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Clinical Sonography & Telecytology
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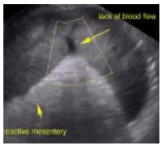
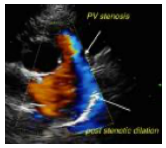
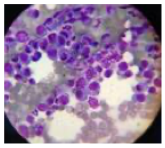
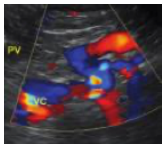

SonoPath.com
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PATIENT
Beignet Vazquez

SPECIES
Canine

BREED
Mix

SEX
Intact Female

AGE
11 years

WEIGHT
40.6 lbs

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

IMAGING PERFORMED BY
Dr. G. Ferrer, DVM

HOSPITAL NAME
Paseos VC

REFERRING VET
Dr. F. Ortiz Vidal, DVM

INVOICE
11420

DATE
8.17.22

PRESENTING CLINICAL SIGNS

History: Presented for an abdominal ultrasound to evaluate increase liver enzymes and PU/PD clinical signs. Patient presented on 8/4/22 with loss of muscular mass and polydipsia. Was found with potbelly abdomen.

Abnormal PE/Chem/CBC/UA Results: 8/4/22 Radiographs shown hepatomegaly. CBC WBC: 20.01 K/uL (5.05-16.76) NEU: 14.52 K/uL (2.95-11.64) MONO: 1.58 K/uL (0.16-1.12) EOS: 0.01 K/uL (0.06-1.23) PCT: 0.52% (0.14-0.46) CHEM: CREA: 0.3 mg/dL (0.5 -1.8) ALT: 620 U/L (10-125) ALKP: 1895 U/L (23-212) GGT: 39 U/L (0-11) LIPA: 1959 U/L (200-1800) TT4: 0.6 ug/dL (1.0-4.0) but a thyroid confirmatory panel was normal with Free T4 and TSH.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** wall is 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. The region of the trigone and the visible portion proximal urethra are normal.

The **left kidney** is normal size (7.38 cm in length); with a normal shape and smooth peripheral margins. The cortex is hyperechoic. There is a normal 1:3 cortex to medulla ratio. There is moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The **right kidney** is normal size (7.33 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The **left adrenal gland** is enlarged (0.91 cm at cranial pole) (1.10 cm at caudal pole) (3.29 cm in length); with a slightly irregular shape. Three hyperechoic nodules are visualized. The nodule at the cranial pole measures 0.75 x 0.72 cm. The nodule mid-gland measures 0.79 x 0.79 cm. The nodule at the caudal aspect measures 0.76 x 0.69 cm. The remaining parenchyma is mildly heterogenous with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature appear normal.

The **right adrenal gland** is enlarged (1.44 cm at cranial pole) (1.06 cm at caudal pole) (3.32 cm in length); with a slightly irregular shape. A 1.34 x 1.20 cm hyperechoic nodule is observed at the cranial pole. The parenchyma at the caudal pole is mildly heterogenous with some loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature appear normal.

Spleen

The **spleen** is normal in size (1.85 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 myelolipomas are observed in the region of the hilus.

Liver

The **liver** is subjectively enlarged with swollen/rounded peripheral contours. The parenchyma is hyperechoic relative to the spleen and slightly mottled and heterogenous in appearance. Numerous, small, ill-defined hypoechoic nodules are observed throughout the organ. In addition, a few, small, hyperechoic nodules are seen. Hepatic vasculature and intrahepatic 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 large amount of aggregated, echogenic suspended sludge, in a partially stellate pattern is observed within the lumen. 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 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. There is no evidence of an obstructive pattern.

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

There is no evidence of free fluid. Several prominent mesenteric **lymph nodes** are visualized, the largest measuring 3.41 cm in length.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Bilateral adrenomegaly. The adrenal nodules trend toward the benign (i.e., nodular hyperplasia) with a lower possibility of emerging tumors.
- The gall bladder changes are consistent with a developing mucocele.
- The hepatic parenchymal changes are nonspecific and could be secondary to a benign process (i.e., regenerative nodular hyperplasia and/or vacuolar hepatopathy). Given the substantially elevated ALT, underlying liver disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis, hepatotoxicosis, Leptospirosis, infiltrative neoplasia (less likely)), is also possible.

Secondary Findings

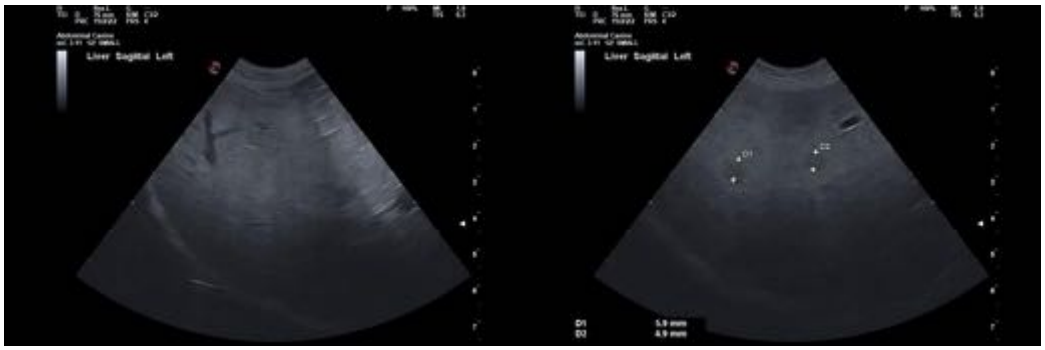
- The bilateral renal changes are most consistent with chronic interstitial nephrosis/nephritis.
- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

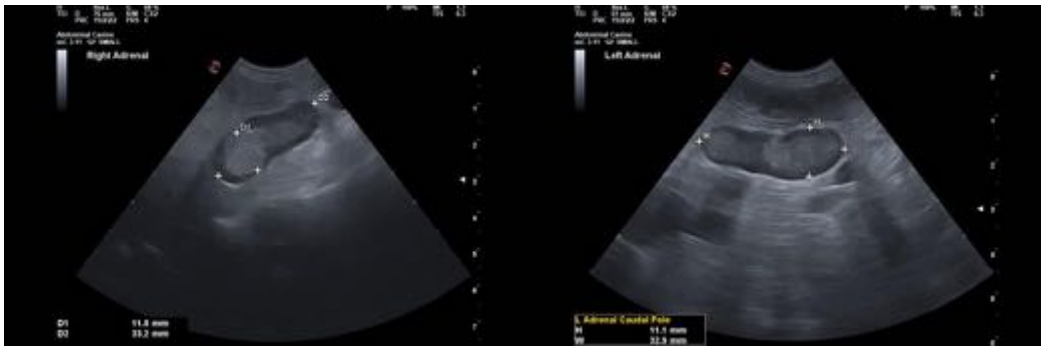
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the patient's clinical history, consider further testing for Cushing's disease (i.e., low-dose dexamethasone suppression test or ACTH stimulation test).

Given the substantially elevated ALT, also consider pre-and postprandial serum bile acids, Leptospirosis testing (i.e., blood and urine PCR, serology), +/- hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy).

Regarding the gall bladder changes, consider initiation of Ursodiol therapy with serial sonographic monitoring (i.e., every 6-8 weeks) to assess for progression to a fully formed mucocele.





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, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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