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Clinical Sonography & Telecytology
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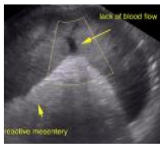
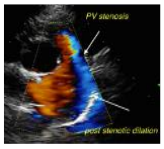
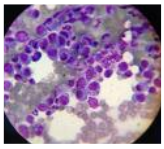
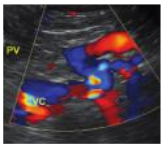

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Mali Yungk

SPECIES
Canine

BREED
English Setter

SEX
Spayed Female

AGE
12 years

WEIGHT
50.2 lbs

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

IMAGING PERFORMED BY
Dr. Jo Goodman

HOSPITAL NAME
Evandale-Blue Ash PH

REFERRING VET
Dr. Jo Goodman

INVOICE
10676

DATE
4/4/22

PRESENTING CLINICAL SIGNS

History: Previous hx of mucocele. Gallbladder and spleen removed 11/2020. Recheck abdominal ultrasound and sent to Sonopath 6/15/2021. Hx of ALT and ALP elevations. Presented 3/29/22 for a semi-annual exam where we performed a CBC/Chem/UA. Owner also noted difficulty getting around. We started her on galliprant that day for her back and clindamycin for mild swelling around upper right PM4. Chemistry showed elevated liver enzymes on results the next day and we had owner d/c galliprant. Owner also brought patient in for convenia injection as she doesn't take capsules well. Owner restarted denamarin but she vomited it up this morning.

Abnormal PE/Chem/CBC/UA Results: 11/9/2020: ALB - 3.4 ALT - 397 ALP - 235 GGT - 3 T. Bili - 0.5 11/30/2020: ALB - 2.9 ALT - 195 ALP - 224 GGT - 6 T. Bili - 0.3 6/14/2021: ALB - 3.3 ALT - 642 ALP - 400 GGT - 10 T. Bili - 0.4 9/3/2021: ALB - 3.1 ALT - 342 ALP - 295 GGT - 9 T. Bili - 0.2 3/30/2022: ALB - 3.1 ALT - 711 ALP - 307 GGT - 8 T. Bili - 0.2 4/4/2022: ALB - 3.3 ALT - 442 ALP - 348 GGT - 8 T. Bili - 0.4 Previous Sonopath report attached

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 (5.30 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. Several small, cortical cysts are present. Mild pyelectasia is present (0.23 cm in the transverse plane). There is no evidence of nephroliths, infarcts or hydroureter.

The right kidney is normal size (5.67 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. Several small, cortical cysts are present. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is mildly enlarged (1.03 cm at cranial pole) (0.72 cm at caudal pole) (2.69 cm in length); with a slightly irregular shape. A 1.44 x 0.83 cm hyperechoic nodule is observed at the cranial pole. Glandular echogenicity and detail at the caudal pole are normal. The phrenicoabdominal vein and surrounding vasculature appear normal.

The right adrenal gland is mildly enlarged (1.88 cm at cranial pole) (0.83 cm at caudal pole) (2.56 cm in length); with a normal shape and smooth peripheral contours. A 1.04 x 0.87 cm hyperechoic nodule is observed at the cranial pole. Glandular echogenicity and detail at the caudal pole are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The patient was splenectomized in November of 2020. The region of the splenic fossa 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.

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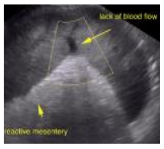
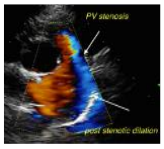
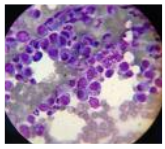
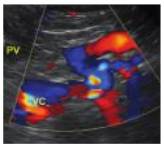

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The patient had a cholecystectomy in November or 2020.

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. 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

- An obvious cause for the patient's elevated liver values is not identified in this study. Sonographic changes are similar to the previous scan from June 2021. Differentials of the elevated liver values include inflammatory disease (chronic active hepatitis, bacterial cholangiohepatitis), hepatotoxicosis (i.e., copper), infiltrative neoplasia (unlikely), other hepatopathy.

Secondary Findings

- Mild bilateral adrenomegaly. The bilateral adrenal nodules are most consistent with nodular hyperplasia. However, emerging tumors cannot be completely excluded.
- Minor age-related renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- If a definitive diagnosis is desired, consider hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy). Surgical biopsies are preferred in that they are more likely to be representative of global organ pathology. If biopsies are pursued, acquisition of additional hepatic tissue samples for potential copper quantitation, as well as aerobic and anaerobic bile cultures, should be obtained.
- If a more conservative approach is desired, consider repeat bloodwork in 10-14 days. If there is no improvement in the liver values at that time hepatic tissue sampling can be revisited.
- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future.

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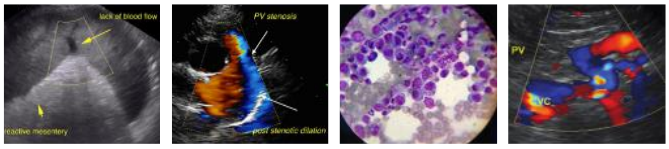

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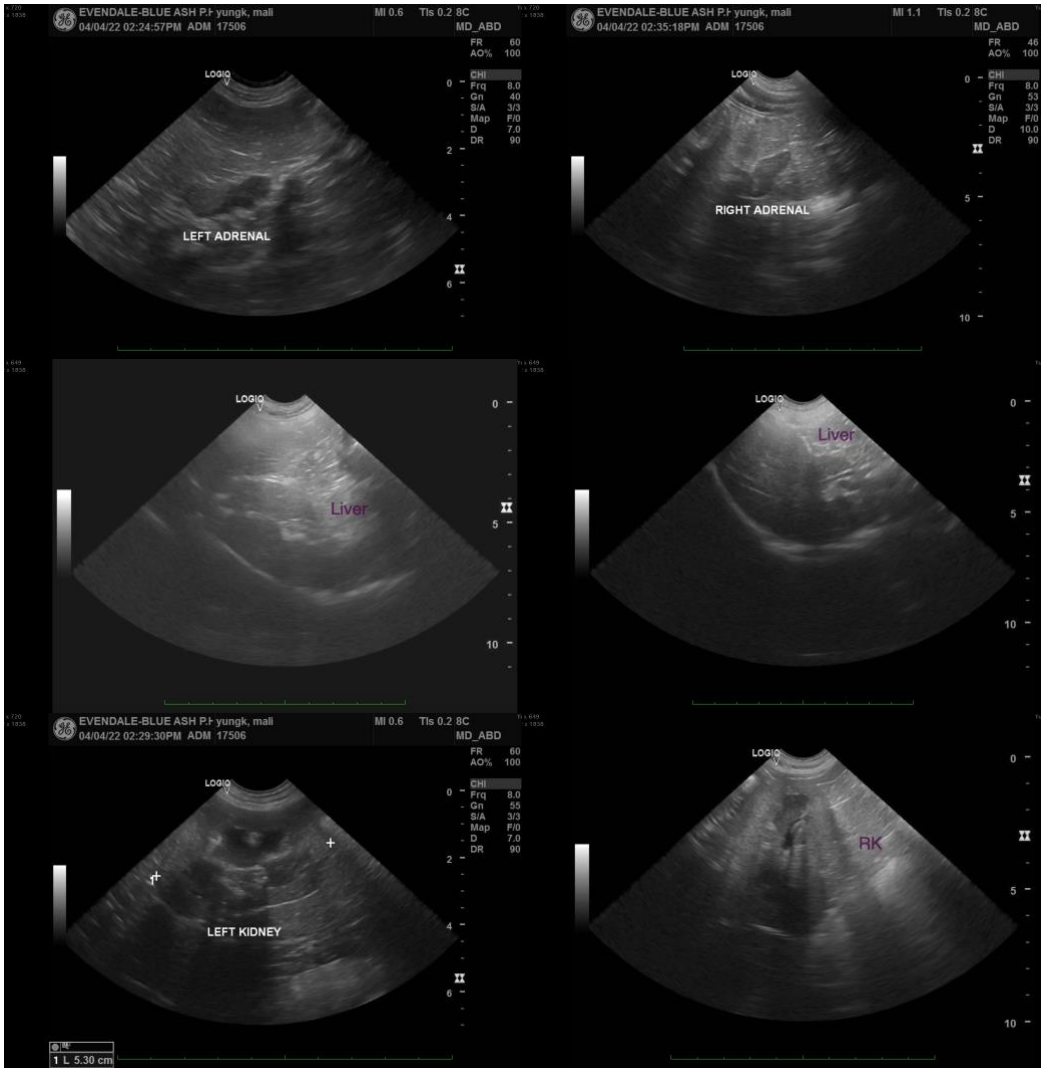

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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