

**DATE PRESENTING CLINICAL SIGNS**

10/11/22

Patient presents for a history of a 4 day period of lethargy and vomiting. Decreased appetite, although will eat a small amount of chicken and sweet potato.

PATIENT

Max Kleinschmidt

Current Medications: Gave SQF and Cerenia on 10/10/2022
 Lab Results: Colitis/enteritis, hypovolemia, otherwise NSF. Labs overall unremarkable.
 CBC shows mild eosinophilia. T4 normal.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

SPECIES

Canine

BREED

Yorkie

SEX

Male, neutered

AGE

2/1/2011

WEIGHT

10 lbs.

INTERPRETED BY

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 Diplomate ACVIM
 (Small Animal Internal
 Medicine)

HOSPITAL NAME

Perry Hall AH

REFERRING VET

Dr. Miller

INVOICE

14074

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The prostate is normal in size (0.83 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (4.16 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. An ill-defined hyperechoic medullary band is observed adjacent to the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (4.24 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. An ill-defined hyperechoic medullary band is observed adjacent to the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is upper limits of normal size (0.66 cm at cranial pole) (0.55 cm at caudal pole) (1.62 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.

The right adrenal gland is borderline enlarged (0.72 cm at cranial pole) (0.57 cm at caudal pole) (1.54 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 (1.10 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 normal to slightly prominent in size with mild rounding of the peripheral contours. The parenchyma is hypoechoic relative to the spleen and subtly heterogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate to large amount of aggregated echogenic partially dependent to

suspended sludge in a partially stellate pattern 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. There is disruption in the normal 1:3 muscularis:mucosal ratio in some segments. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

Pancreas

The region of the left limb is largely isoechoic relative to surrounding omental fat. In the region of the right limb, the parenchyma is hyperechoic relative to surrounding omental fat and slightly mottled in appearance. The borders are ill-defined. The pancreatic duct is not overtly dilated. There is no evidence of peripancreatic effusion.

Free Abdomen

There is no evidence of free fluid. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- The pancreatic changes in the right limb are suggestive of age-related remodeling with fibrosis. Mild chronic pancreatitis may also be present, particularly if the patient's clinical history fits with this diagnosis.
- The bowel changes are suggestive of inflammatory bowel disease with some potential for emerging lymphoma.
- The gallbladder changes could be consistent with an emerging mucocele, cholestasis, or less likely, fasting.

Secondary Findings:

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- Borderline bilateral adrenomegaly. This may be a normal variant for this patient or may represent early hyperplastic change.
- Minor bilateral, age-related renal changes.

*It is unclear whether the patient's clinical signs are due to underlying gastrointestinal disease, low-grade pancreatitis, cholecystitis or other issue.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Supportive care for acute gastroenteritis/pancreatitis is recommended. Also consider a cPLI +/- a full GI panel including serum cobalamin, folate, TLI and PLI to further assess for pancreatitis and maldigestion/malabsorption. A fecal evaluation for ova and Giardia is also recommended, if not already performed. If the patient does not begin to clinically improve within 48-72 hours of medical management, a more advanced GI workup may be warranted.
- Given the gall bladder changes, Ursodeoxycholic acid (Ursodiol) at 10-15 mg/kg once a day is recommended. Serial sonographic monitoring (e.g., every 6-8 weeks) of the gall bladder is recommended to assess for progression to a fully-formed mucocele.



The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

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