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Clinical Sonography & Telecytology
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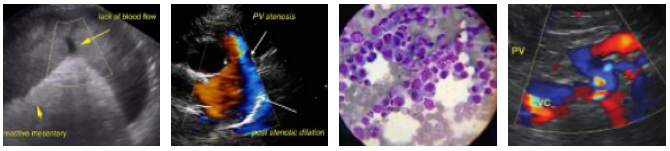


PATIENT
Mya Armbruster

SPECIES
Canine

BREED
Golden Retriever

SEX
Female, spayed

AGE
11 Yrs.

WEIGHT
61.4 lbs.

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

IMAGING PERFORMED BY
Dr. Goodman

HOSPITAL NAME
Evandale Blue Ash PH

REFERRING VET
Dr. Wehmer

INVOICE
14883

DATE
5/2/23

PRESENTING CLINICAL SIGNS

History: Patient presented today for abdominal ultrasound due to continue elevation of liver enzymes despite being on Denamarin. Originally had liver enzyme changes 10/2021 but was also on prednisone at the time for an ear infection. Owner declined rechecking values after prednisone course since she was clinically doing well. CBC/Chem performed 11/2022 and liver enzymes were improved from last year. Rechecked liver enzymes 12/2022, ALP normalized and ALT still mildly elevated. Started on Denamarin Advanced and rechecked values on 3/2023, which showed her ALT increased significantly. Owner opted to pursue ultrasound instead of antibiotic course. Patient remains on Denamarin Advanced. Clinically doing well at home.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The left kidney is normal size (6.16 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.

The right kidney is normal size (6.26 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.

Adrenal Glands

The left adrenal gland is normal size (0.71 cm at cranial pole) (0.71 cm at caudal pole); 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.

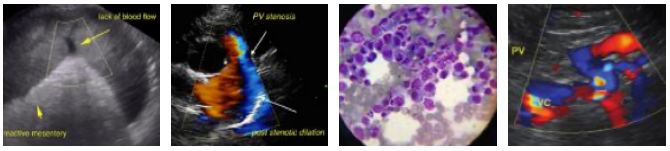
The right adrenal gland is normal size (0.46 cm at cranial pole) (0.78 cm at caudal pole); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (2.19 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 2.85 cm hypoechoic mass/area is observed near the hilus. The lesion does not appear to cause capsular expansion. In addition, a few ill-defined hyperechoic nodules/areas are seen, the largest measuring 0.96 cm in diameter. Splenic vasculature is normal.

Liver

The liver is normal to slightly prominent in size with irregular peripheral contours. The parenchyma is isoechoic relative to the spleen. Numerous ill-defined hyperechoic to heterogeneous nodules/masses are observed throughout the organ. One of the larger lesions measures 2.39 cm in diameter. 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 polypoid like lesion is arising from the luminal



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surface. A small to moderate amount of mostly gravity-dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is not distended. The gastric wall is 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. There is no evidence of an obstructive pattern.

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. 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:

- The diffuse hepatic nodules/masses may represent a benign process (i.e., regenerative nodular hyperplasia, inflammatory foci, other). Alternatively, infiltrative neoplasia may be present.
- The hypoechoic splenic mass/lesion could be consistent with a tumor (i.e., metastatic, primary tumor). Alternatively, a benign focus (i.e., lymphoid hyperplasia, extramedullary hematopoiesis or similar) may be present. The hyperechoic splenic nodules are most consistent with a benign process (i.e., myelolipomas) with a low possibility of neoplasia.

Secondary Findings:

- Gallbladder debris, non-mucocele.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- Consider fine needle aspirates of the liver and splenic lesions, if clotting status is appropriate. 25-gauge needles should be used. If cytology results are inconclusive, consider surgical liver biopsies +/- a splenectomy with submission of the spleen for histopathology. If surgery is pursued, aerobic and anaerobic bile cultures should be considered along with hepatic copper quantitation.

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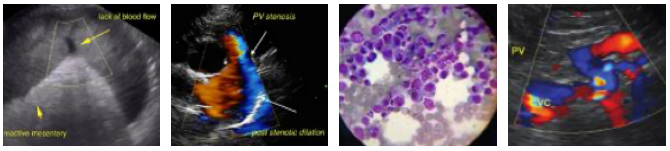

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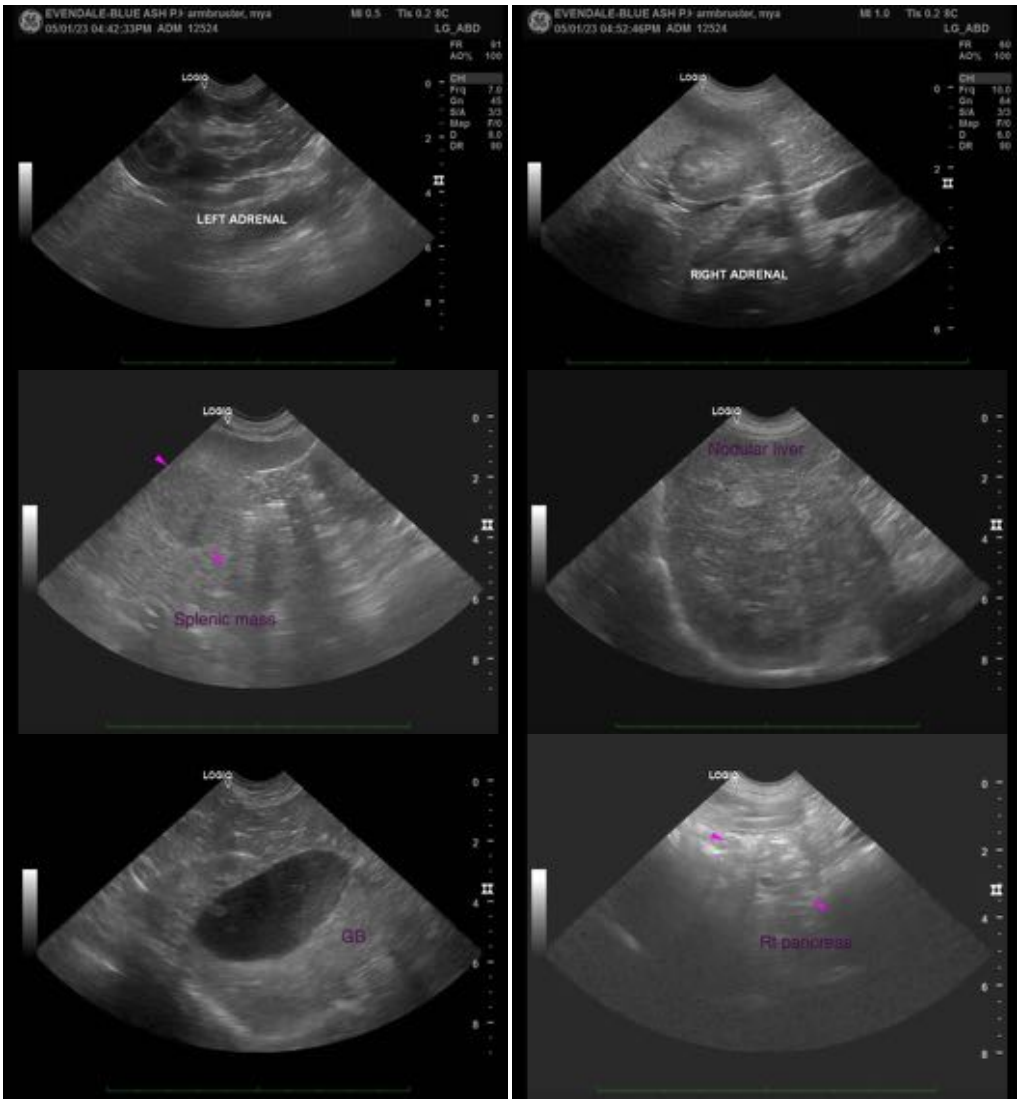

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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