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Clinical Sonography & Telecytology
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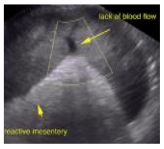
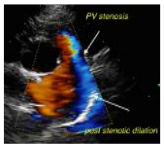
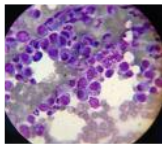
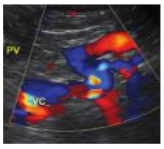




SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Chase Arends

SPECIES

Canine

BREED

Dachshund

SEX

Male

AGE

13y, 3m

WEIGHT

20

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Mack

HOSPITAL NAME

Northside VC

REFERRING VET

Dr. Mack

INVOICE

16080

DATE

2/8/23

PRESENTING CLINICAL SIGNS

Vomiting and not eating
Abnormal PE/Chem/CBC/UA Results: Alt -- too high to read ALKp- 1922 GGT- 33 tbil - 4.3 Chol-434 TP- 8.5 ALB-4.0

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 4.6 cm in length. The right kidney measured 4.6 cm in length.

Adrenal Glands

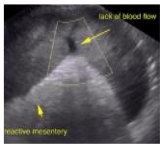
The bilateral adrenal glands were mildly prominent in size. The left adrenal gland exhibited uniform mildly expansive nodule at the caudal pole, as well as discretely nodular cranial pole. The caudal pole left adrenal nodule measured 0.9 cm x 0.89 cm. Overall, the left adrenal gland measured 0.62 cm width at the cranial pole and 0.90 cm width at the caudal pole. Concurrent, similar appearing mid to cranial right adrenal nodule was present measuring 1.3 cm x 1.0 cm. Overall, the right adrenal gland measured 1.0 cm width at the cranial pole and 0.64 cm width at the caudal pole. No evidence of capsular escape to vascular invasion associated with the left and right adrenal nodules. No evidence of mineralization was noted.

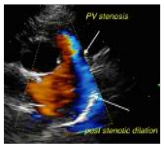
Spleen

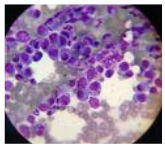
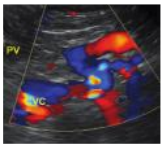
The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute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

Liver/ Gallbladder

The liver presented subjective mild enlarged size. The hepatic parenchyma revealed mildly decreased echogenicity compared to the spleen and renal cortical parenchyma with a mild coarse echotexture. Mild increased yet indistinct prominence of the portal vascular border was evident. The capsule of the liver was normal in margination. Distinct masses or nodules were not evident. The hepatic and portal vasculature were normal in appearance. The gallbladder was mildly distended in size with mildly prominent to hyperechoic gallbladder walls. The cystic and common bile ducts were normal.





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Nondependent to organized biliary sludge exhibiting a stellate pattern was present. Minor evidence of regional peripheral inflammation was noted. No evidence of pericholecystic free fluid was noted.

Gastrointestinal

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. The stomach contained a mild amount of retained anechoic fluid with no evidence of gastric foreign material or mechanical pyloric outflow obstruction.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

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

Pancreas

The parenchyma of the pancreas base and right pancreatic limb were hyperechoic to adjacent omental fat with diffuse parenchyma remodeling. The capsule of the pancreas was mildly asymmetrical in contour without evidence of peripancreatic inflammation. These changes may suggest chronic inflammation, fibrosis, or saponification if previous history of pancreatitis. No overt signs of pancreatic neoplasia.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Hepatopathy - suspect acute on chronic hepatopathy, subjectively benign
- Mature gallbladder mucocele with subjective mild peripheral inflammation
- Bilateral nonspecific adrenal nodules
- Gastritis
- Chronic pancreatitis / pancreatic fibrosis pancreas base / right pancreatic limb pattern

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The primary cause of the patient's elevated liver enzymes and likely gastrointestinal signs is the gallbladder mucocele. Assuming normal clotting status and with perioperative antibiotic therapy, referral for cholecystectomy as soon as possible with concurrent hepatic biopsies is recommended, as medical therapy of the gallbladder mucocele will likely be unrewarding. Likewise, potential for emerging gallbladder mucocele rupture is of concern, although no evidence of regional bile peritonitis at this stage.

Considerations for the bilateral adrenal nodules may include functional vs. nonfunctional adenoma, benign hyperplasia, and lipogranulomas, while the possibility of emerging neoplasia such as pheochromocytoma, although considered less likely at this stage, cannot be definitively excluded. Screening BP is recommended to assess for evidence of hypertension, which may allude to an emerging left or right pheochromocytoma. Adrenal work up would be warranted if clinical signs consistent with adrenal hyperfunction are present. Sonographic monitoring of the bilateral adrenal nodules for evidence of progression is recommended.

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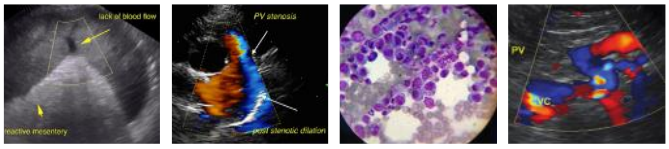

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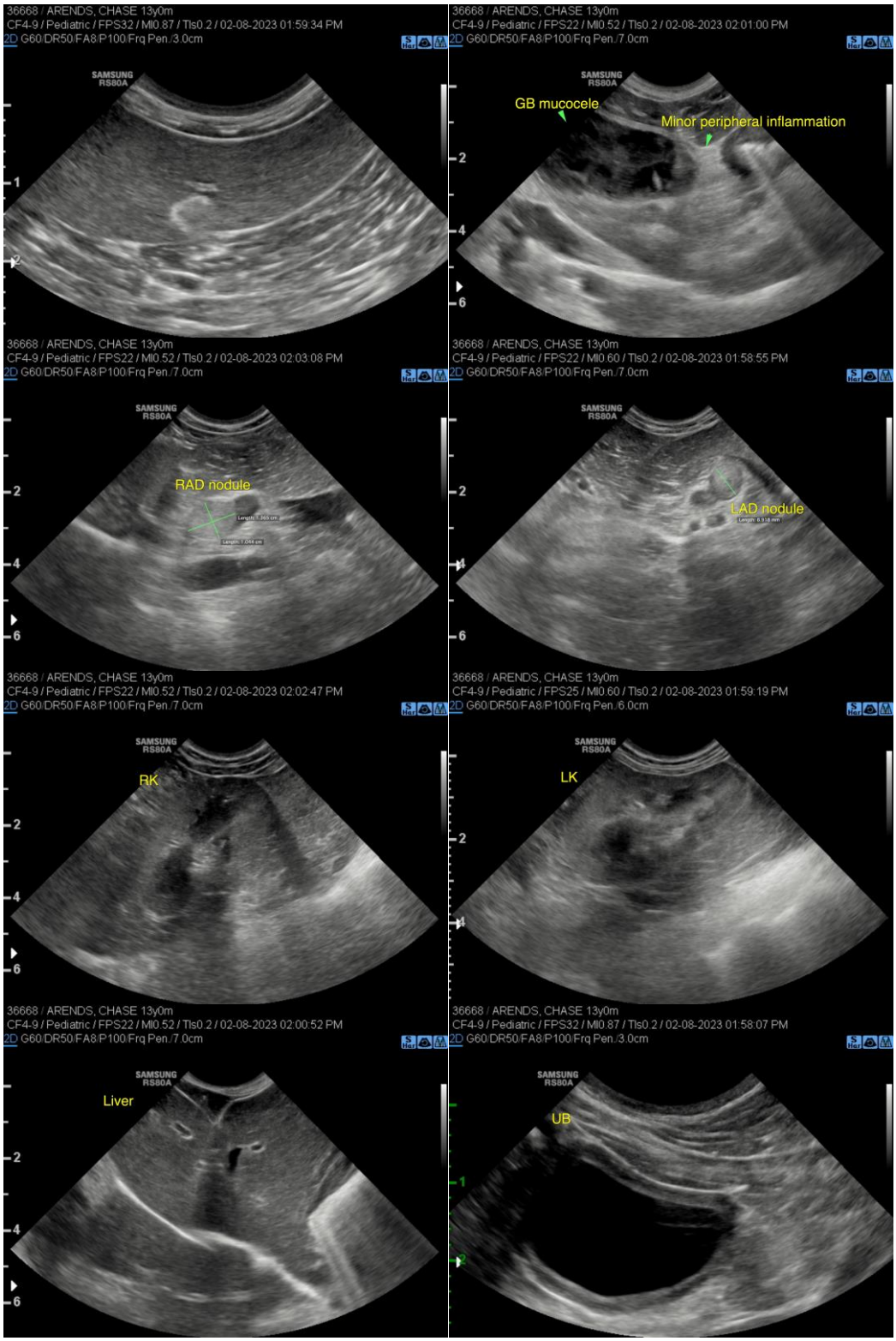

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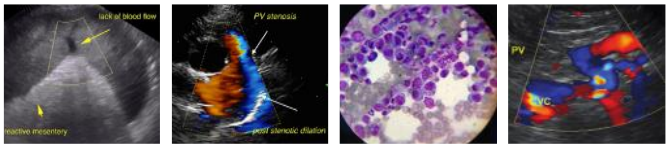

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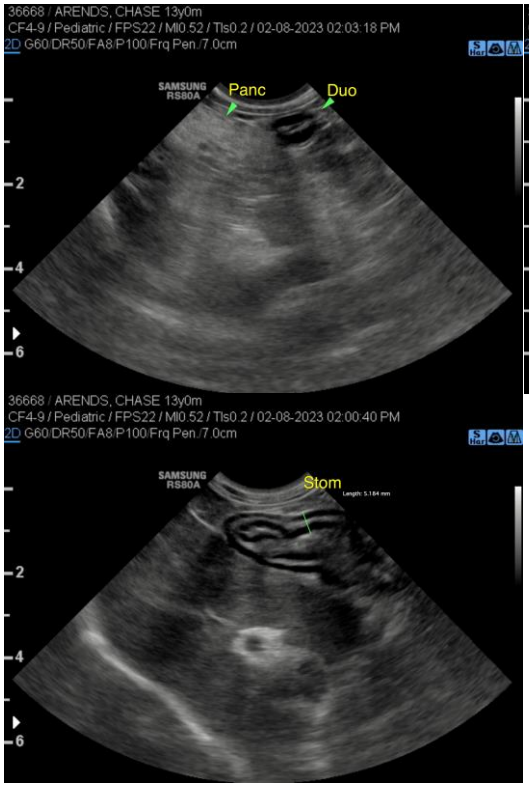

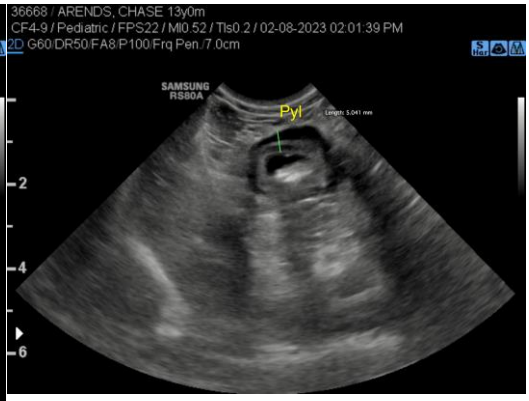

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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