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Clinical Sonography & Telecytology
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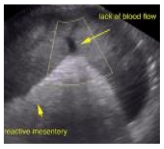

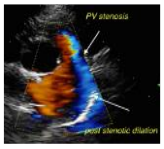

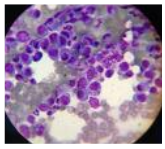
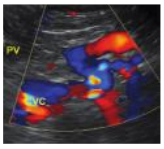

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Sasha Rasmussen

SPECIES

Canine

BREED

Pug

SEX

F/S

AGE

17

WEIGHT

7.6 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Belan

HOSPITAL NAME

Alpine 24/7

REFERRING VET

Dr. Kyono

INVOICE

16261

DATE

2/22/23

PRESENTING CLINICAL SIGNS

The owners name is Sean Rasmussen. Poor appetite despondent accident in house.
Abnormal PE/Chem/CBC/UA Results: Non diagnostic

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder was mildly distended with normal tone. The bladder contained anechoic urine primarily with minor indistinct hyperechoic sediment, which may indicate pinpoint areas of mineral. No urinary bladder tumors were noted. The urethra exhibited normal structure and tone to a depth of 3.0 cm.

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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Nonobstructive medullary, primarily lateral diverticuli, mineralization was present. No evidence of pelvic dilation or pyelectasia was present. The left kidney measured 3.7 cm in length. The right kidney measured 3.8 cm in length.

Adrenal Glands

The bilateral adrenal glands were overtly normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.45 cm width in the cranial pole and 0.41 cm width in the caudal pole. The right adrenal gland measured 0.50 cm width in the caudal pole.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

Liver/ Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver exhibited possible mild decreased parenchyma echogenicity with a moderate coarse echotexture and evidence of parenchymal remodeling. Prominent yet indistinct portal vascular borders were present. Normal hepatic vascular volume was present. No masses or nodules were noted. The gallbladder was mildly distended in size containing primarily anechoic content with moderate, inspissated to irregular, hyperechoic gallbladder debris. No evidence of peripheral inflammation was noted. The cystic and common bile ducts were normal.

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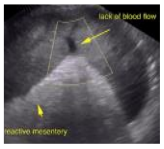

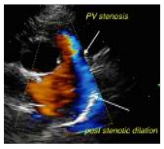

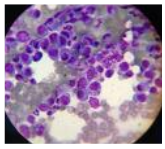
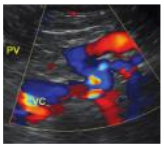

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Gastrointestinal

The stomach exhibited mild to variably prominent walls exhibiting intact, mild regional indistinct wall layer detail. The stomach was empty without evidence of retained ingesta, fluid, or foreign material. The ventral gastric body wall width measured 0.65 cm.

The intestinal walls demonstrated intact wall layering and maintained 1:3 muscularis / mucosa ratio. The mucosa exhibited mild decreased echogenicity. Intermittent hyperechoic duodenojejunal mucosal speckling was present. A mild, nonobstructive, segmental intestinal ileus pattern consisting of mild fluid accumulation in the intestinal lumen was present without obstruction or foreign material. The duodenum wall measured 0.42 cm width. The jejunum wall measured 0.39 cm width.

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

Pancreas

The pancreas exhibited variably prominent to irregular size with asymmetrical contour and nonhomogeneous, variably hypoechoic parenchyma.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Sonographically unremarkable urinary bladder with possible pinpoint nondependent mineral
- Chronic renal changes with nonobstructive medullary mineral
- Gastroenteritis pattern with prominent to mildly thickened gastric walls and mild nonobstructive segmental intestinal ileus
- Hepatic parenchymal remodeling with mildly prominent yet indistinct portal vascular borders
- Moderate congealed to irregular gallbladder debris
- Variably prominent to irregular nonhomogeneous hypoechoic pancreas

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient may be passing small amounts of mineral from the kidneys into the urinary bladder. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

The gastrointestinal appearance may suggest inflammatory criteria. However, the possibility of early to emerging gastrointestinal neoplasia cannot be excluded. Chronic to chronic active pancreatitis may be a contributing factor in this patient. Further assessment may include a GI panel to include PLI/TLI/Cobalamin/Folate, especially if evidence of weight loss.

Given the lack of reported hepatic enzyme elevations and/or cholestasis, the hepatobiliary findings are of unclear clinical significance. Potential for low-grade to mild chronic cholangitis is possible if previous history of hepatic enzyme elevations or elevated liver enzymes / cholestasis going forwards.

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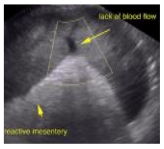

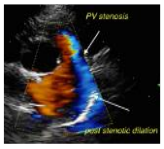

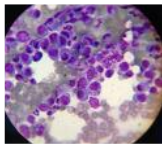
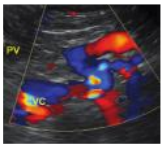

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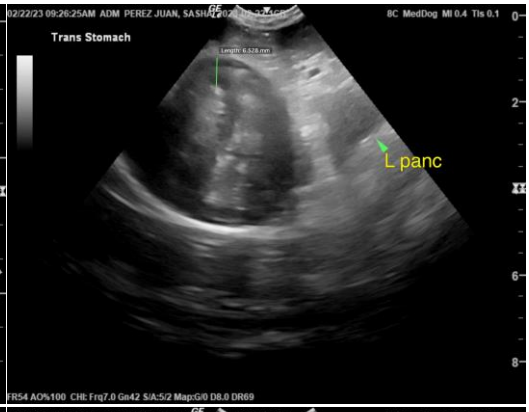

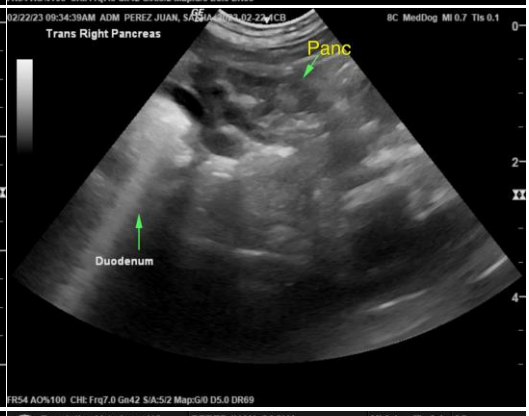

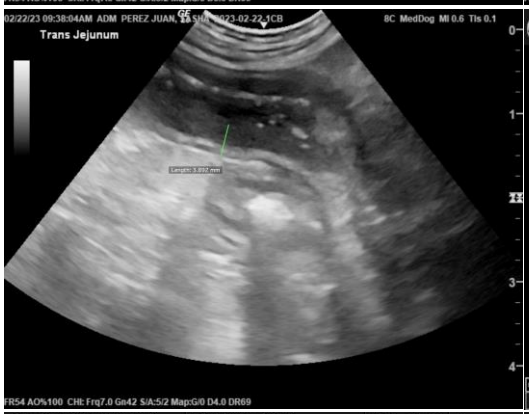

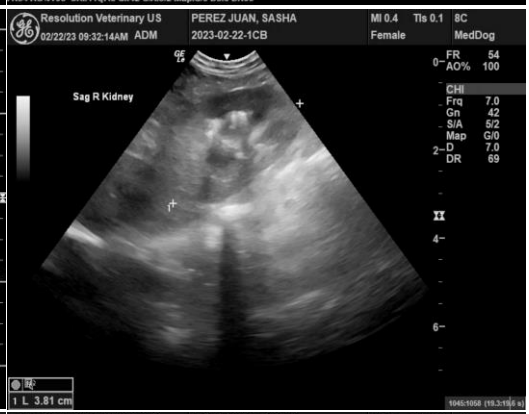

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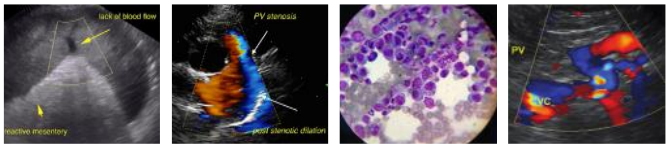

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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