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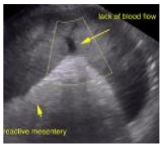
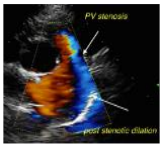
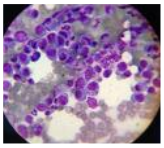
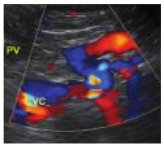
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
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PATIENT
Otto Youngbauer

SPECIES
Canine

BREED
Mini Schnauzer

SEX
Neutered Male

AGE
10 years

WEIGHT
12.6 lbs

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

IMAGING PERFORMED BY
Saum Haudi

HOSPITAL NAME
Bethany Family Pet Clinic

REFERRING VET
Dr. Saum Haudi

INVOICE
10805

DATE
4/24/22

PRESENTING CLINICAL SIGNS

History: P has a history of seizures, controlled on phenobarbital and zonisamide. Recent annual lab work revealed a marked increase in ALKP (2100 U/L) and a moderate increase in ALT (348 U/L). P has had a historic increase in ALKP, but this is the highest value we have obtained. ALT increase is new. Phenobarbital levels within therapeutic range. Starting P on denamarin advanced.

Abnormal PE/Chem/CBC/UA Results: ALT: 348 U/L ALKP: 2101 U/L Mild increase in triglyceride (1131 mg/dL) PercisionPSL WNL.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. A moderate amount of suspended, echogenic debris is observed within the lumen. 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 in size (4.08 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is minimal loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter.

The right kidney is normal in size (4.08 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is minimal loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is normal size (0.35 cm at cranial pole) (0.40 cm at caudal pole) (2.00 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 region of the right adrenal gland is evaluated. No obvious pathology is observed.

Spleen

The spleen is normal in size (1.36 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 prominent in size with swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is of normal contours. A small to moderate amount of echogenic +/- mineralized debris is observed within the lumen, most of which is gravity dependent and some of which is suspended. The wall is normal in thickness. No choleliths are observed. 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 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. The lumen of the descending colon contains shadowing fecal material. There is no evidence of an obstructive pattern.

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

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

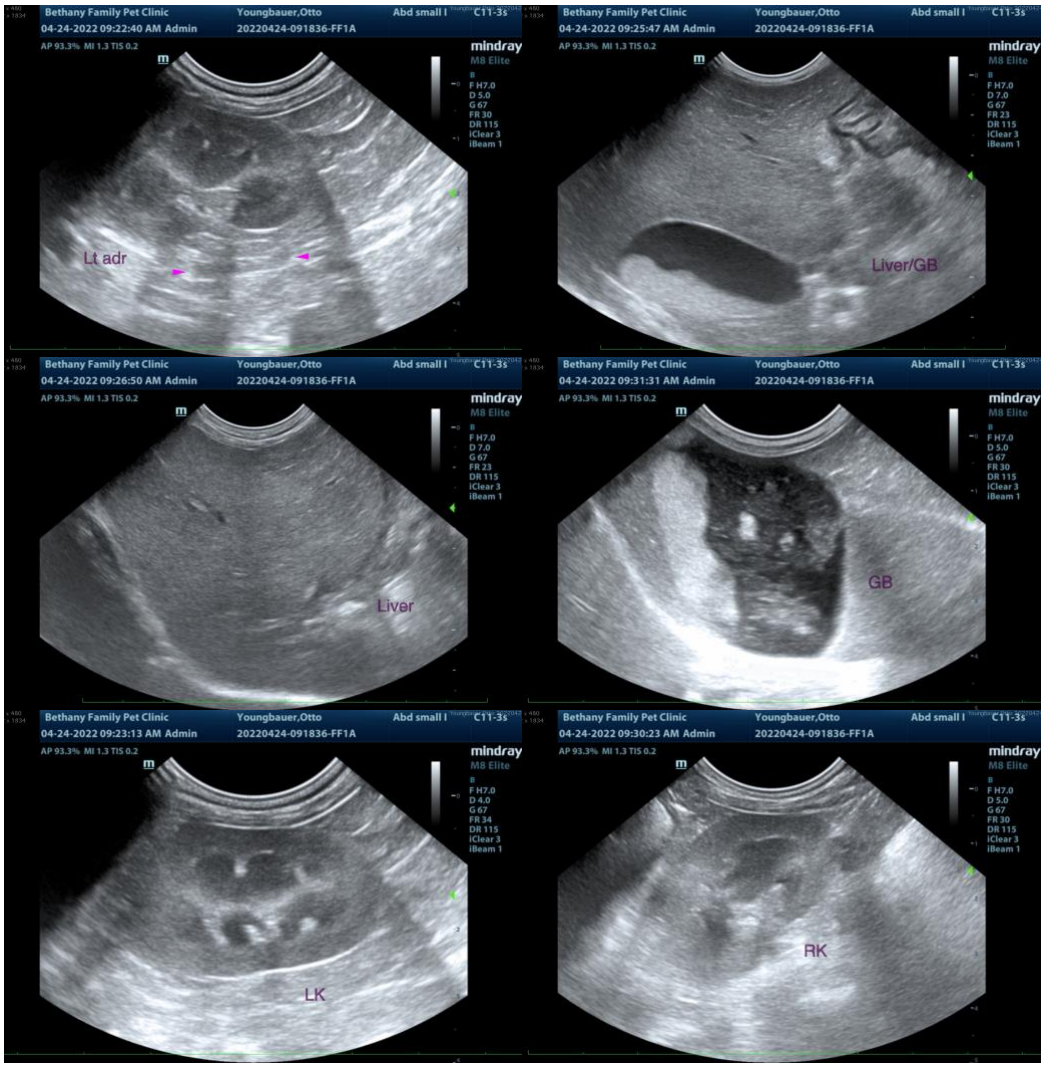
- Nonspecific diffuse hepatopathy. Differentials include benign age-related processes (i.e., vacuolar hepatopathy, regenerative nodular hyperplasia), drug-induced hepatotoxicosis (i.e., phenobarbital, zonisamide), copper hepatotoxicosis, inflammatory hepatopathy, infiltrative neoplasia (unlikely), other.

Secondary Findings

- Minor, age-related renal changes with dystrophic mineralization
- Gall bladder debris, non-mucocele

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Pre- and post-prandial serum bile acids to assess hepatic function
- Consider Leptospirosis testing (i.e., blood and urine PCR, serology)
- Consultation with a board-certified neurologist is recommended to discuss possible weaning of phenobarbital and zonisamide and initiation of a different anti-convulsant (i.e., levetiracetam).
- Hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy) may be necessary to get a definitive diagnosis. Surgical biopsies are preferred in that they are more likely to be representative of global organ pathology. If surgical biopsies are to be pursued, aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation are recommended. Thoracic radiographs should be performed prior anesthesia to assess cardiopulmonary status.



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, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com