SonoPath
Clinical Sonography & Telecytology
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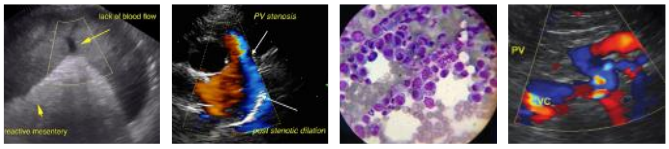


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Lily Nimtz

SPECIES

Canine

BREED

Dachshund

SEX

FS

AGE

5 years

WEIGHT

22 lbs.

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Dr. Jennifer Todd

HOSPITAL NAME

Lambs Gap AH

REFERRING VET

Dr. Jennifer Todd

INVOICE

17194

DATE

6/29/23

PRESENTING CLINICAL SIGNS

Lily is a five year old, FS, Dachshund with a history of elevated liver enzymes. Lily was presented in February for vomiting. No toxin exposure was noted. ALT was 7,550, AST was 2,756, ALP was 2,107 and Total Bili was 1.8. Enrofloxicin, metronidazole, cerenia and denamarin were prescribed. Lily's liver enzymes initially improved and the vomiting resolved. But her liver enzymes have not returned to normal despite continued use of denamarin.

At last check on 5/11/23 Lily's ALT=438 and AST=279. ALP and total bilirubin were normal. Abdominal ultrasound was advised and bile acids will follow.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. No evidence of mineral or calculi was noted. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

No evidence of pathology in the area of the aortic trifurcation.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 5.3 cm in length. The right kidney measured 5.5 cm in length.

Adrenal Glands

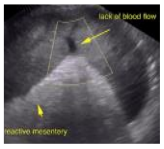
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.7 cm length x 0.43 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.1 cm length x 0.52 cm width at the caudal pole.

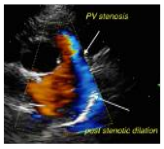
Spleen

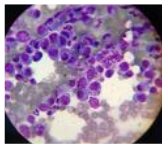
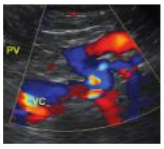
The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver/ Gallbladder

The liver demonstrated mild to possible moderate enlargement. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size containing primarily anechoic content with mild, nonorganized, variably hyperechoic congealed gallbladder sediment. No evidence of





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gallbladder or peripheral gallbladder inflammatory criteria was noted. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild, nonshadowing ingesta sonographically consistent with food without signs of obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Minor similar appearing segmental nonshadowing ingesta / chyme was present with no signs of obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The pancreas base and right pancreatic limb was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Hepatopathy - sonographically benign
- Mild gallbladder sediment (non-mucocele)
- Minor pancreatic remodeling - likely incidental, patient variant, previously inflammatory episode, possible chronic pancreatitis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although nonspecific, the liver may suggest persistent nonspecific inflammatory criteria / hepatitis, given persistent elevated ALT / AST combination, nonobstructive cholestasis, vacuolar hepatic changes, toxic hepatopathy, i.e., copper, inflammatory disease, i.e., hepatitis / cholangiohepatitis, or other hepatopathy are all potentials without evidence neoplastic criteria.

Assuming normal clotting status, screening hepatic FNA cytology could be considered primarily to assess for inflammatory cells. Hepatic core surgical biopsy is likely required for a definitive diagnosis.

The addition of Ursodiol to current Denamarin, given the presence of gallbladder debris, as well as its antioxidant and immunomodulatory effects within the liver, may prove beneficial. No evidence of an intrahepatic or extrahepatic shunt was noted.

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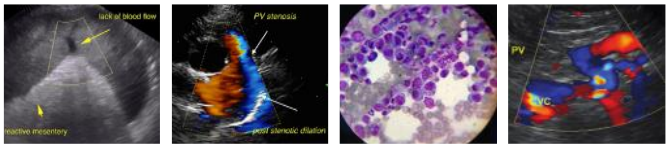

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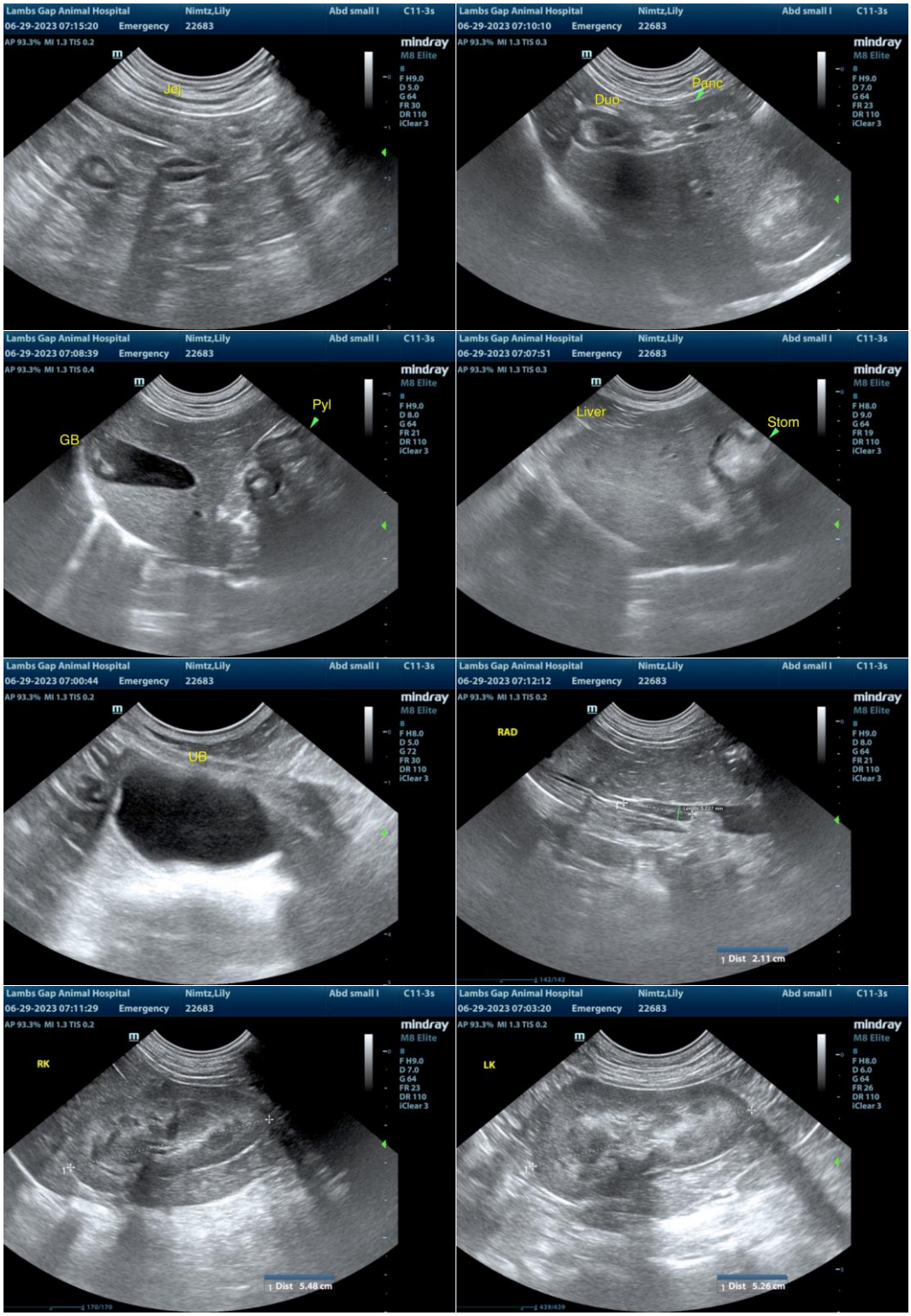

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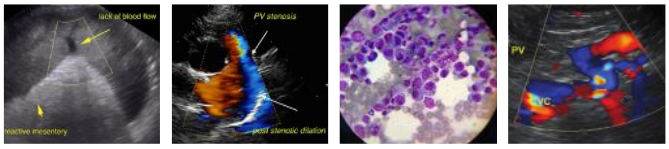

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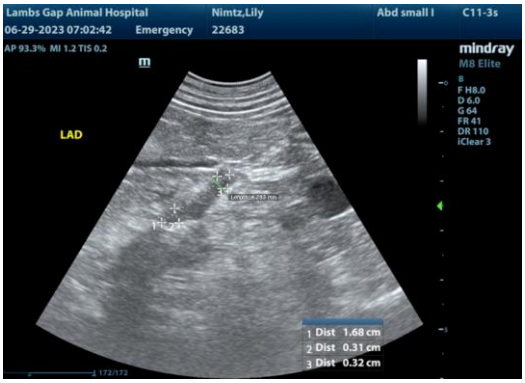

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
info@sonopath.com