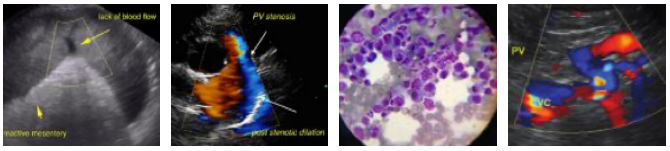
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Onyx Virani-Spanier

SPECIES
Canine

BREED
West Highladn Terrier

SEX
Male, neutered

AGE
17 Yrs.

WEIGHT
8.7 kg.

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

IMAGING PERFORMED BY
Dr. Barthelemy

HOSPITAL NAME
Bridgeland VC

REFERRING VET
Dr. Flath

INVOICE
15189

DATE
8/8/23

PRESENTING CLINICAL SIGNS

History: Anorexia and vomiting. Previous episodes of what appeared like vestibular signs.
Abnormal PE/Chem/CBC/UA Results: IRIS Stage 3 with hyperphosphatemia and mild hyperkalemia. UPCR elevated at 0.9.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is mildly to moderately distended with anechoic urine. The wall is mildly thickened (up to 0.57 cm) and irregular, particularly along the dorsal and ventral walls. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (0.88 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (3.93 cm in length) with a normal shape and architecture with smooth peripheral margins. The cortex is isoechoic relative to the spleen with numerous varying sized cortical cysts. The largest cyst which is located at the lateral aspect, measures approximately 0.90 cm in its longest dimension and appears complex. There is moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. Moderate pyelectasia is present (0.39 cm in the transverse plane). There is no evidence of hydroureter.

The right kidney is normal size (4.94 cm in length) with a normal shape and smooth peripheral contours. The parenchyma is isoechoic relative to the spleen with numerous varying sized cortical cysts. There is moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. There is no evidence of pyelectasia or hydroureter.

Adrenal Glands

The left adrenal gland is mildly enlarged (0.56 cm at cranial pole) (0.57 cm at caudal pole); 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 mildly enlarged (0.80 cm at cranial pole) (0.61 cm at caudal pole); 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

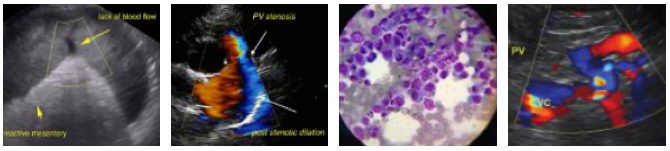
The spleen is normal in size (0.94 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is subtly heterogeneous in appearance. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity along with a few small ill-defined hypoechoic nodules, the largest measuring 1.63 cm in its longest dimension. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

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. Mucosal speckling +/-



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striations are observed in the proximal duodenal wall. In the remaining small intestinal segments, wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecocolic junction and colonic wall are normal. No obstructive disease is noted.

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic 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

Primary Findings:

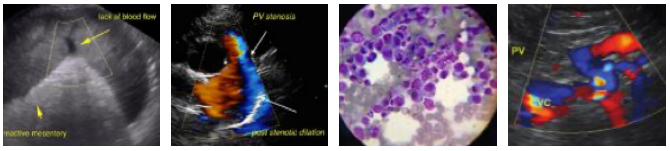
- Bilateral chronic nephropathy with dystrophic mineralization and cortical cysts.
- The mucosal speckling +/- striations in the duodenal wall may be a normal variant for this patient or may represent an inflammatory process, lymphangiectasia or other enteropathy.

Secondary Findings:

- Urinary bladder wall changes are suggestive of cystitis.
- Mild bilateral adrenomegaly.
- 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).
- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- Minor age-related pancreatic remodeling in the right limb.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Regarding the patient's renal disease, consider the following:
  1. Urine culture and sensitivity
  2. Baseline blood pressure measurement
  3. Fluid therapy (i.e., intravenous or subcutaneous as needed)
  4. Consider initiation of an angiotensin receptor blocker +/- an ACE inhibitor to address the proteinuria.



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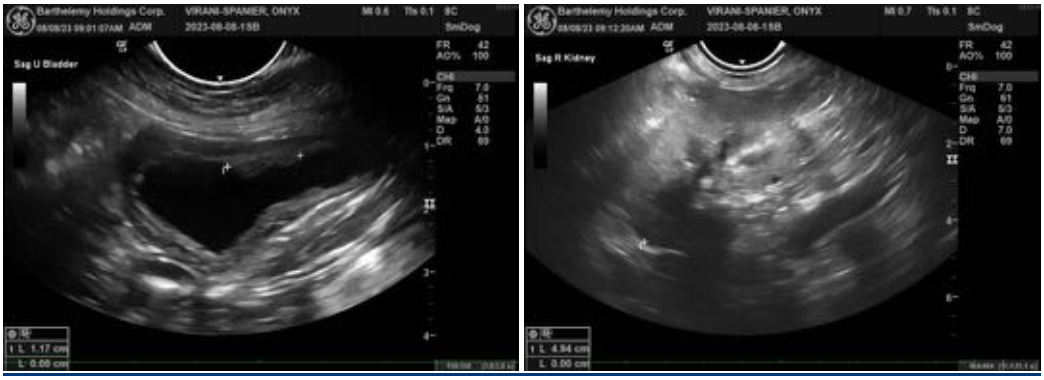
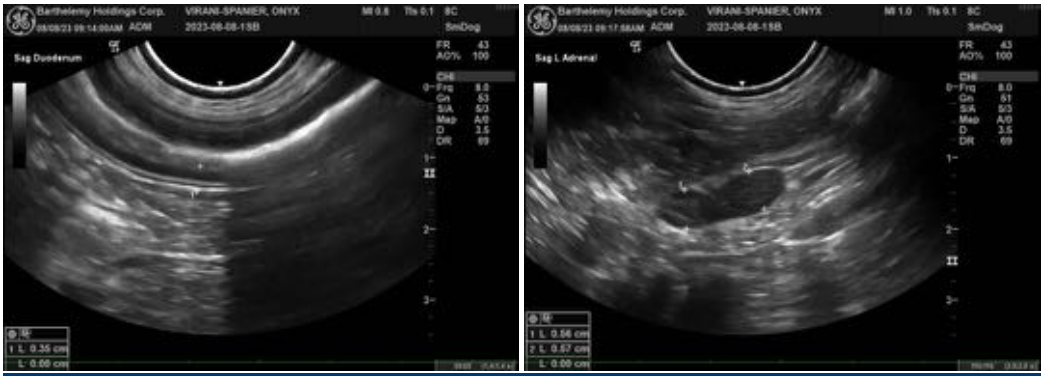
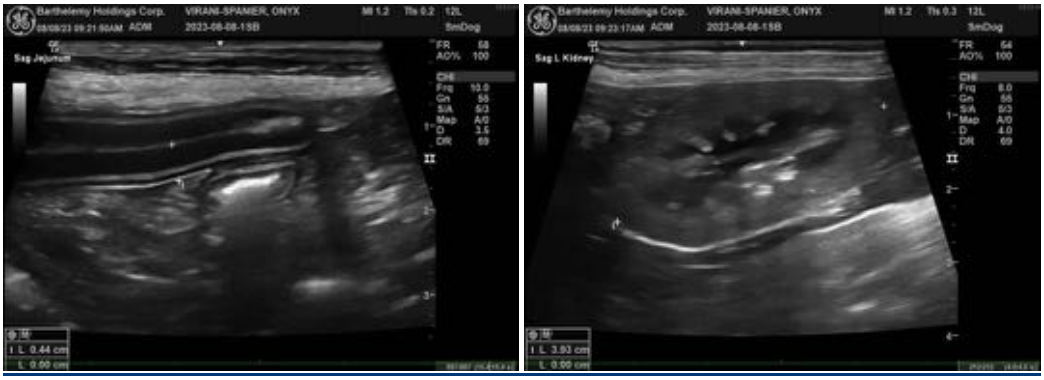
5. If the patient's GI signs are thought to be secondary to be secondary to renal failure, symptomatic care is recommended as needed. If an extrarenal etiology is considered more likely, the following diagnostics can be considered:

1. Fecal evaluation for internal parasites
2. cPLI +/- full Texas GI panel including serum cobalamin, folate, TLI and PLI.
3. +/- additional workup (i.e., GI biopsies)







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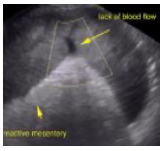
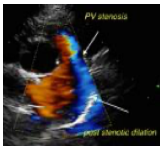
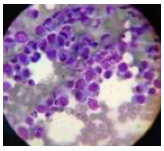
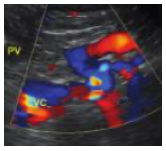

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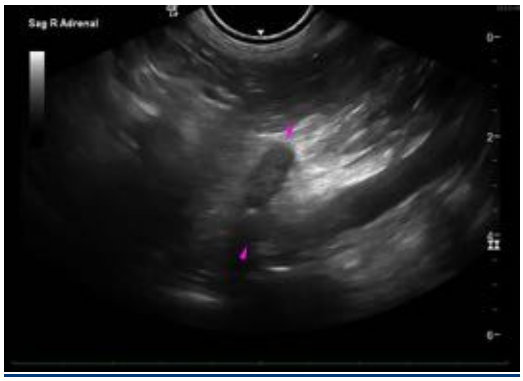

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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