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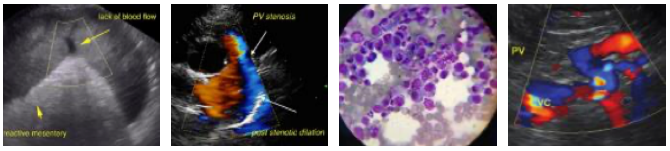

PATIENT
Jack Baker

SPECIES
Canine

BREED
Mini Dachshund

SEX
Male, neutered

AGE
17 Yrs.

WEIGHT
11.46 lbs.

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

IMAGING PERFORMED BY
Dr. Saum Hadi

HOSPITAL NAME
Bethany Family Pet Clinic

REFERRING VET
Dr. Saum Hadi

INVOICE
13803

DATE
8/9/22

PRESENTING CLINICAL SIGNS

History: P has had recent changes/inconsistencies in stool consistency and frequency. Some will come soft, some harder per O. P has a history of a hepatopathy that has not been worked up. Abnormal PE/Chem/CBC/UA Results: 3/9/22: ALT: 298 U/L, ALKP: 1736 U/L, BUN 43 mg/dL, Crea 1.4 mg/dL. CBC, Chem 27, UA, O&P + Giardia pending.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is 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.

The prostate is not definitively visualized due to its pelvic location.

The left kidney is normal size, 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.

The right kidney is normal size (4.03 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. There is no evidence of nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is normal size (0.44 cm at cranial pole) (0.43 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 normal size (1.11 cm at cranial pole) (0.53 cm at caudal pole) (1.84 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 (0.93 cm in width at the level of the hilus) with slight rounding at the poles. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and heterogeneous in appearance. In the region of the right medial lobe, a 3.70 x 2.34 cm isoechoic to heterogeneous swelling/mass is visualized. The lesion does not cause capsular expansion. 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. A small amount of echogenic debris is observed within the lumen, some of which is gravity-dependent and some of which is suspended. The cystic and common bile ducts are normal/not seen.

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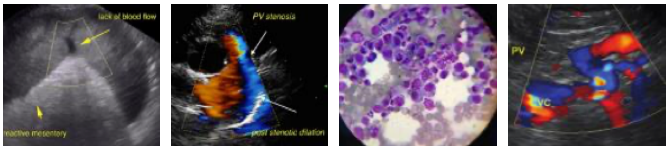

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Gastrointestinal

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 thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

Pancreas

The left 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:

- Diffuse hepatopathy. Differentials include inflammatory disease (i.e., chronic active hepatitis, bacterial cholangiohepatitis), hepatotoxicosis (i.e., copper), infiltrative neoplasia, other hepatopathy +/- benign age-related change (i.e., vacuolar hepatopathy and/or regenerative nodular hyperplasia). There is a questionable hepatic mass in the region of the right medial lobe. This area may represent a region of regenerative nodular hyperplasia or potentially, a hepatic tumor (i.e., adenoma, adenocarcinoma).

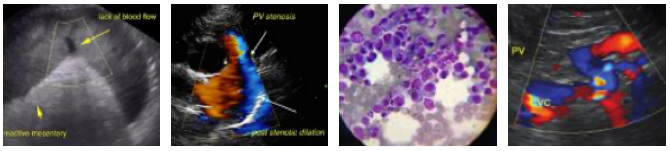
Secondary Findings:

- Bilateral age-related degenerative renal changes with cortical cysts and trace pyelectasia.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

*It is unclear whether the patient's intermittent diarrhea is related to a hepatopathy or other concurrent disease process (i.e., inflammatory bowel disease, food allergy/intolerance, other).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- If an aggressive approach is desired, consider an abdominal exploratory with liver and gastrointestinal biopsies. At the time of surgery, biopsy or removal of the mass-like lesion on the right side and bile samples should be obtained for aerobic and anaerobic cultures. Additional hepatic tissue samples should be acquired for potential copper quantitation. The decision to move forward with surgery, however, should be based on the patient's current metabolic functions. Therefore, recent lab results should be assessed in order to make that decision.
- If the patient is still azotemic, consider the following:



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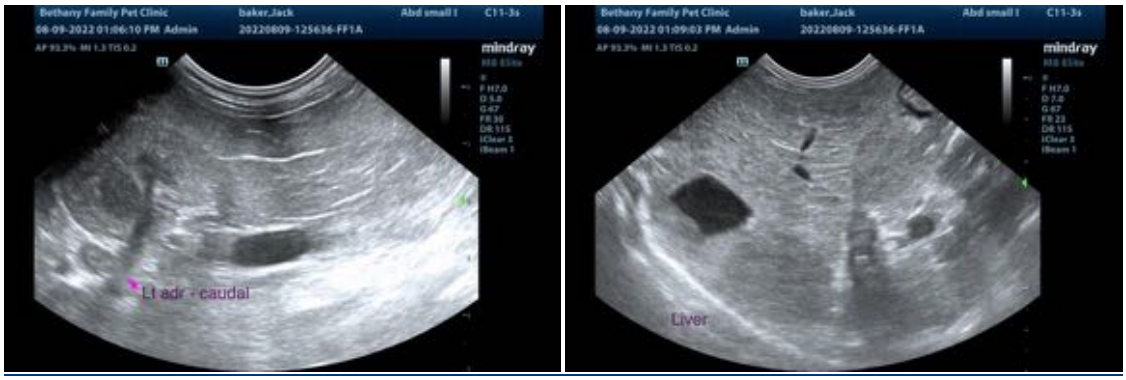
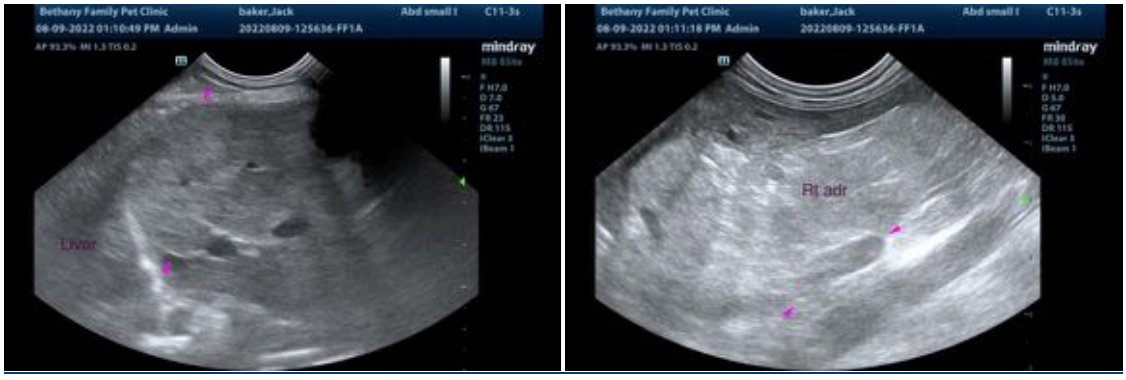
1. Baseline blood pressure measurement
2. UPC (if proteinuria is present)
3. Urine culture and sensitivity

- Regarding the diarrhea, diagnostic and symptomatic care could include the following:
  1. Malabsorption panel including serum cobalamin, folate, TLI and PLI
  2. Novel protein diet trial.
  3. Empirical treatment for small intestinal bacterial overgrowth (i.e., 4-week course of Tylosin)
  4. Probiotic with a high colony count (i.e., Visbiome or Proviable Forte)





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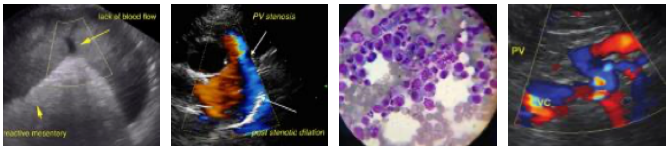

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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