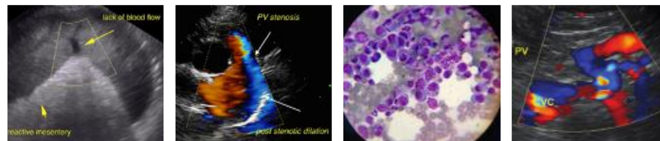
SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com™

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

PATIENT

Cocoa Stewart

SPECIES

Canine

BREED

Yorkie

SEX

MN

AGE

12yr

WEIGHT

6.8kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Goeres

HOSPITAL NAME

Kelowna Veterinary Hospital

REFERRING VET

Singh

INVOICE

13743ag

DATE

05/08/2023

PRESENTING CLINICAL SIGNS

<1 week of Hard abdomen, not moving Pet presented May 4 for physical examination, h/o frequent urination at night sometimes, lethargic, arching back condition, owner not aware of defection from last 2 days, may be constipated as per the owner, no vomition, no diarrhea, h/o ate long grass as per owner yesterday, no h/o trauma or injury.. no coughing/no sneezing, e/d: less. no change in diet. Was hospitalized for supportive care (fluids, buprenorphine 0.09mg IV BID , ampicillin 150mg IV BID, cerenia 1mg/kg IV SID, sucralfate BID, metronidazole BID)

Abnormal PE/Chem/CBC/UA Results: Snap cPL : abnormal BW : Highly increased Lipase, Inflammation (Neutrophilic leukocytosis) 4 radiographs dated May 4, 2023 are available for review. The liver is enlarged and rounded. The spleen is within normal limits. The kidneys and urinary bladder are within normal limits. The stomach contains a mild amount of gas. The small intestines contain homogeneous soft tissue opacity with interspersed gas and are normal in diameter. The colon contains gas and formed feces. There is adequate peritoneal serosal detail. The included portions of the thorax are unremarkable. Conclusion 1. Hepatomegaly. Consider vacuolar hepatopathy, hepatitis, or neoplasia. 2. No radiographic evidence of constipation.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder was subnormal in size owing to lack of urine distension which prohibited full evaluation of the urinary bladder walls. The trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Mild asymmetrical luminal surface to micropolyploid changes were present likely associated with age related mural changes. 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 were noted.

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. Bilateral intermittent small cortical cysts with minor bilateral pyelectasia was present. The left kidney measured 4.6 cm in length. The right kidney measured 4.1 cm in length.

The area of the aortic trifurcation was free of pathology.

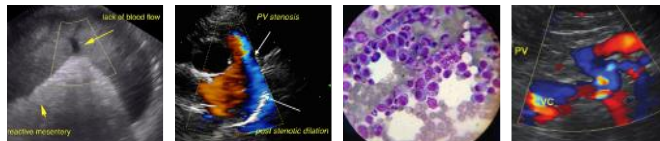
The area of the residual prostate appeared normal and free of pathology.

Adrenal Glands

Bilateral symmetrical adrenal gland enlargement based on caudal pole width and body weight with uniformly hypoechoic parenchyma was present. The left adrenal gland measured 0.64 cm width at the caudal pole and 2.0 cm length. The right adrenal gland measured 0.61 cm width at the caudal pole and 2.0 cm length.

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.



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Liver/Gallbladder

The liver exhibited generalized enlargement with areas of capsule asymmetry. Non-homogenous generalized hyperechoic parenchyma exhibiting moderate coarse echotexture was present. Intermittent non-specific discrete intraparenchymal nodules exhibiting mild hypoechoic nodular echogenicity were present, an example measuring 1.0 cm in diameter. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was mildly distended in size with moderate non-dependent congealed to emerging organized hyperechoic debris. 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 was empty with mild luminal gas and no signs of ileus, obstruction or foreign material.

The small intestine presented generalized intact prominent wall layering with mildly prominent duodenojejunal mucosa. Discrete non-specific duodenojejunal mucosal speckling was present to the level of the colon. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. The duodenum wall measured 0.59 cm width. The jejunum wall measured 0.45 cm width.

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

Pancreas

The right pancreatic limb was normal in size and contour with non-homogenous variably hyperechoic parenchyma. The left pancreatic limb was indistinctly visualized yet appeared to exhibit variable enlargement with capsule asymmetry and non-homogenous hypoechoic parenchyma with subtle surrounding hyperechoic omentum.

Free Abdomen

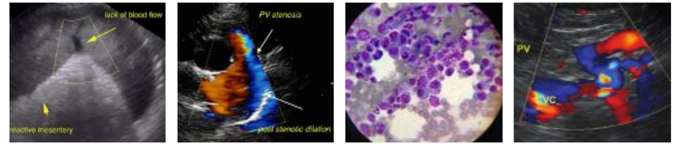
No omental masses, overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Subtle micropolyploid urinary bladder.
- Moderate chronic renal changes with cortical cysts and minor pyelectasia.
- Hepatomegaly exhibiting non-homogenous hyperechoic to nodule parenchyma-subjectively benign, vacuolar hepatopathy, inflammatory disease, suspect discrete areas of hematopoiesis, hyperplasia, fibrosis or other hepatopathy possible. Neoplastic criteria considered less likely.
- Gallbladder mucocele.
- Mixed pattern pancreatitis-suspect active to chronic pancreatitis left pancreatic limb, chronic pancreatitis right pancreatic limb.
- Intact generalized prominent small bowel walls-possible concurrent inflammatory enteropathy.
- Semi formed to soft feces in colon.
- Mildly prominent adrenal glands- nonspecific.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The bilateral pyelectasia may be owing to chronic renal changes, potential pelvic scarring possibly owing to previous calculi passage or IV fluid therapy (if applicable). Urine C/S and protein: creatinine ratio on sterile urine sample is recommended.



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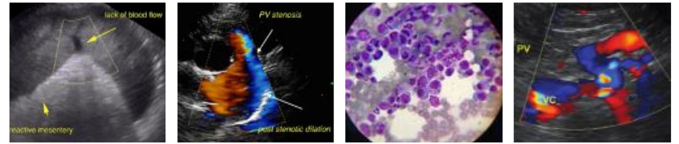
Assuming normal clotting status a hepatic FNA for screening cytology could be considered for further assessment.

Minor potential for emerging left pancreatic limb bioplastic criteria considered less likely with mixed pattern pancreatic criteria present. Correlation with a GI panel to include PLI/TLI/Cobalamin/Folate is recommended to assess for intestinal disease as a contributing factor to the GI signs.

The bilateral prominent adrenal glands are non-specific given the lack of reported clinical signs which may suggest Cushing's syndrome i.e., PU/PD, polyphagia etc. A full adrenal workup is suggested if these clinical signs are noted or if clinical suspicion for adrenal hyperfunction.

Empirical therapy for mixed pattern pancreatitis with as needed hepatic/gastrointestinal support would be reasonable. Sonographic reassessment is recommended if evidence of progressive clinical signs or lab work abnormalities.



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BLADDER

RT KIDNEY

LIVERLT

LIVER

Stom

GB

LT KIDNEY

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)
mac.daniel@sonopath.com