**DATE PRESENTING CLINICAL SIGNS**

9/14/21

Patient presented on 09/07/21 with vomiting, diarrhea, and decreased appetite for 2 days. Patient had previously had similar clinical signs at the beginning of August. At that time, abdominal radiograph had been taken and an opacity was noted in the cranial abdomen suspected to be in the fundus or body of the stomach. A suspected bladder stone was also noted. Radiographs were repeated on 09/07 and the same opacity was noted. Patient treated supportively and ultrasound scheduled.

PATIENT

Charlie Windle

SPECIES

Canine

Current Medications: Meds started on 09/07: Metronidazole liquid (100mg/mL, 0.5 oz) - 0.9 mL PO BID with food for 7 days.

Famotidine 10mg #10 - 1 tab PO BID. Provable - 1 cap over food SID.

Lab Results: 09/07-CBC: Mild leukocytosis characterized by a mild neutrophilia, mild monocytosis. Chem: Mild decrease in total protein and albumin, mild decrease in ALKP, mild hypocholesterolaemia, mild hypochloremia.

BREED

Cavalier King Charles spaniel

Radiographs: 2-view abdominal radiographs (right lateral, VD): Stomach moderately full of ingesta. Radioopaque opacity noted in cranial abdomen around level of fundus/body of the stomach - cannot determine from radiograph if this material/opacity is within the stomach. Small intestines appear bunched diffusely. Moderate amount of gas within the descending colon. Suspect urolith within the urinary bladder.

SEX

Male, neutered

Date of Previous IntraPet Ultrasound: No previous

Sedation: not needed

Stat Report: not requested

AGE

2016

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System****WEIGHT**

19.2 lbs.

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

INTERPRETED BY

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

The prostate is normal in size (0.59 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

HOSPITAL NAME

Churchville VC

The left kidney is normal size (4.80 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. Trace pyelectasia is present (0.13 cm in the longitudinal plane). There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

REFERRING VET

Dr. Kauffman

The right kidney is normal size (4.44 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands**INVOICE**

12085

The left adrenal gland is normal size (0.49 cm at cranial pole) (0.46 cm at caudal pole) (1.59 cm in length); normal shape; 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 normal size (0.49 cm at cranial pole) (0.47 cm at caudal pole) (1.59 cm in length); normal shape; 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 normal in size (1.01 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are observed. Several intrahepatic biliary stones are visualized. Hepatic vasculature is of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated echogenic gravity-dependent debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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 segmentally dilated with chyme. The small intestinal wall is normal to borderline thickened (up to 0.40 cm) with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. The lumen of the descending colon contains granular appearing fecal material. No obstructive disease is noted.

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

A few areas of reactive mesentery are observed in the mid-abdominal cavity. Trace free fluid is present. A few prominent mesenteric lymph nodes are visualized, the largest measuring 2.59 cm in length.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Intrahepatic biliary stones- incidental. The hepatic parenchymal changes are non-specific and could be consistent with inflammatory/immune mediated disease, reactive hepatopathy, hepatotoxicosis (i.e., copper) or may be a normal variant for this patient, particularly given the normal liver values.
- The bowel changes could be consistent with an inflammatory process or normal variation.
- The mild peritonitis is thought to be secondary to bowel inflammation.
- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

Secondary Findings:

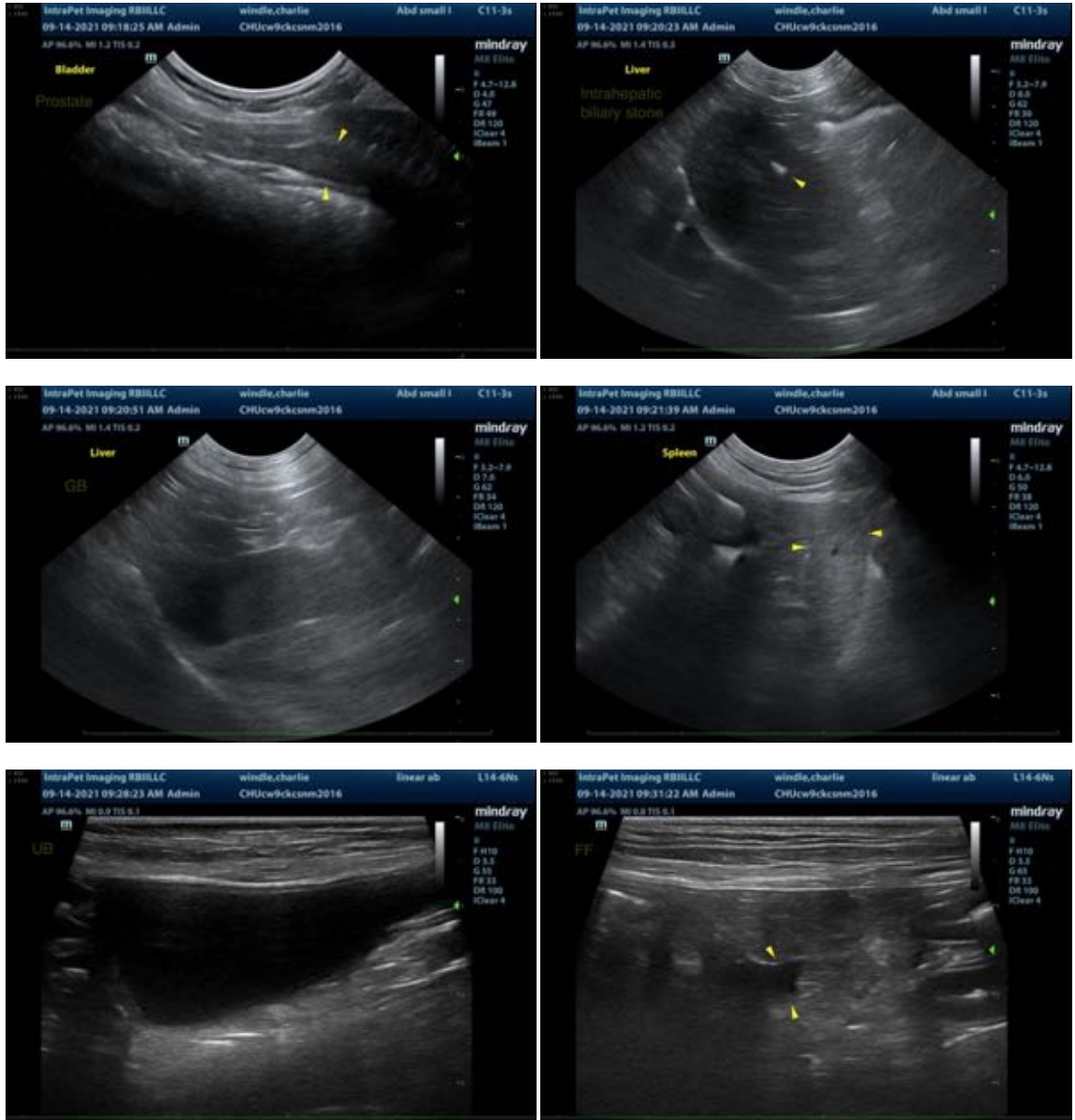
- The trace left pyelectasia may be secondary to fluid therapy or PU/PD if applicable or pyelonephritis. Correlation with clinical findings is recommended.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the patient's clinical history, consider the following diagnostics/therapeutics:

1. Serum cobalamin, folate, PLI and TLI
2. A fecal evaluation for ova/Giardia
3. Prophylactic deworming with Fenbendazole at 50 mg/kg once a day for 5 days is recommended. Repeat above protocol in 3 weeks.
4. A resting cortisol level to screen for hypoadrenocorticism. If resting cortisol level is < 2.0 mcg/dL, an ACTH stimulation test is recommended
5. Pre- and post-prandial serum bile acids, to assess for occult hepatic dysfunction.
6. A 6-week limited antigen diet trial to assess for food allergies
7. Depending on the results of the above diagnostics/therapeutics, endoscopic or surgical gastrointestinal biopsies may be necessary to get a definitive diagnosis.
8. Also consider a UPC to assess for renal protein loss.





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.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)
 Andrea.nicastro@sonopath.com