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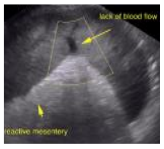
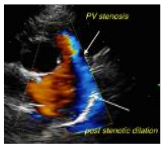
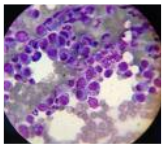
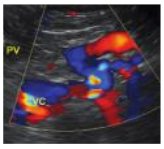

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1-800-838-4268 info@sonopath.com

PATIENT

Vector Norvell

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Neutered Male

AGE

11 years

WEIGHT

5.2 kg

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Dr Schwanebeck

HOSPITAL NAME

Animal EH Deland

REFERRING VET

Dr Schwanebeck

INVOICE

14153

DATE

8.18.23

PRESENTING CLINICAL SIGNS

History: Vector is an 11yo MN Yorkie who was presented for vomiting blood.
This AM patient not interested in food and unable to keep anything down (vomiting after drinking). patient has vomited 6x with blood in it. Patient also lethargic.

Abnormal lab-work values/Chem: Increased ALT (1192), ALP (420), GGT (27), t.bili (2.0), hyperproteinemia (7.6). EPOC: NSF. CBC: NSP. cPLI: Abnormal

Radiograph Findings:
Radiographic findings, thorax and abdomen: Three images of the thorax and abdomen dated August 17, 2023 are available for interpretation. The cardiac silhouette is normal in width on the lateral views. There is no dorsal deviation of the trachea. No specific cardiac chamber enlargement is identified on the VD view. The pulmonary vessels are normal in appearance. No pulmonary, pleural, or mediastinal lesions are identified. The imaged portion of the trachea is normal in appearance. There is no abnormal esophageal distention. There is moderate distention of the stomach with gas, ingesta, and fluid. The pyloric outflow tract and proximal duodenum are gas-filled on the left laterally recumbent image. There is mild generalized fluid and gas distention of the small intestinal tract. A segmental pattern of intestinal distention is not identified. The colon is mildly distended with intermittent gas and fecal material. No radiopaque intestinal foreign material is identified. The urinary bladder is mildly distended and normal in shape. There is appropriate abdominal visceral detail. The visible portion of the splenic silhouette is normal in shape and has a smooth margin. The hepatic angle has a mildly rounded shape and extends slightly beyond the costal arch. No renal abnormalities are identified.

Conclusion/Radiographic impressions:
1. Unremarkable thorax.
2. Gastric distention with fluid, gas, and ingesta. Consideration is given to loss of gastric motility (such as secondary to gastritis or pancreatitis) or intermittent pyloric outflow obstruction due to intermixed soft tissue opacity gastric luminal foreign material. Recheck abdominal radiographs after an additional 8 to 12 hours of supportive care and medical management while maintaining the patient strictly NPO may be beneficial to evaluate for appropriate progressive gastric emptying, if clinically warranted.
3. The mild generalized fluid and gas distention of the small intestinal tract has an appearance most suggestive of paralytic ileus, such as secondary to nonspecific gastroenteritis, pancreatitis, and / or recent dietary indiscretion. Metabolic disease can also potentially contribute to paralytic ileus. A small intestinal obstructive lesion is given lesser consideration, but cannot be entirely ruled out. If gastrointestinal signs persist despite supportive care and medical management, complete diagnostic abdominal ultrasound may also be beneficial for further evaluation.
4. Minimal to mild hepatomegaly. Preferential consideration is given to non-specific benign diffuse hepatopathy. Hepatic neoplastic diseases given lesser consideration. Correlation with current serum biochemistry values is recommended. Abdominal ultrasonography may be beneficial to further evaluate the hepatic parenchyma, if clinically warranted.

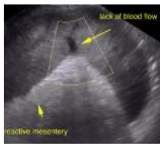
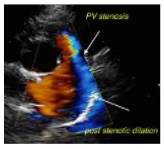
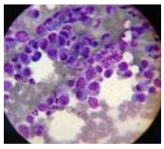
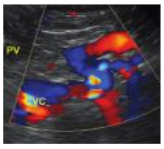
ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

The prostate is normal in size (0.76 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (4.19 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to

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medulla ratio with mild loss of corticomedullary distinction. Two-to-three small cortical cysts are seen. Trace pyelectasia is present There is no evidence of nephroliths, infarcts or hydroureter.

The right kidney is normal in size (4.18 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. One-to-two small cortical cysts are seen. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is upper limits of normal size (0.46 cm at cranial pole) (0.55 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is in normal size (0.56 cm at cranial pole) (0.46 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is prominent to enlarged with smooth curvilinear peripheral contours. The parenchyma is subtly mottled in appearance. No distinct focal lesions are observed. Splenic vasculature appears normal with no evidence of thrombosis.

Liver

The liver is enlarged with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and mildly heterogenous in appearance. A 0.89 cm hyperechoic nodule is observed deep on the left side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is distended. The wall is normal in thickness. A large amount of organized, echogenic, suspended sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen. The mesentery adjacent to the gallbladder appears slightly hyperechoic.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

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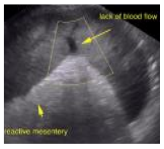
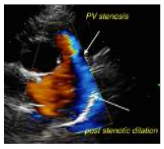
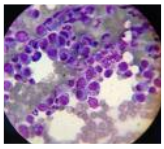
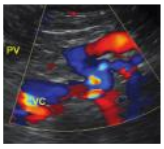

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Primary Findings

- The gallbladder changes are consistent with an emerging mucocele. Subtle adjacent peritonitis is present, which could be associated with concurrent cholecystitis.
- The hepatic parenchymal changes are nonspecific and may be secondary to an Inflammatory hepatopathy (i.e., bacterial cholangiohepatitis, chronic hepatitis), infiltrative neoplasia (i.e., lymphoma), hepatotoxicosis (i.e., copper), Leptospirosis, regenerative nodular hyperplasia, vacuolar hepatopathy, other hepatopathy or some combination thereof.

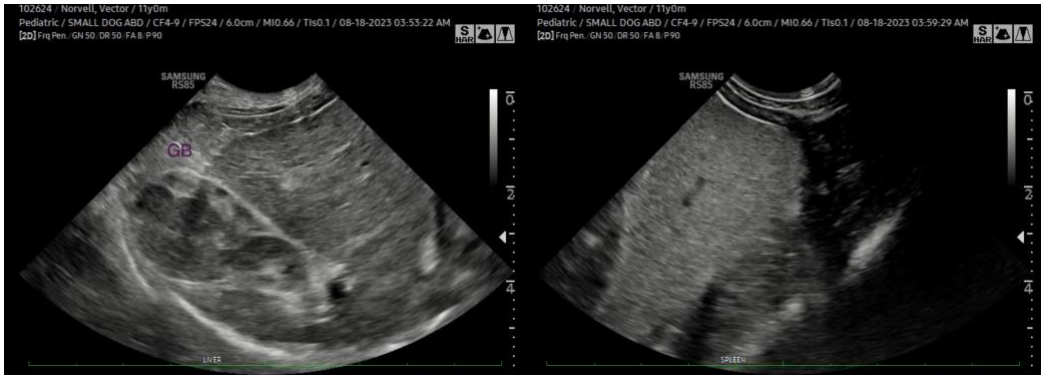
Secondary Findings

- Bilateral chronic age-related renal changes
- The splenic parenchymal changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis, splenitis or antigenic stimulation with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the presence of a hepatopathy and hematemesis clotting times (i.e., PT/PTT) are recommended to assess for coagulopathy. If clotting times are normal, consider fine-needle aspiration of the liver, using a 25-gauge needle. While awaiting test results, consider the following:

  1. Leptospirosis testing (i.e., blood and urine PCR, serology)
  2. Pre-and postprandial serum bile acids
  3. Empirical treatment for bacterial cholangiohepatitis/Leptospirosis (i.e., amoxicillin-clavulanic acid, Denamarin.
  4. Initiation of Ursodiol therapy for the gallbladder changes. The gallbladder should be closely monitored sonographically to assess for progression to a fully-formed mucocele. A cholecystectomy may be warranted if gallbladder changes progress.
  5. Other symptomatic measures (i.e., gastric protectants, such as a proton pump inhibitor, sucralfate, as well as antiemetics) should also be initiated.



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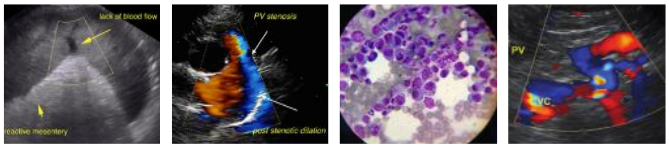

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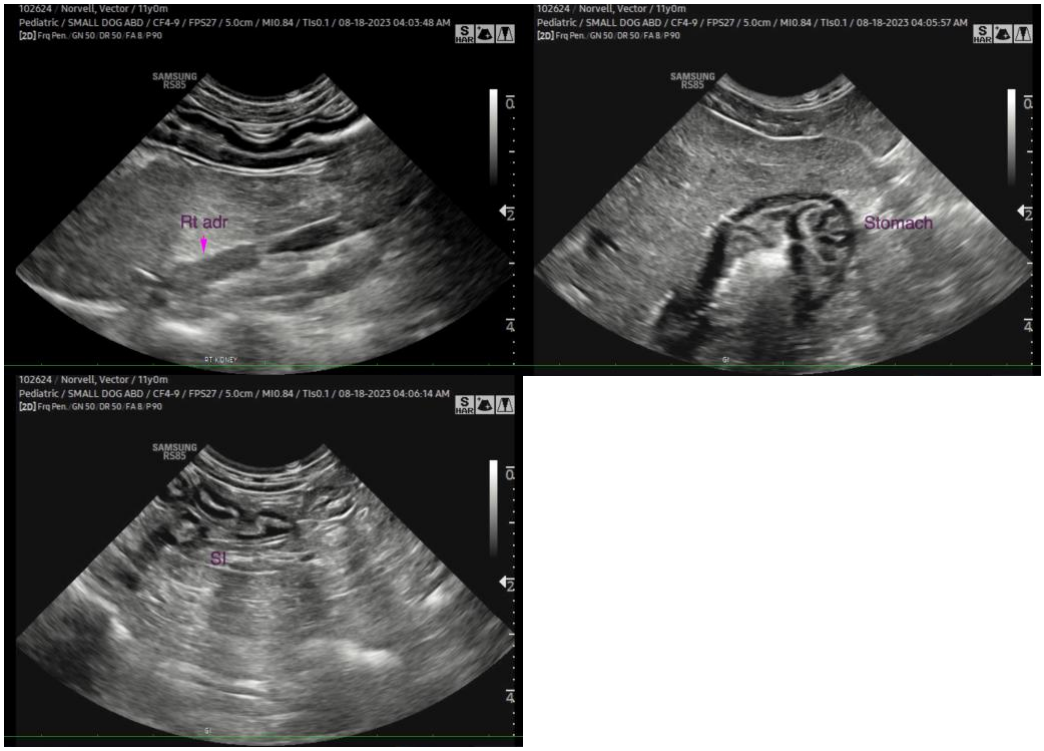

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com