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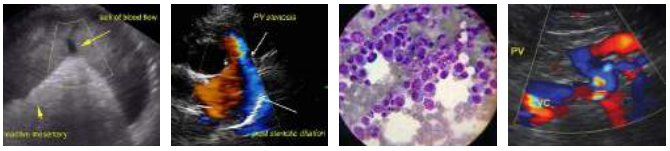
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Pixel Lien

SPECIES
Canine

BREED
Maltese

SEX
Female Spayed

AGE
16 Years, 4 Months

WEIGHT
6 lbs.

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

IMAGING PERFORMED BY
Potomac Mobile Veterinary Ultrasound

HOSPITAL NAME
Banfield Clifton

REFERRING VET
Dr. Jarrett

INVOICE
11633kk

DATE
8/12/21

PRESENTING CLINICAL SIGNS

History: Thin. Ultrasound requested because kidney and liver values are getting worse over time.

Abnormal PE/Chem/CBC/UA Results: ALT 773, ALP 1153, GGT 84, T Bili 1.0, SDMA 67, BUN 61, Creat 2.3, Chol 412. phosphorus 3.0 CBC NSF

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone is normal.

The left kidney is normal size (2.87 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 is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (3.00 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 is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.40 cm at cranial pole) (0.42 cm at caudal pole) (1.44 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 (0.51 cm at cranial pole) (0.54 cm at caudal pole) (1.40 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

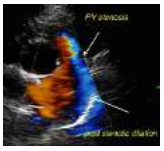
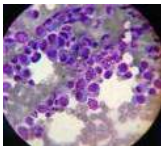
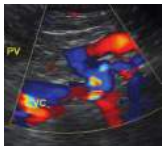
The spleen is normal in size (1.04 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous 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 distended. The wall is normal in thickness. A large amount of aggregated, echogenic, debris/sludge 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.

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

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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 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.

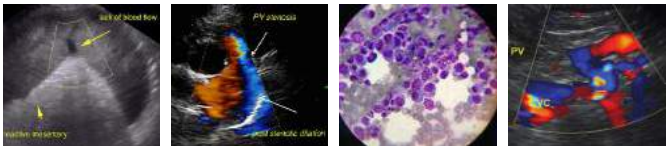
ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Bilateral, minor, non-specific, age-related renal pathology.
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, infiltrative neoplasia (less likely)) cannot be excluded.
- Excessive gall bladder sludge – differentials include cholestasis, early mucocele formation, secondary to fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Regarding the renal disease, consider the following:
    a. Urine culture and sensitivity +/- UPC (if proteinuria is present).
    b. Baseline blood pressure measurements.
    c. Subcutaneous fluid administration.
    d. Transition to a prescription renal diet if the patient will tolerate it.
2. Regarding the hepatopathy, consider the following:
    a. 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.
    b. +/- Fine needle aspirate of the liver (if clotting status is appropriate). A 25-guage needle should be used. If cytologic evaluation is inconclusive and an aggressive approach is desired, surgical biopsy can be considered.
3. Regarding the gall bladder sludge:



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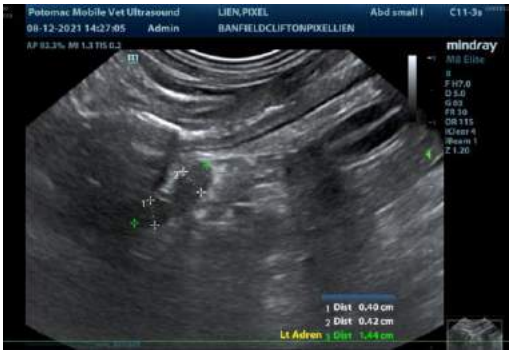
a. Ursodiol therapy can be considered. Alternatively, if a more conservative approach is desired, consider a repeat ultrasound of the gallbladder in 2-3 weeks, preferably 2 hours following a small meal. If the gall bladder changes are similar to the current scan, Ursodiol therapy can be considered at that time.

b. Regardless if Ursodiol therapy is initiated, the gall bladder should be monitored sonographically every 6-8 weeks to assess for progression to a mucocele.



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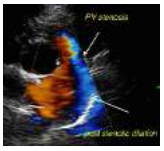
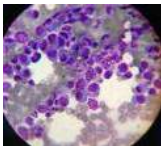
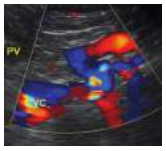

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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*)
Andrea.nicastro@sonopath.com