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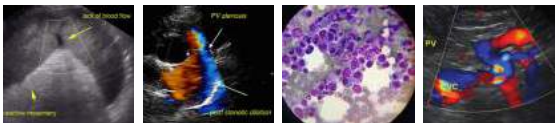

ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT
Pearl Steiner

SPECIES
Feline

BREED
Siamese Mix

SEX
Female Spayed

AGE
13 years

WEIGHT
8. 4 lbs.

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

IMAGING PERFORMED BY
Heidi Putnam

HOSPITAL NAME
VCA Salem AH

REFERRING VET
Dr. Hallden

DATE
8/13/21

INVOICE
11636kk

PRESENTING CLINICAL SIGNS

History: 1.5 pound weight loss from November, 2020 noted at 7/25/2021 exam (8 month interval), received FVRCP vaccination on 7/25/21. Dental disease present in otherwise uneventful PE. Elevated ALT and AST on 7/26 panel results with normalization of AST and greatly improved ALT as of 8/5 with normal fT4ED at that time. Indoor only lifestyle cat. Unknown FeLV-FIV status. No medication in use.

Abnormal PE/Chem/CBC/UA Results: ALT 355 IU/L on 8/5 panel (was 994 on 7/26) AST 57 IU/L (normal) on 8/5 (was 259 on 7/26) Total T4 = 3.1 ug/dL on 7/26, with normal fT4ED 37.5 pmol/L on 8/5 See full panel results emailed. Urine sample to be collected on day of US.

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 lumen is moderately distended with mostly 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 left kidney is normal size (3.53 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There are suspected infarcts at the cranial aspect. There is no evidence of pyelectasia, nephroliths, or hydroureter. Renal vasculature is normal.

The right kidney is normal size (3.55 cm in length) with a slightly irregular shape. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. An infarct is suspected at the cranial aspect. There is no evidence of pyelectasia, nephroliths or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.91 cm length; 0.36 cm width). Normal shape and glandular echogenicity. 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 (0.91 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 contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The gall bladder is moderately distended. The wall is normal in thickness with questionable mineralization of the wall. 1-2 small choleliths (versus mineralized sand) are observed within the lumen. The cystic and common bile ducts are normal/not seen.

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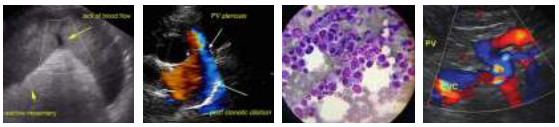

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Gastrointestinal

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 is normal in thickness with a normal layering pattern and appropriate mural detail. There is thickening of the submucosal layer in some segments. Discreet masses are not identified. The ileocolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

Pancreas

The pancreas is diffusely prominent in size with slightly irregular peripheral contours in the region of the right limb. The parenchyma is hypoechoic relative to surrounding omental fat. The pancreatic duct is borderline dilated (0.22 cm) in diameter. Within the right limb, a few, hypoechoic to slightly heterogeneous nodules are visualized. The mesentery effacing the serosal surface is hyperechoic.

Free Abdomen

There is no evidence of free fluid. A few prominent lymph nodes are observed adjacent to the ileocolic junction with the largest measuring 0.44 cm in length.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, lymphoplasmacytic hepatitis, hepatic lipidosis, infiltrative neoplasia (less likely)) cannot be excluded.
- Choleliths versus mineralized sand - incidental. The possible mineralization of the gall bladder wall could be consistent with cholecystitis. In rare cases this finding can be associated with biliary adenocarcinoma.
- The pancreatic changes are consistent with chronic active pancreatitis.
- The bowel pattern is consistent with inflammatory bowel disease with lower potential for emerging lymphoma.
- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

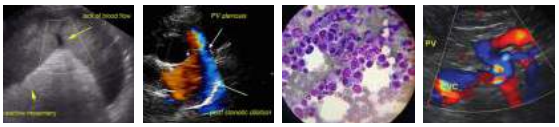
Secondary Findings:

- Minor, bilateral, age-related renal pathology with cortical infarcts.

**Given the clinical history and sonographic changes, “triaditis” is a consideration in this patient.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Consider a fine needle aspirate of the liver (if clotting status is appropriate). A 25-guage needle should be used. If cytological evaluation is inconclusive, a surgical liver biopsy with aerobic and anaerobic bile cultures can be considered.



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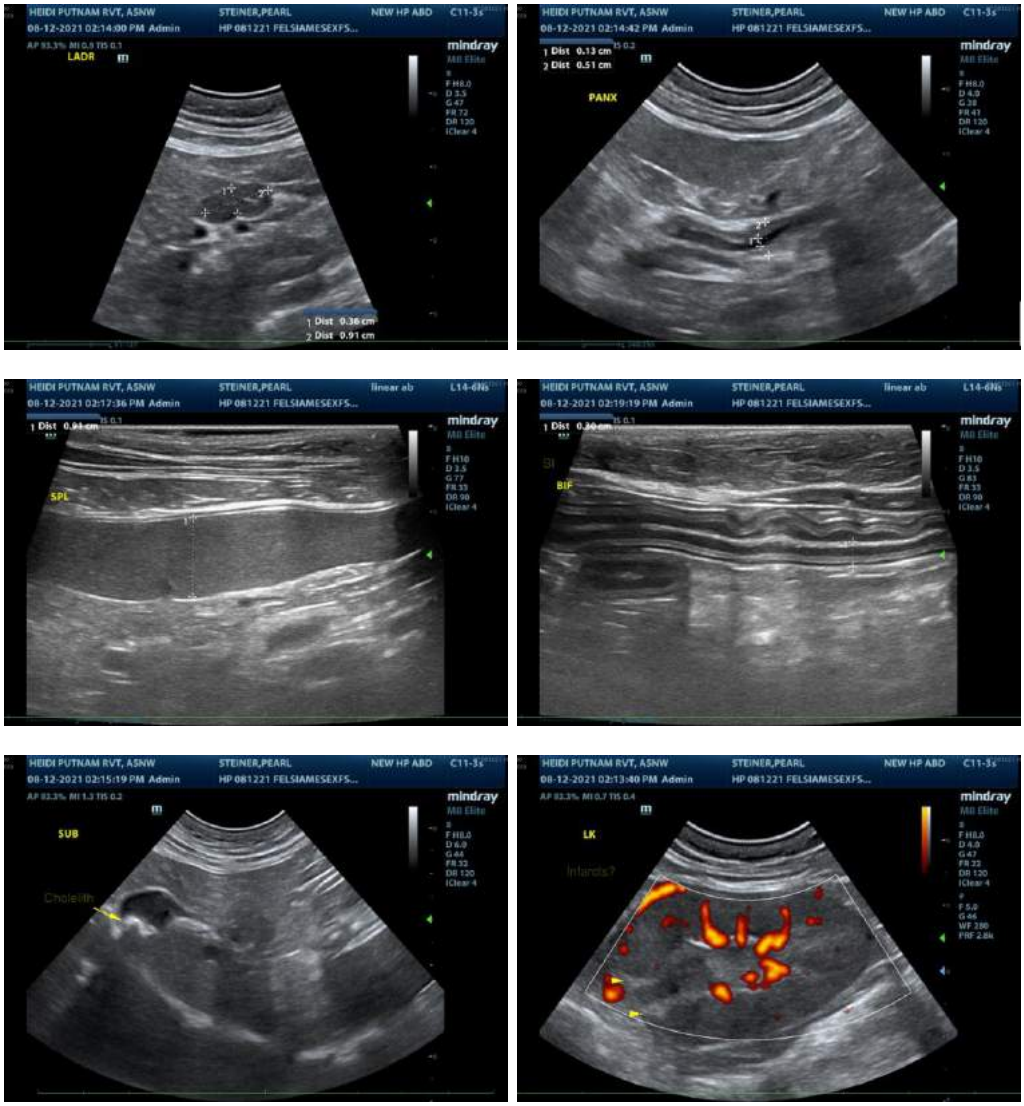
2. If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, +/- Metronidazole, Denamarin Advanced). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.
3. Other diagnostic considerations include:
    a. A malabsorption panel including serum cobalamin, folate, PLI and TLI.
    b. Three-view thoracic radiographs (to assess cardiopulmonary status)



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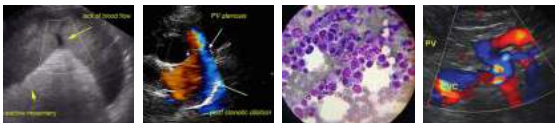

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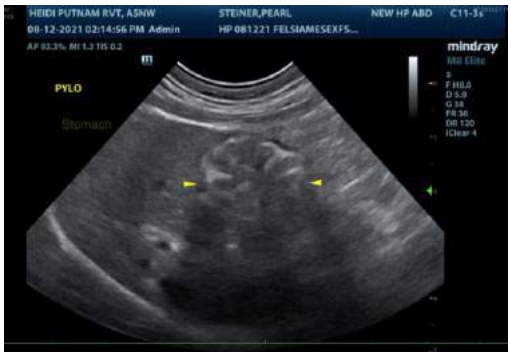

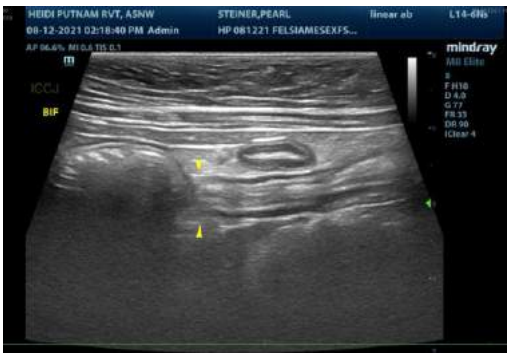

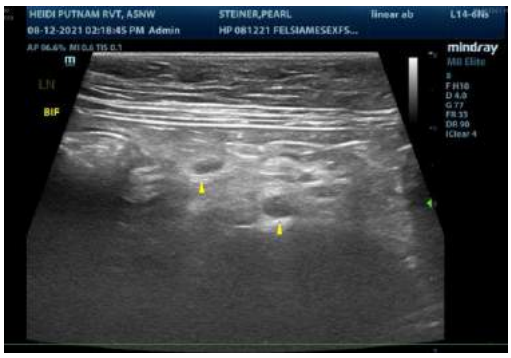

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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*)
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