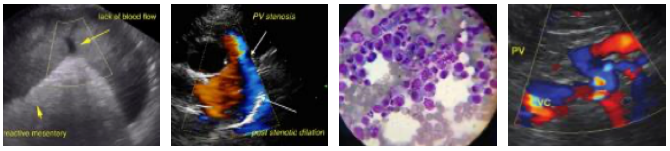
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Casey Mayhew

SPECIES
Canine

BREED
Cocker spaniel

SEX
Male, neutered

AGE
9 Yrs. 10 months

WEIGHT
50 lbs.

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

IMAGING PERFORMED BY
Jessica Miller

HOSPITAL NAME
ACC Flanders

REFERRING VET
Dr. Hallihan

INVOICE
12544

DATE
11/16/21

PRESENTING CLINICAL SIGNS

History: Recheck- liver values still eleavted- u/s 7/7/21- prominent bilateral adrenal glands, splenic nodules, mild chronic renal changes, hepatomegaly. No improvement of liver values. Current meds: Denamarin
Abnormal PE/Chem/CBC/UA Results: ALT 243 (was 264), Alk Phos 145, TP 17

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. A scant amount of suspended echogenic debris is observed within the lumen. 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 normal in size (1.13 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (6.41 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is mildly hyperechoic. 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 (5.86 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is mildly hyperechoic. 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 mildly enlarged (1.31 cm at cranial pole) (0.83 cm at caudal pole) (2.93 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.

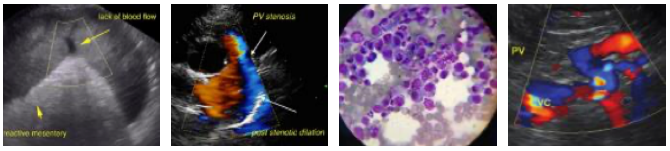
The right adrenal gland is mildly enlarged (0.99 cm at cranial pole) (0.83 cm at caudal pole) (2.23 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.26 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A few small ill-defined hypoechoic nodules/areas 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. No distinct focal lesions are observed. 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 debris is observed within the lumen, most of which is gravity-dependent and



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some of which is adhered to the luminal surface. The cystic and common bile ducts are normal/not seen. A fine needle aspirate of the liver was performed during the study without obvious complications.

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. 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 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:

- Non-specific diffuse hepatopathy. Differentials include inflammatory/immune mediated disease, hepatotoxicosis (i.e., copper), fibrosis, other hepatopathy +/- concurrent age-related changes. Changes are similar to the previous sonogram.
- Gallbladder sludge, non-mucocele.

Secondary Findings:

- Bilateral adrenomegaly. Changes are similar to the previous sonogram.
- Bilateral non-specific age-related renal changes.
- 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

Further recommendations should be based on cytology results. If cytologic evaluation is inconclusive and an aggressive approach is desired, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation. Alternatively, serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If values continue to increase, repeat abdominal ultrasound +/- hepatic biopsies can be reconsidered.

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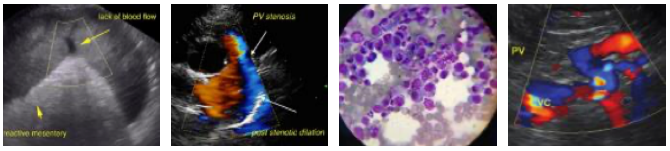

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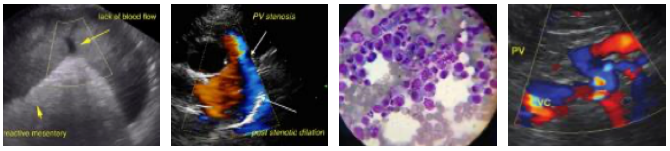

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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