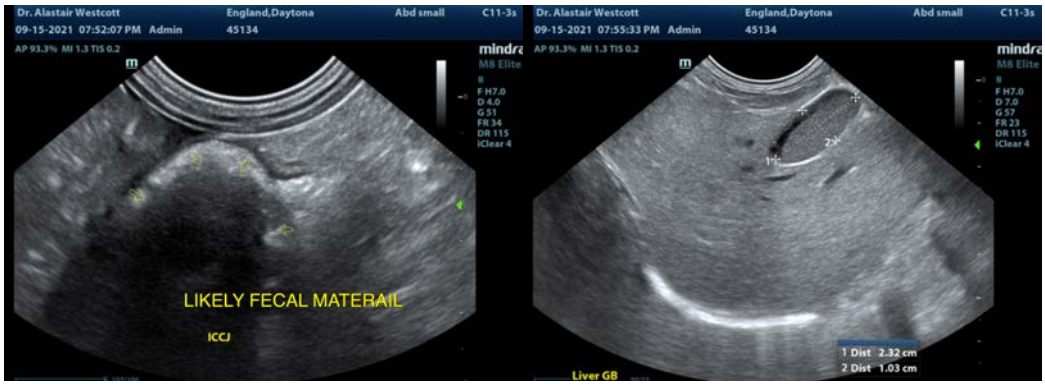

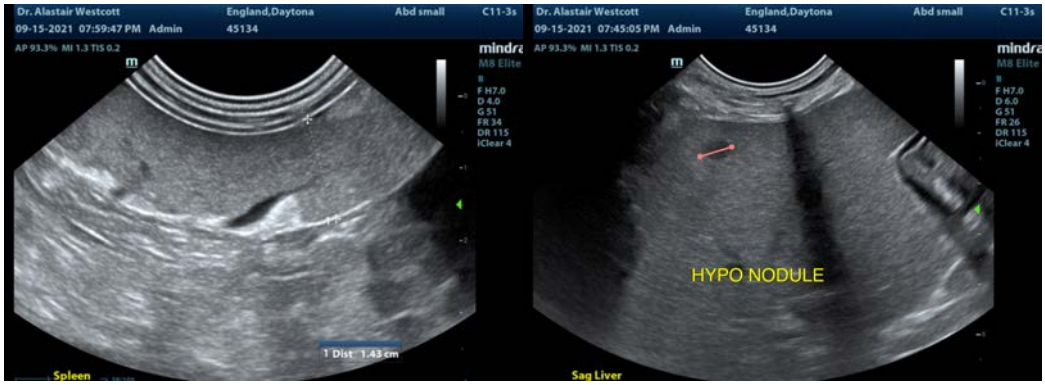

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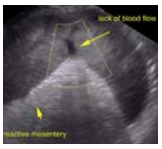
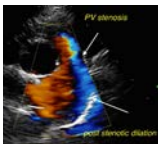
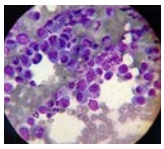
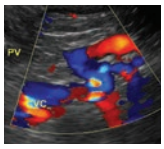

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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