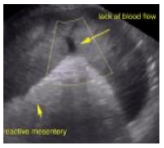
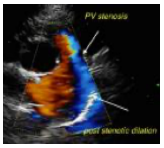
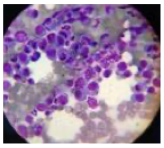
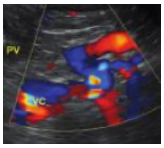
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
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PATIENT

Luna Ocasio

SPECIES

Canine

BREED

Poodle

SEX

Female Spayed

AGE

9 years

WEIGHT

19.5 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ferrer DVM

HOSPITAL NAME

Paseos VC

REFERRING VET

Dra. Alexis Imholz

INVOICE

12350

DATE

3.9.23

PRESENTING CLINICAL SIGNS

History: The patient presented as a referral for an abdominal ultrasound for evaluation of the liver. Pt has hx of elevated hepatic enzymes (ALT). The patient is on Urinary Diet and Denamarin, otherwise healthy.

Abnormal PE/Chem/CBC/UA Results: Laboratory: Bile acids: WNL ALT: 138 (10-125)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended. The wall is mildly thickened (up to 0.35 cm) with an irregular mucosal surface. Numerous cystic calculi are observed within the lumen (the largest measuring 0.78 cm in diameter). The stones extend into the proximal urethra. A moderate amount of suspended echogenic debris is also observed within the bladder lumen.

The left kidney is normal in size (4.70 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

The right kidney is normal in size (4.58 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

Adrenal Glands

The left adrenal gland is normal in size (0.48 cm at cranial pole) (0.48 cm at caudal pole) (2.18 cm in length) with a normal shape and 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 in normal size (0.40 cm at cranial pole) (0.38 cm at caudal pole) (2.23 cm in length) with a normal shape and 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 (0.95 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. 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 moderate amount of aggregated, echogenic to mineralized, partially dependent sludge 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 body/right limb of the pancreas are 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
There is no evidence of free fluid. One to two prominent mesenteric lymph nodes are visualized (the largest measuring 0.38 cm in length). Surrounding mesentery is slightly hyperechoic.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Nonspecific diffuse hepatopathy. Differentials include reactive hepatopathy, inflammatory disease (i.e., bacterial cholangiohepatitis, chronic hepatitis), hepatotoxicosis (i.e., copper), fibrosis, Leptospirosis, other hepatopathy.
- Gall bladder sludge – non-mucocele
- Cystic/urethral calculi with bladder wall changes consistent with cystitis

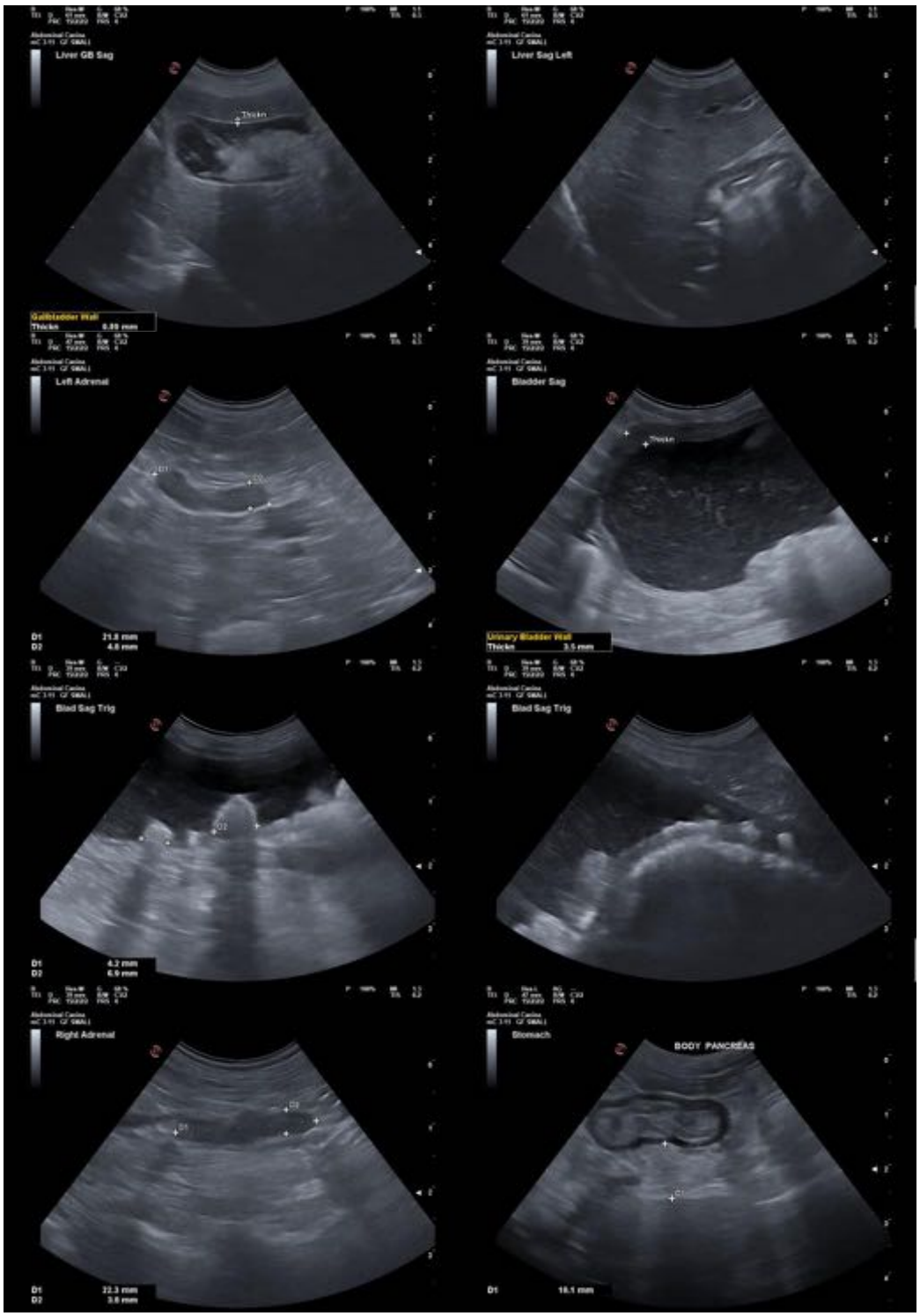
Secondary Findings

- Mild bilateral age-related renal changes with subtle dystrophic mineralization
- Minor age-related pancreatic remodeling
- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider pre-and postprandial serum bile acids
- Leptospirosis testing (i.e., blood and urine PCR, serology) can also be considered if the liver enzyme elevation is acute and/or if clinical suspicion for the disease is high.
- Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
- If a more conservative approach is desired, consider empirical treatment for cholangiohepatitis with amoxicillin-clavulanic acid along with hepatic antioxidants. If liver values do not begin to improve within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If values do improve, a 4–6-week course of treatment is recommended.

- Regarding the bladder/urethral stones, a cystotomy with stone removal, analysis and culture is recommended. If pursued, hepatic tissue sampling and bile cultures can be performed at the time of surgery.



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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