IMAGING PERFORMED BY

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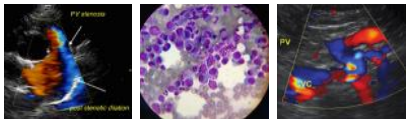

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

10/14/21

PATIENT

Crunch Raraigh

SPECIES

Canine

BREED

Yorkshire Terrier Mixed Breed

SEX

Spayed Female

AGE

6/25/2008

WEIGHT

9.38 Pounds

INTERPRETED BY

Andrea Nicastro, DMV, Diplomate DACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Everhart VC

REFERRING VET

INVOICE

10/14/21

PRESENTING CLINICAL SIGNS

History: presented for vomiting on 10/9. Hx of elevated liver values

Current Medications: Cerenia 10mg/mlg 0.42ml IV q24hrs recently for acute vomiting, Ampicillin 250mg/ml 0.34ml IV q12hrs recently, Baytril 22.7mg/ml 0.93ml IV q24hr recently, Famotidine 0.42ml IV.
Lab Results: (4/19) alp 537, alt 102, tbili 0.1, (4/25) alp >2000, alt 852, tbili 0.1, (4/29) alp >2000, alt 694, tbili 0.1, (8/27) alp 71, alt 56, tbili 0.1. (10/9) alp 384, alt 706 , tbili 1.3 10.10 alp 1342, alt 517, tbili 0.1.
Radiographs: Not provided by the veterinarian.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Prev u/s at ER with internist:
1. Liver: heterogeneous mass effect with anechoic center noted at margin of the liver lobe near midline; this structure measures approximately 15-20 mm in diameter
2. Gall Bladder: moderate amount of brightly echogenic debris in lumen, not typical at this time for mucocele formation; no acoustic shadowing noted
3. Pancreas: no discrete sonographic abnormalities noted in area of right or left pancreatic limb
4. Spleen: uniformly unremarkable-appearing parenchyma with no obvious focal lesions
5. Left Kidney: no significant sonographic abnormalities
6. Right Kidney: no significant sonographic abnormalities
7. Urinary Bladder: very full of urine, no obvious intraluminal, mucosal, or mural abnormalities noted
8. Prostate: not applicable
9. Left Adrenal: no obvious sonographic abnormalities, 5.6 mm wide
10. Right Adrenal: not clearly identified
11. Gastrointestinal Tract Segments: no significant distension, dilation plication, focal areas of intraluminal shadowing or obvious mural lesions seen within visualized portions of gastrointestinal tract
12. Regional Lymph Nodes: no appreciable mesenteric or other abdominal LN enlargement_
Sedation: Sedation not required for scan.
Stat Report: STAT report not requested by the veterinarian.

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 mildly distended. A scant amount of suspended echogenic debris is observed within the lumen.

The left kidney presented normal size (3.21 cm in length); with a normal shape, smooth peripheral margins and normal internal architecture. There is mild 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 presented normal size (3.48 cm in length); with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. A small cortical cyst is observed at the caudolateral aspect. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

Adrenal Glands

The left adrenal gland is normal size (0.47 cm at cranial pole) (0.45 cm at caudal pole) (1.43 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 right adrenal gland is normal size (0.55 cm at cranial pole) (0.45 cm at caudal pole) (1.52 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 (1.00 cm to 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. A 2.48 x 2.07 cm isoechoic swelling is observed at the caudal aspect along mildline. Hepatic vasculature 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 moderate amount of aggregated echogenic to mineralized gravity dependent sludge is observed within the lumen. The cystic and common bile ducts are normal.

Gastrointestinal

The gastric wall in the region of the fundus is normal to mildly thickened (up to 0.58 cm) with retention of the normal layering pattern. The pyloric wall is normal in thickness with a normal layering pattern. The gastric lumen is not distended. The pyloric outflow tract is patent. The small intestinal lumen is segementally dilated with chyme and gas. The small intestinal wall thickness is normal (xxx cm) with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

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

- Non-specific diffuse hepatopthy- Differentials include inflammatory/immune mediated disease (i.e., bacterial cholangiohepatitis, chronic active haepatitis), hepatotoxicosis (i.e., copper), infiltrative neoplasia (less likely), leptospirosis (less likely), other hepatopathy. Benign age-related pathology may also be present. The isoechoic swelling along the midline line may represent a benign area of

hyperplasia or vacuolar hepathopathy. Alternatively, an emerging neoplastic process may be present.

- Gallbladder sludge, non-mucocele

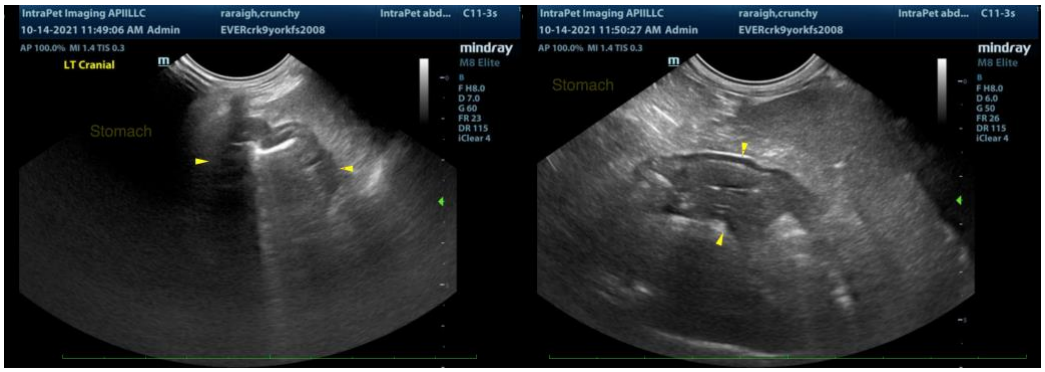
Secondary Findings

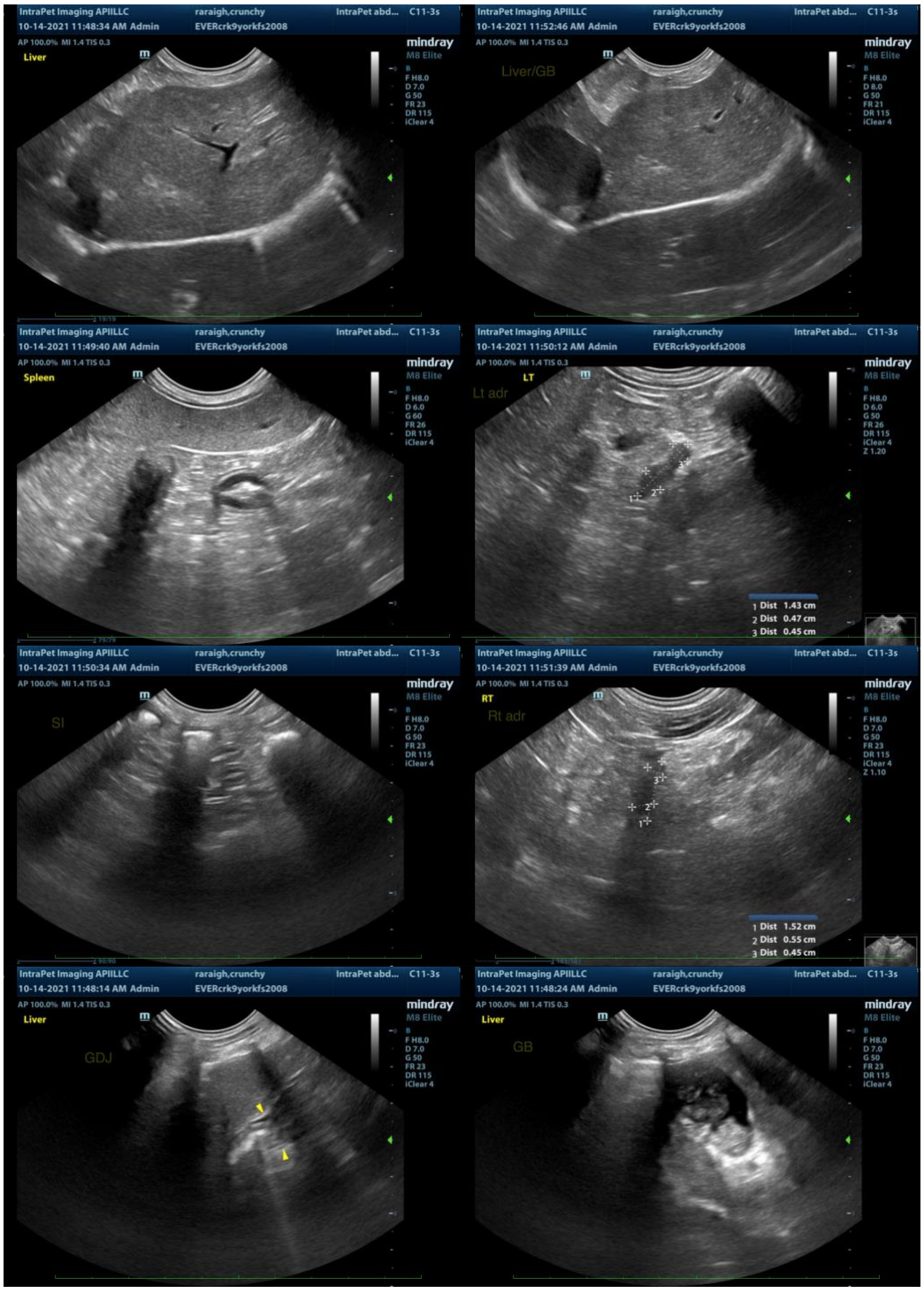
- The mild gastric wall thickening is likely secondary to inflammation. Infiltrative neoplasia is possible, but considered unlikely.

- Bialteral age-related nephropathy with dystrophic mineralization

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
- If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, 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.
- Leptospirosis testing (i.e., blood and urine PCR, serology) can be considered. However, given the chronic intermittent nature of the liver enzyme elevations, this differential is considered less likely.
- Given the patients age, 3-view thoracic radiographs are recommended to assess cardiopulmonary status.
- Consider a recheck ultrasound in 2-3 months to assess for progression of the hepatic swelling.

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Liver
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Liver/GB
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Spleen
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2 Dist 0.47 cm
3 Dist 0.45 cm
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mindray M8 Elite
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Rt adr
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3 Dist 0.45 cm
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AP 100.0% MI 1.4 TIS 0.3
mindray M8 Elite
Liver
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Liver
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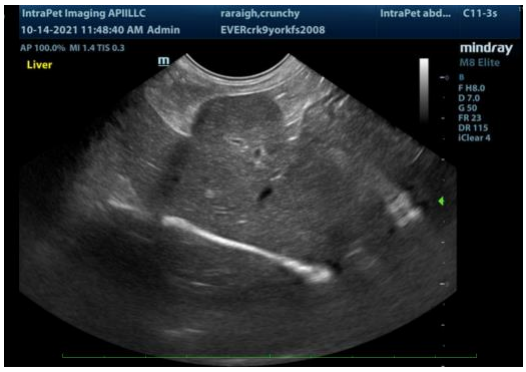

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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