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Clinical Sonography & Telecytology
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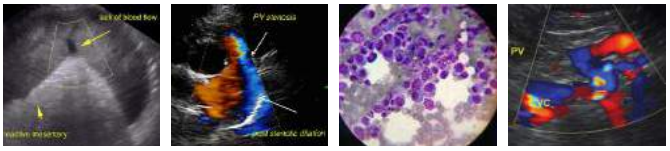

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1-800-838-4268 info@sonopath.com

PATIENT
Tucker Belardinelli

SPECIES
Canine

BREED
Labrador

SEX
Male Neutered

AGE
13 years

WEIGHT
104 lbs.

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

IMAGING PERFORMED BY
Jessica Miller

HOSPITAL NAME
Bergen County VC

REFERRING VET
Dr. Moore

INVOICE
11807kk

DATE
9/13/21

PRESENTING CLINICAL SIGNS

History: Elevated liver values (acute rise from 9/2020 - 9/2021) Current meds: Rimadyl 100mg - 1 BID, Phenobarbital 97.2mg = 1/2 tab BID, Gabapentin 300-600mg BID-TID PRN.

Abnormal PE/Chem/CBC/UA Results: ALT 309, AST 76, ALP 608 UA: WNL. SG 1.038

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 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 visulzied due to its pelvic location.

The left kidney is normal size (6.91 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (6.93 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is borderline enlarged (0.69 cm at cranial pole) (0.93 cm at caudal pole) (2.97 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 (1.11 cm at cranial pole) (0.60 cm at caudal pole) (2.33 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 (2.13 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. The parenchyma is isoechoic relative to the spleen and slightly mottled in appearance. No distinct focal lesions are observed. 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 to moderate amount of gravity-dependent debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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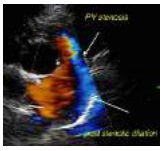
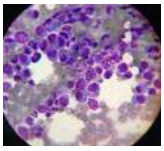
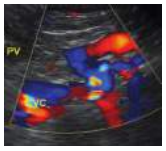

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Gastrointestinal

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. One segment of small intestine contains shadowing material but is not overtly dilated. The remaining segments are 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 pancreas is normal in size with normal peripheral contours. The pancreatic duct is normal. The base and limbs of the pancreas are isoechoic to surrounding omental fat. No focal lesions are observed. 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:

- Non-specific diffuse hepatopathy. Differentials include inflammatory/immune-mediated disease, hepatotoxicosis (i.e., copper, drug induced), infiltrative neoplasia (less likely), reactive hepatopathy +/- concurrent age-related pathology.
- Gall bladder debris – incidental.

Secondary Findings:

- The shadowing material within the small intestine likely represents transient foreign material without evidence of overt obstruction.
- Borderline left adrenomegaly.
- Minor age-related renal pathology.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. 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.
2. 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.
3. Consider Leptospirosis testing (i.e., blood and urine PCR; serology), particularly if the disease is endemic in the patient's geographic region.
4. Three-view thoracic radiographs are recommended to assess cardiopulmonary status.

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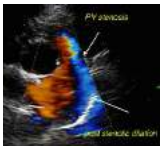
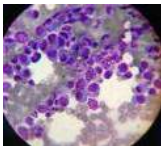
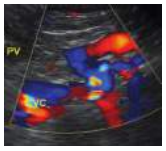

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5. Consider adjustment of the patient's treatment regimen to help determine if a drug-induced hepatotoxicosis is present.

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*)
Andrea.nicastro@sonopath.com