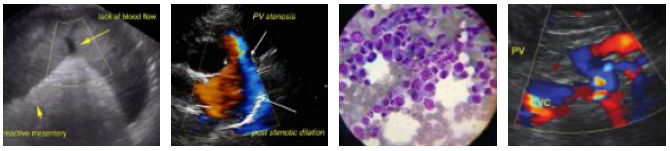
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Oreo Ortiz

SPECIES
Canine

BREED
Mixed breed

SEX
Female, spayed

AGE
7 Yrs.

WEIGHT
46.8 lbs.

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

IMAGING PERFORMED BY
Dr. Ferrer

HOSPITAL NAME
Paseos VC

REFERRING VET
Dr. Ortiz

INVOICE
12913

DATE

PRESENTING CLINICAL SIGNS

History: Presented for an abdominal ultrasound to evaluate elevated liver enzymes. The patient came in for LDDST test was normal and the patient suppressed recommended re-check abdominal ultrasound to see the liver as next step b/c values are extremely high
Abnormal PE/Chem/CBC/UA Results: CHEM: ALT 247 (10 - 125 U/L) ALP >2,000 (23 - 212 U/L) Cholesterol 323 (110 - 320 mg/dL) Cortisol - Baseline 8.0 µg/dL Cortisol - 8 hr Post Dex <0.5 µg/dL

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The wall in the region of the apex is slightly thickened (up to 0.26 cm) with an irregular mucosal surface. The wall tapers to a normal thickness as it extends toward the urinary bladder neck. 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 (6.33 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 (5.80 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. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is normal size (0.47 cm at cranial pole) (0.62 cm at caudal pole) (2.36 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.

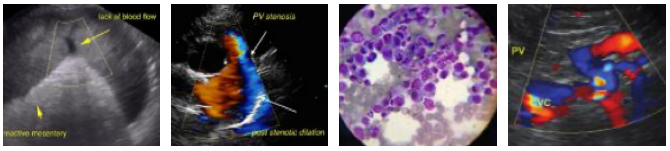
The right adrenal gland is mildly enlarged with a slightly irregular shape. A 1.61 x 0.84 cm irregular hyperechoic to slightly heterogeneous nodule is observed at the cranial to mid-aspect. The glandular echogenicity and detail at the caudal aspect are unremarkable. The phrenicoabdominal vein and surrounding vasculature are normal with no obvious evidence of vascular invasion.

Spleen

The spleen is normal in size (1.82 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 0.34 cm myelolipoma is observed in the region of the hilus. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely mottled and heterogeneous in appearance. Several



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varying sized, ill-defined hypoechoic nodules are observed throughout the organ. In addition, at least one hyperechoic nodule is observed approximately mid-liver. A 0.71 cm target like lesion is also observed deep left to mid-liver. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder is over distended. The wall is normal in thickness. A large amount of aggregated echogenic suspended sludge is observed within the lumen and appears to extend into the cystic duct. The common bile duct appears normal, measuring 0.23 cm in diameter at the distal aspect.

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 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. The medial iliac lymph nodes are visible but are subjectively normal in size and echogenicity. A prominent mesenteric lymph node measuring 2.12 cm in length is also seen. The node is normal in shape and echogenicity.

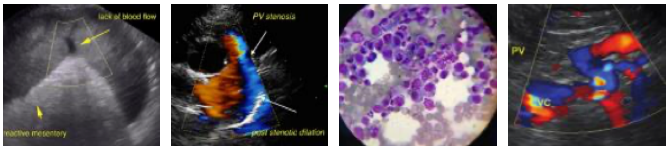
ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- The gallbladder changes are most consistent with a mucocele with suspected extension into the cystic duct.
- Overall, the hepatic nodules trend toward the benign (i.e., regenerative nodules) with a lower possibility of infiltrative neoplasia. However, the target lesion is more concerning for possible neoplasia.
- The right adrenal nodule trends toward the benign (i.e., regenerative nodular hyperplasia). However, emerging neoplasia cannot be completely excluded.

Secondary Findings:

- Minor degenerative renal changes.
- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia with a low possibility of infiltrative neoplasia.



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- The urinary bladder wall changes in the region of the apex may be a normal variant for this patient or may be secondary to cystitis. Correlation with clinical findings is recommended.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- A cholecystectomy with submission of the gallbladder for histopathology is recommended along with hepatic biopsies, with particular attention to the target lesion, if visible. If surgery is pursued, referral to a board-certified surgeon is recommended due to the potential for perioperative complications. Three-view thoracic radiographs should be performed prior to anesthesia to assess cardiopulmonary status.
- If a more conservative approach is desired, Ursodiol can be initiated with serial sonographic monitoring (i.e., every 4-6 weeks) of the gallbladder to assess for progression. It should be noted however, that gallbladder rupture can occur at any point with mucoceles, resulting in bile/septic peritonitis.
- Serial sonographic monitoring of the right adrenal gland nodule and hepatic target lesion (if not surgically removed) is recommended to assess for progression.

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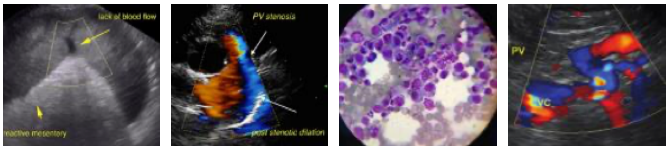

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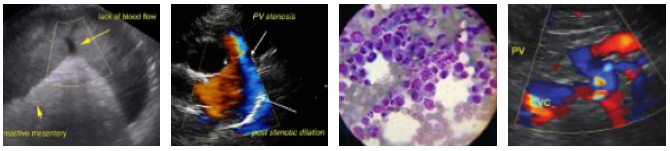

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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 ACVIM (*Small Animal Internal Medicine*)

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