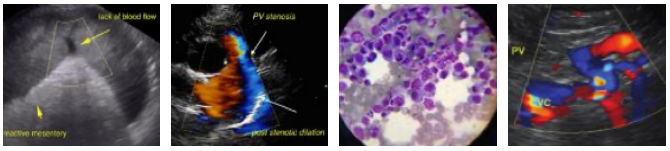
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Mickey Rodriguez

SPECIES
Canine

BREED
Yorkshire terrier

SEX
Male, neutered

AGE
13 Yrs.

WEIGHT
10.4 lbs.

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

IMAGING PERFORMED BY
Dr. Ferrer

HOSPITAL NAME
Paseos VC

REFERRING VET
Dr. Munoz

INVOICE
14514

DATE
1/25/23

PRESENTING CLINICAL SIGNS

History: Presented as as referral for an abdominal ultrasound to further evaluate elevated liver enzymes. Pt has liver enzymes elevated on routine chemistries for approximately 3 months and pre/post prandial bile acids elevate. Tx: Denamarin ¼ Tab am on fasting
Abnormal PE/Chem/CBC/UA Results: CHEM: ALT: 10/28/22 - 186 U/L, 12/1/22 - 243 U/L 1/9/23 - 218U/L ALP: 10/28/22 407U/L, 10/28/22 - 286U/L, 9/1/23 - 328 BILE ACID POSTPRANDIAL: 59.5 umol/L FNA of the liver enzymes was done: Pending pathology

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended. The wall is normal in thickness with a smooth mucosal surface. Several small cystic calculi are visualized, the largest measuring 0.34 cm in diameter. A scant amount of echogenic debris is also observed within the lumen. The region of the trigone is normal. A few small ureteroliths are observed within the prostatic/proximal urethral lumen.

The prostate is normal in size (0.71 cm in width) and shape. Parenchyma is homogenous. A few ureteroliths are observed within the lumen. The urethra is not overtly dilated.

The left kidney is normal size (4.27 cm in length) with a slightly irregular shape. The cortex is variably thickened and hyperechoic and there is moderate loss of corticomedullary distinction. Several cortical cysts are present. A few mineralized foci are also seen. Mild pyelectasia is visualized (0.22 cm in the transverse plane). There is no evidence of hydroureter.

The right kidney is normal size (4.36 cm in length) with a normal shape and architecture and smooth peripheral contours. The cortex is hyperechoic and there is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Several non-obstructive nephroliths are visualized. Mild pyelectasia is present (0.22 cm in the transverse plane). There is no evidence of infarcts or hydroureter. Several cortical cysts are seen.

Adrenal Glands

The left adrenal gland is normal size (0.48 cm at cranial pole) (0.48 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.

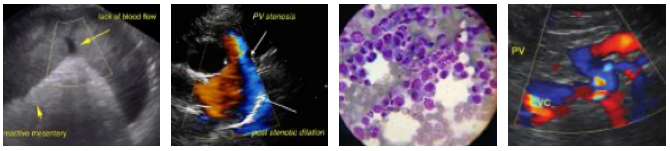
The right adrenal gland is normal size (0.58 cm at cranial pole) (0.39 cm at caudal pole) (1.47 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (0.94 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 prominent in size with swollen peripheral contours and rounding of the left lateral lobe. The parenchyma is isoechoic relative to the spleen and diffusely heterogeneous in appearance. A 1.41 cm ill-defined hyperechoic nodule is observed deep on the left side. Vascular and



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

PATIENT
Mickey Rodriguez

SPECIES
Canine

BREED
Yorkshire terrier

SEX
Male, neutered

AGE
13 Yrs.

WEIGHT
10.4 lbs.

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

IMAGING PERFORMED BY
Dr. Ferrer

HOSPITAL NAME
Paseos VC

REFERRING VET
Dr. Munoz

INVOICE
14514

DATE
1/25/23

biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. There is no obvious evidence of a congenital extrahepatic portosystemic shunt. The gall bladder lumen is distended. The wall is normal in thickness. A moderate amount of aggregated, echogenic, partially dependent to suspended 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. No obstructive disease is noted.

Pancreas

The pancreas is diffusely visible/prominent with slightly irregular peripheral contours. The parenchyma is hyperechoic relative to surrounding omental fat and slightly mottled in appearance. A 0.34 cm hypoechoic nodule is observed in the left limb. The pancreatic duct is not overtly dilated.

Free Abdomen

Trace ascites is observed post aspiration of the hepatic nodule. A few prominent mesenteric lymph nodes are visualized, the largest measuring 1.44 cm in length. Surrounding mesentery is hyperechoic.

ULTRASONOGRAPHIC FINDINGS

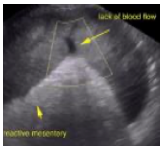
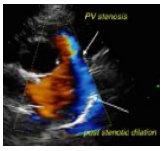
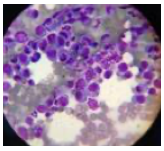
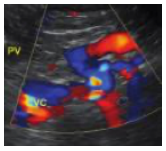
Primary Findings:

- Non-specific diffuse hepatopathy. Differentials include inflammatory disease (i.e., chronic hepatitis, bacterial cholangiohepatitis), hepatotoxicosis (i.e., copper), fibrosis, microvascular dysplasia, infiltrative neoplasia (less likely) +/- concurrent benign age-related change (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy). The hyperechoic hepatic nodule trends toward the benign (i.e., regenerative nodular hyperplasia) with a lower possibility of an emerging tumor or other pathology.
- Cystic calculi and small ureteroliths.

Secondary Findings:

- The pancreatic changes are most consistent with age-related remodeling with fibrosis. A previous episode of pancreatitis cannot be completely excluded. Correlation with the patient's clinical history is recommended.
- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.
- The bilateral renal changes are most consistent with chronic interstitial nephrosis/nephritis with non-obstructive nephrolithiasis and pyelectasia.
- Trace ascites post aspiration of hepatic nodule.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT

Mickey Rodriguez

SPECIES

Canine

BREED

Yorkshire terrier

SEX

Male, neutered

AGE

13 Yrs.

WEIGHT

10.4 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ferrer

HOSPITAL NAME

Paseos VC

REFERRING VET

Dr. Munoz

INVOICE

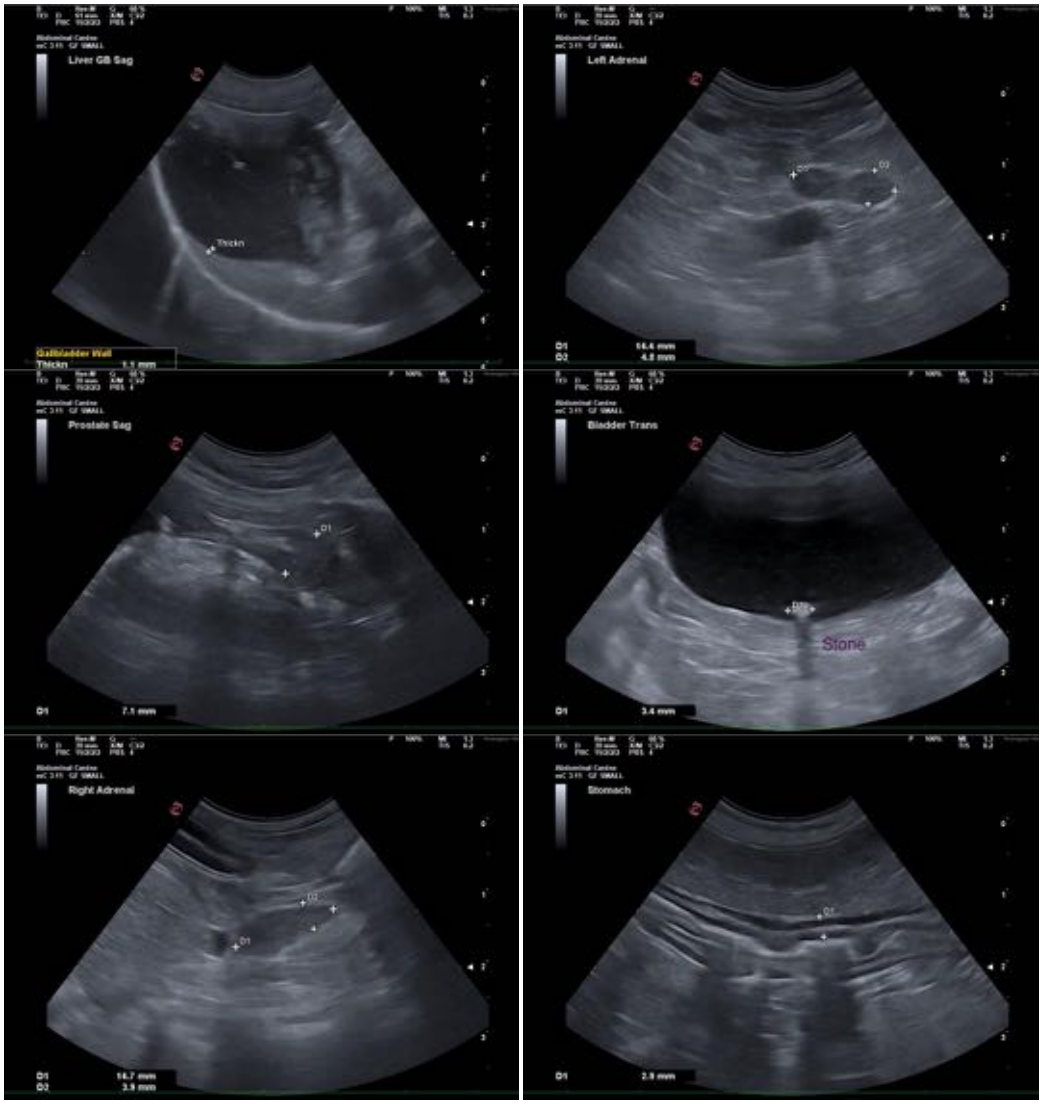
14514

DATE

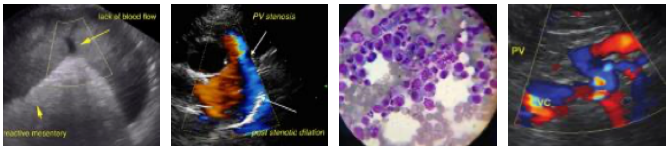
1/25/23

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- If hepatic cytology results are inconclusive, consider laparoscopic or surgical hepatic biopsies with aerobic and anaerobic bile cultures and hepatic copper quantitation. While awaiting test results, consider empirical treatment for bacterial cholangiohepatitis (i.e., broad spectrum antibiotics, Denamarin). If the liver values do not improve within 7-10 days of initiating therapy, antibiotics should be discontinued.
- Regarding the cystic calculi, consider a cystotomy with stone removal, analysis and culture. If surgery is not pursued at this time, consider an attempt at medical dissolution (i.e., prescription urinary diet, broad spectrum antibiotics).



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Mickey Rodriguez

SPECIES

Canine

BREED

Yorkshire terrier

SEX

Male, neutered

AGE

13 Yrs.

WEIGHT

10.4 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ferrer

HOSPITAL NAME

Paseos VC

REFERRING VET

Dr. Munoz

INVOICE

14514

DATE

1/25/23

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)
info@SonoPath.com