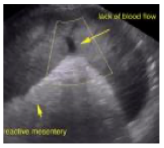
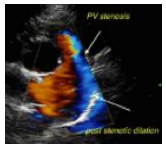
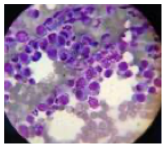
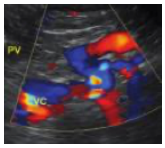
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT
Pirulin Fields

SPECIES
Canine

BREED
Yorkshire Terrier

SEX
Neutered Male

AGE
14 years, 6 mos

WEIGHT
10.9 lbs

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

IMAGING PERFORMED BY
Dr. Rivera

HOSPITAL NAME
DPC VH

REFERRING VET
Dr. White

INVOICE
12265

DATE
2.23.23

PRESENTING CLINICAL SIGNS

History: Reason for Visit: Owner has noticed pet's stomach bloating over the week. History: Patient is presented today b/c over the last week O has noticed P's stomach expanding/bloating. Owner states that P's behavior is normal other than his water intake increasing, P is drinking alot of water. P is not lethargic at all. owner has no other concerns.

Abnormal PE/Chem/CBC/UA Results: Hydration: Moderately dehydrated Mentation: BAR, head shy EENT: No nasal discharge; nuclear sclerosis OU; unable to look in Ps ears; No cough on tracheal palpation. Oral Cavity: no dental tartar present, recent dental Lymph Nodes: Symmetrical, no changes in size, shape, consistency Skin: Good hair coat. Multiple (~10) small pink lobulated dermal growths. CV/Respiratory: No murmur or crackles/wheezing auscultated. Synchronous pulses, weak. Normal bronchovesicular sounds. Abd/GI: suspect fluid distended abdomen Uro/Perineum: N Musculoskeletal: Ambulatory x4. Grade 3-4 MPL RH. BCS 5/9 Neurological: Appropriate CBC/Chem, T4, SDMA CBC- WNL Chem - SDMA 16 (0-14), ALT 135 (10-125), CHOL 349 (110-320)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended. The wall in the region of the trigone is slightly thickened and irregular. The remaining bladder wall is normal in thickness with a smooth mucosal surface. At least 4 cystic calculi are observed (the largest measuring 0.59 cm in diameter). The remaining luminal contents are anechoic.

The region of the prostate is not visualized due to its pelvic location.

The left kidney is normal in size (3.99 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. Several nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter.

The right kidney is normal in size (4.91 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. Several nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is enlarged (0.84 cm at cranial pole) (0.84 cm at caudal pole) with a slightly irregular shape. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The caudal pole of the right adrenal gland is visualized and is mildly enlarged (0.63 cm in width) with a normal shape and smooth peripheral contours. Glandular echogenicity and detail appear normal. Surrounding vasculature appears normal.

Spleen

The spleen is normal in size (1.00 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 enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is distended. The wall is normal in thickness. A moderate to large amount of aggregated, echogenic-to-mineralized suspended sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal
The stomach is distended with ingesta. 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 thickness is normal 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
A portion of the pancreas is obscured by the gastric distention. In the visualized portion (right limb), the pancreas is normal to prominent in size, with minimal deviation from the normal peripheral contours. The parenchyma is hyperechoic relative to surrounding omental fat and slightly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated.

Free Abdomen
Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The hepatic parenchymal changes could be consistent with vacuolar hepatopathy (i.e., idiopathic/endocrine), inflammatory disease, infiltrative neoplasia (less likely), hepatotoxicosis (i.e., copper), reactive hepatopathy, other.
- Bilateral adrenomegaly
- Cystic calculi. The irregular bladder wall in the region of the trigone could be due to cystitis (i.e., secondary to the presence of bladder stones). Alternatively, an emerging tumor (i.e., transitional cell carcinoma) is possible.
- The gall bladder changes are concerning for an emerging mucocele.
- Trace ascites

Secondary Findings

- Bilateral chronic renal changes with nonobstructive nephrocalcinosis
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- If the patient was fasted for this study, the presence of ingesta within the gastric lumen could suggest delayed gastric emptying.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

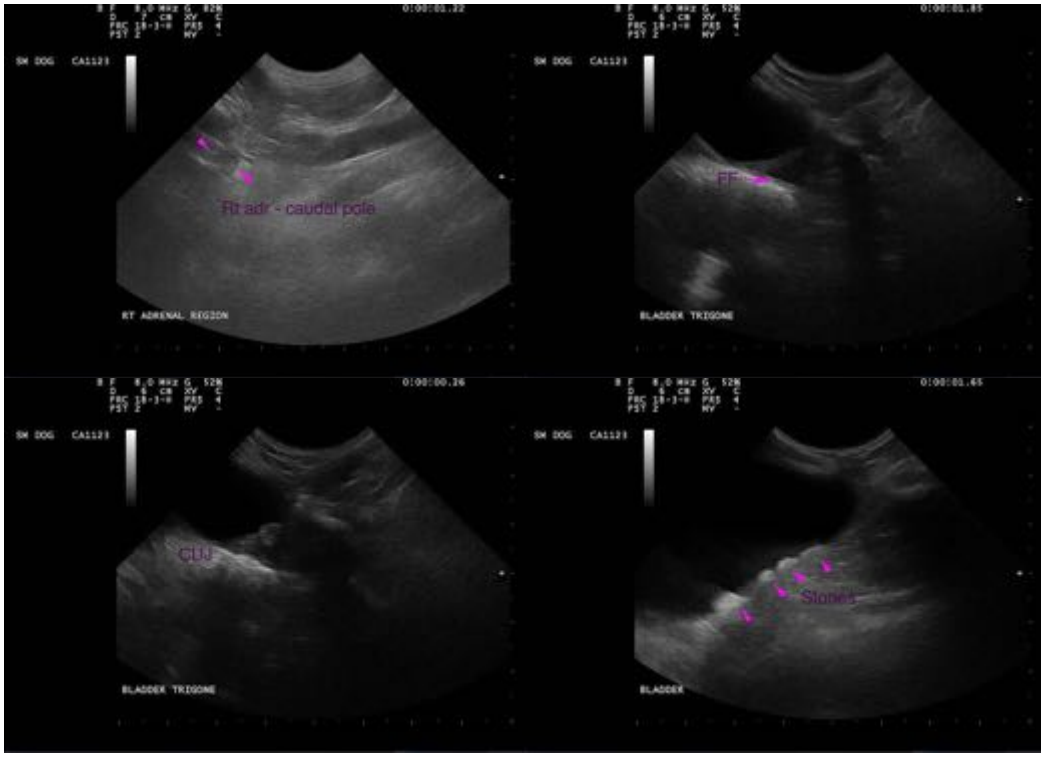
- Given the patient's clinical history, consider the following:

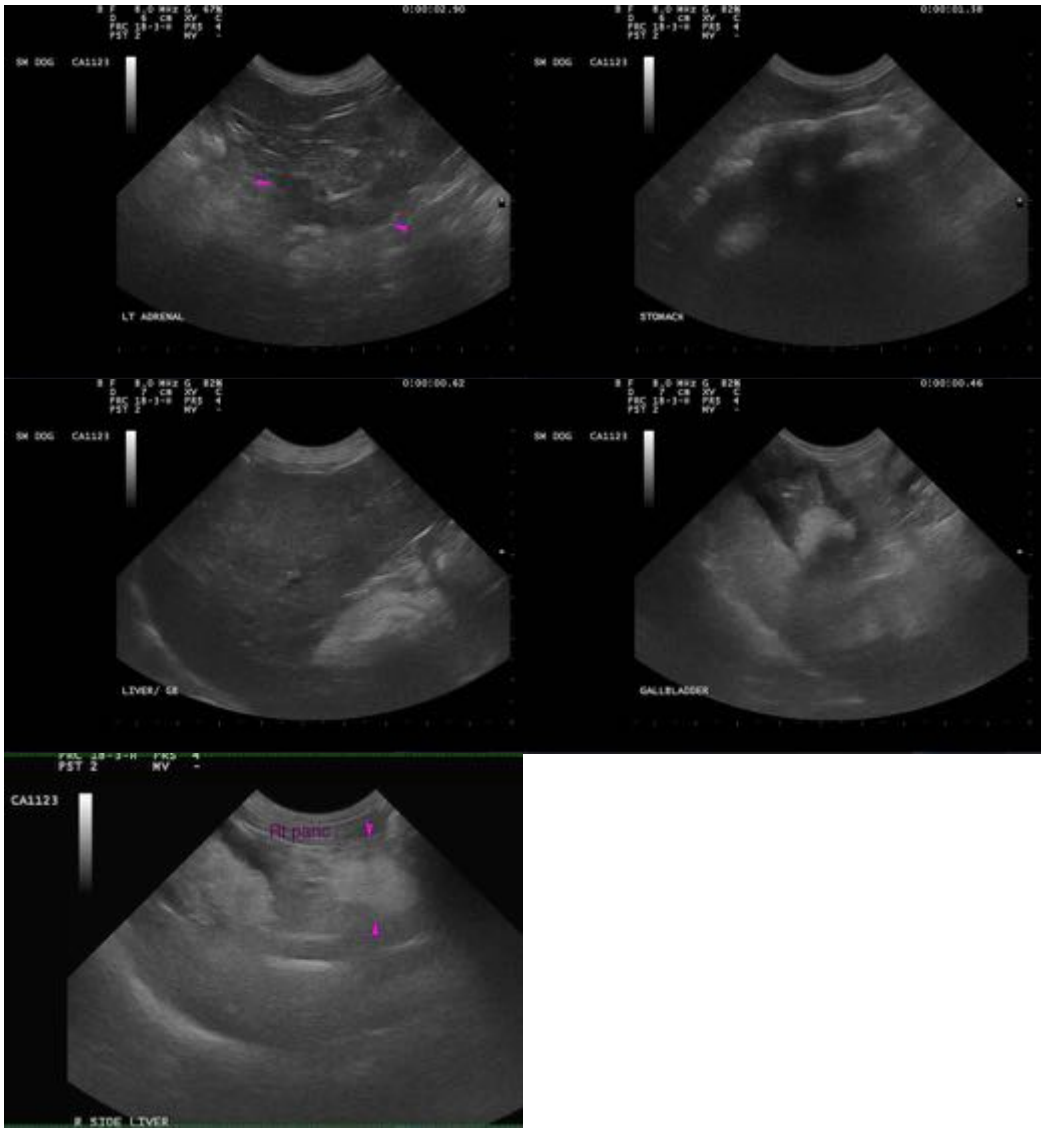
    1. Urinalysis
    2. Urine culture and sensitivity
    3. Further testing for Cushing's disease (i.e., low-dose dexamethasone suppression test ACTH stimulation test).

- Given the gall bladder changes, Ursodeoxycholic acid (Ursodiol) is recommended. Serial sonographic monitoring (e.g., every 6-8 weeks) of the gall bladder is recommended to assess for progression to a fully formed mucocele. If progression occurs, a cholecystectomy may be warranted.

- Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If values continue to increase, a repeat abdomen ultrasound +/- a more advanced hepatic work-up (i.e., tissue sampling) may be warranted.

- A cystotomy with stone removal, analysis and culture is recommended. Alternatively, medical dissolution of the stones can be considered with a prescription renal diet and broad-spectrum antibiotic therapy. If there is no improvement in stone size after 4 weeks of therapy, a cystotomy should be reconsidered. If the stone size is reduced, continue therapy until complete dissolution has been achieved.





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