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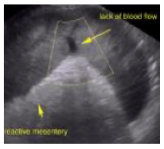
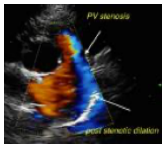
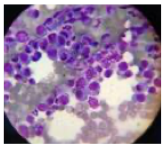
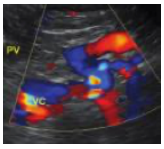

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Doc Stebler

SPECIES

Canine

BREED

German Shepherd

SEX

Neutered Male

AGE

1 year

WEIGHT

34.6 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Kacie Edwards

HOSPITAL NAME

Boren Vet. Med. Teaching Hospital OK State University

REFERRING VET

Dr. Dugat

INVOICE

12980

DATE

5.8.23

PRESENTING CLINICAL SIGNS

Pertinent clinical history: patient had an exploratory laparotomy 4 weeks prior for a linear gastrointestinal foreign body. i removed fiber material from the stomach and then had to remove about 14 inches of ascending duodenum and jejunum from partial perforations and severe trauma associated from the foreign body. There were multiple other areas of concern with severe trauma, but I left them rather than removing the entire duodenum in addition. he did well after surgery, went home eating and drinking very little. has done well for the most part, but has had persistent loose/soft stools that are now straight liquid diarrhea, he has had persistent vomiting and regurgitation and a decreased appetite and always wants to eat grass. he is getting skinnier as well, has lost 5.4kg (12 pounds) since then. I have tried initially gastroprotectant (omeprazole), initially was on Unasyn for concern for sepsis at surgical visit, which was transferred over to Clavamox, then have continued omeprazole, and initially did maropitant as an appetite stimulant. tried to start Fortiflora 6 days ago, but he won't really eat much to be able to receive it. he is dumpy today and not willing to eat - only ate a couple of bites of air fryer chicken from home here at the hospital. most of the GI is intact, definitely not enough bowel removed for short bowel syndrome. concern for continued obstruction at surgical staple site (used a stapler to perform the anastomosis), or thickened bowel from inflammation.

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 (1.18 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 (7.93 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 (7.58 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/borderline "flat" measuring 0.41 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 area of the right adrenal gland is normal. 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.

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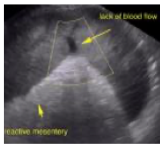
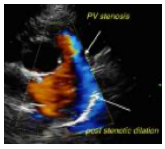
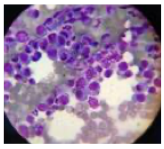
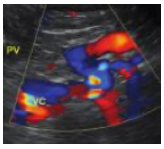

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Liver

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. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is severely dilated with fluid and irregular ingesta. 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 pylorus appears filled with this fluid/irreg material, no overt obstruction is visualized.

The visualized areas of duodenum, jejunum and ileum appear moderately to severely fluid-dilated, with some some occasional echogenic intraluminal material. Wall thickness appears normal with intact wall layering. The duodenum measured as normal (0.32 cm) and the jejunum measured as normal (0.26 cm) Non-progressive motility is observed with hyperechoic mesentery surrounding. No focal lesions are visualized consistent with obstruction or a mass effect. There is a questionable narrowing which, could be consistent with a stricture.

Sections of colon are visualized and appear severely fluid-dilated, with no observed focal or generalized wall thickening or loss of layering.

Pancreas

The pancreas is hypoechoic and prominent, particularly in the left limb. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

There is a small pocket of free fluid which appears somewhat incapsulated in the left side of the abdomen (3.05 cm x 0.80 cm). There are prominent mesenteric lymph nodes visualized (0.71 cm and 0.79 cm). The omentum appears diffusely hyperechoic.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Severe diffuse fluid and ingesta dilation of the stomach, small bowel and colon - Findings would be most consistent with generalized ileus, although an obstructive process cannot be definitively ruled out.
- Prominent hypoechoic left limb of the pancreas - Findings could be consistent with mild pancreatic inflammation.
- Mild mesenteric lymphadenopathy - The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.
- Small fluid pocket visualized in the left abdomen - The significance of this is unclear, but it does appear somewhat encapsulated. Consider sampling for fluid analysis and cytology.

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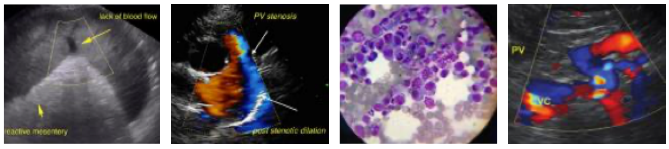

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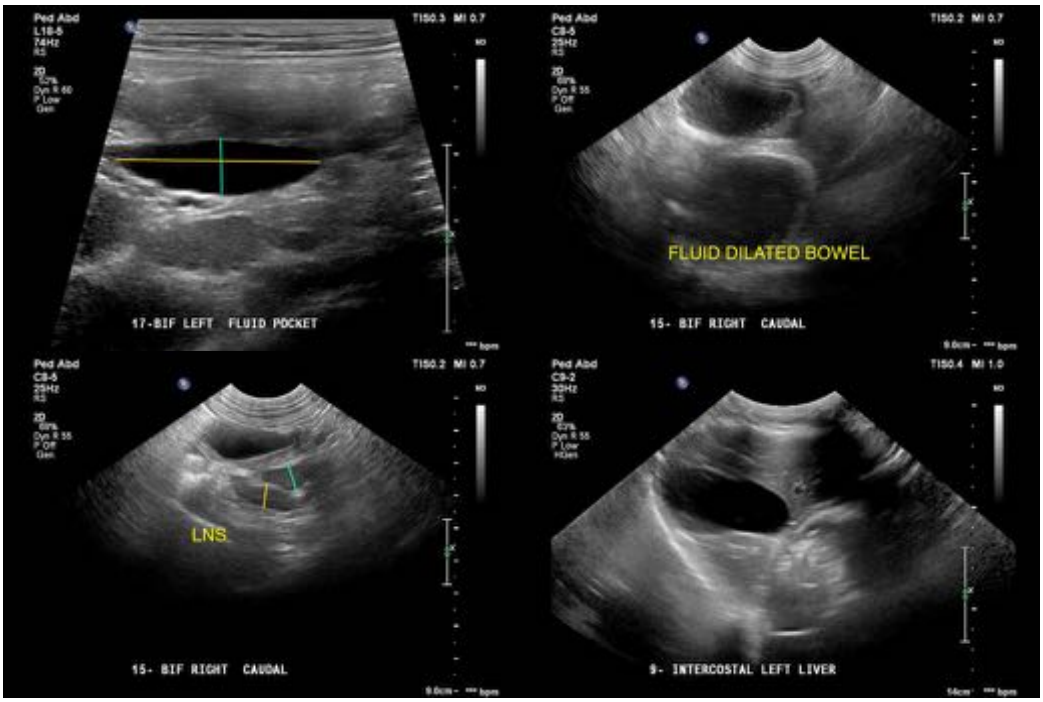
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is severe distention of the gastric lumen with fluid and some shadowing material. This dilation extends into the pylorus. The duodenum small bowel and colon appear moderately to severely fluid-distended, with occasional shadowing intraluminal material. The surgical site was not clearly observed, although there is a small pocket of fluid visualized associated with small bowel. Findings are most consistent with diffuse ileus/enteritis, although the possibility of an obstructive process or multiple partial obstructions are possible. There is a questionable narrowed area which cold be consistent with a stricture (or a phase of peristalsis). It would be less likely to have significant diarrhea in the face of a significant obstruction. Additionally, the pancreas is somewhat prominent, so concurrent mild pancreatitis is possible.

Consider hospitalization for treatment of acute gastroenteritis/pancreatitis as well as possible decompression of the stomach with a nasogastric tube and conservative use of promotility medications with continued imaging (serial radiographs +/- ultrasound) looking for the emptying of the stomach etc. Additionally, you could consider sampling of the fluid pocket, looking for any evidence of an abscess, etc.

The surgical site was not clearly visualized to comment on, but no focal lesions were observed. This does not exclude the possibility of a devitalized section of bowel, perforation etc., but it seems less likely. Additionally consider the possibility of severe dysbiosis secondary to antibiotic use. Consider measuring a baseline cortisol as both adrenal glands appear somewhat "flat," and the possibility of underlying gastrointestinal disease contributing to a difficult recovery.

If symptoms are worsening or there is no response to therapy, consider repeat imaging if an obstructive process is strongly suspected, or if the surgical site is to be reevaluated (then surgical evaluation may be necessary). If this route is pursued, biopsies of the GI tract should be obtained.



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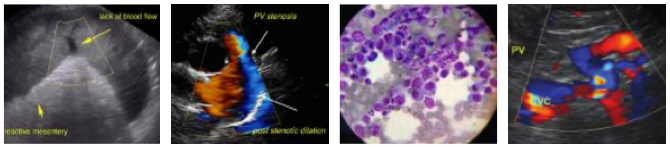

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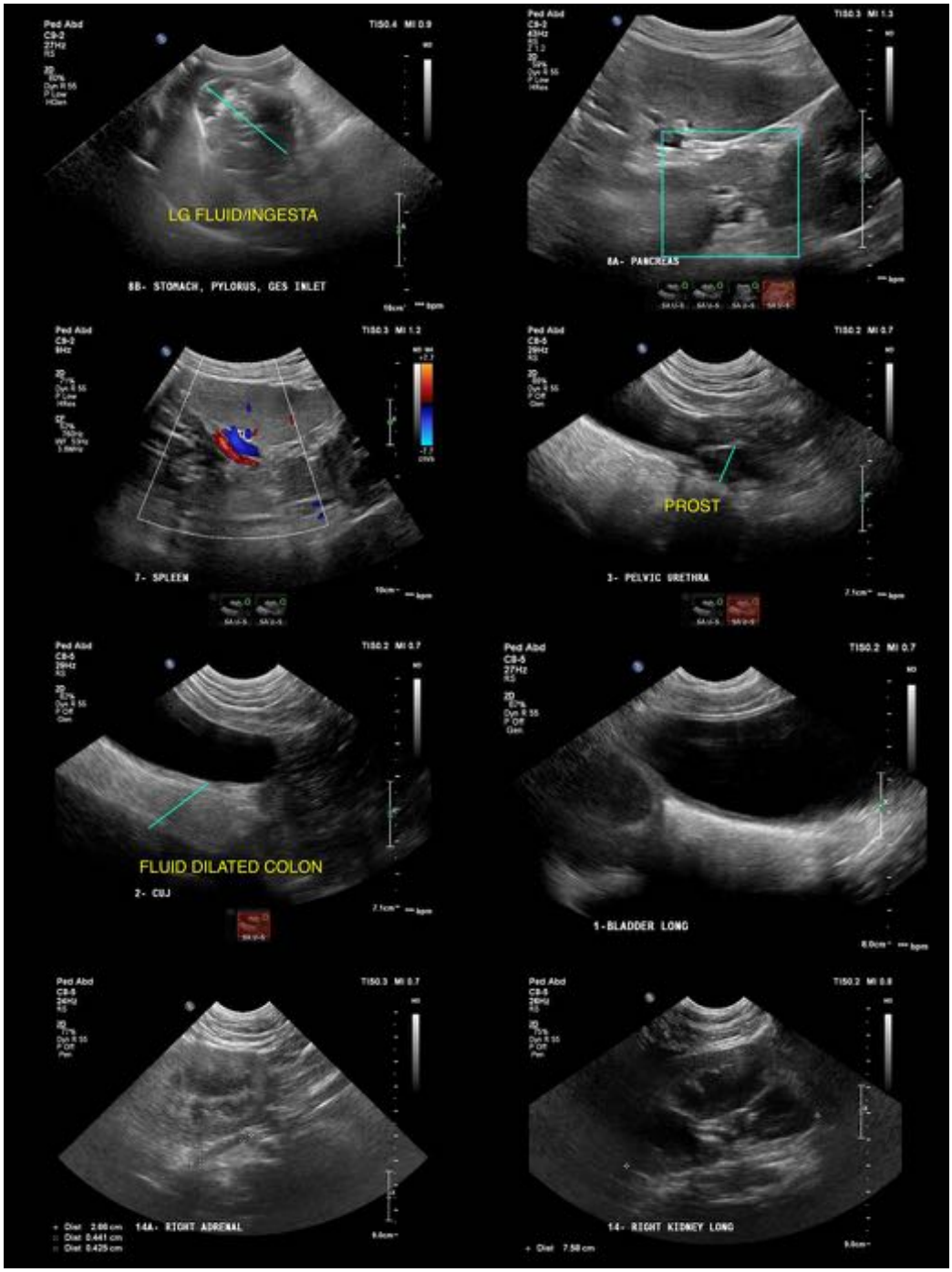

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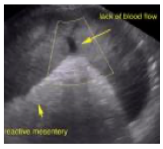
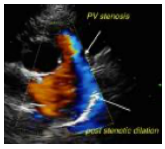
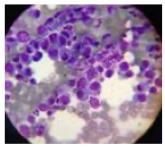
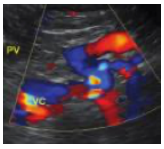

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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