



PATIENT PRESENTING CLINICAL SIGNS

Echo Dodge History: Pt ate milk chocolate 12-15 hours prior to presentation, dose likely to produce GI signs but no CV or CNS signs expected. Concern for pancreatitis. Pt has been regurgitating and burping, anorexia for one meal offering. Incidental liver enzyme elevations on bloodwork. BAR on presentation, tense abdomen with some distension, normal thoracic auscultation.

SPECIES

Canine Abnormal PE/Chem/CBC/UA Results/CBC: HCT 52.6% (wnl), lymphocytes 0.65, Eosinophils 0.01 Chem17: ALT 748, ALP 683, GGT 27, Cholesterol 325 EPOC: Glucose 145, lactate 4.96, PCO2 24.5, pH 7.464, PO2 76.4, TCO2 16.6, BE -6.2, BUN 6 cPL: 81.2 (wnl)

BREED

Chihuahua Mix

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

SEX

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.

Spayed Female

AGE

The left kidney is normal size (4.94 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

8 years

The right kidney is normal size (5.20 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

WEIGHT

28 lbs

Adrenal Glands

The left adrenal gland is normal size (0.40 cm at cranial pole) (0.58 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

INTERPRETED BY

Andrea Nicastro, DVM,
Diplomate ACVIM (*Small Animal Internal Medicine*)

The region of the right adrenal gland is evaluated. No obvious pathology is observed.

IMAGING PERFORMED BY

Dr. Neuhaus

Spleen

The spleen is normal in size (1.37 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.

HOSPITAL NAME

Willamette VH

Liver

The liver is prominent in size with normal peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

REFERRING VET

Dr. Neuhaus

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of aggregated, echogenic suspended sludge in a partially stellate pattern, is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

INVOICE

11879

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. 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. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

DATE

12.19.22

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Nonspecific diffuse hepatopathy. Differentials include inflammatory disease (i.e., chronic hepatitis, bacterial cholangiohepatitis), Leptospirosis, hepatotoxicity, other hepatopathy, +/- concurrent benign age-related changes (i.e., remodeling, nodular hyperplasia, vacuolar hepatopathy).
- The gall bladder changes are concerning for a developing mucocele.

*There is no obvious sonographic evidence of pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the presence of regurgitation, thoracic radiographs are recommended to assess for occult esophageal disease.
- Supportive care for dietary indiscretion/gastroenteritis/esophagitis is recommended.
- Regarding the liver enzyme elevations, consider the following:
 1. Pre-and postprandial serum bile acids
 2. Leptospirosis testing (i.e., blood and urine PCR, serology)
 3. Hepatic tissue sampling (i.e., fine needle aspirate or biopsy ((i.e., laparoscopic, or surgical)). If biopsies are pursued, aerobic and anaerobic bile cultures as well as copper quantitation should be performed. Clotting times should be evaluated prior to any tissue sampling.
 4. Given the gall bladder changes, Ursodeoxycholic acid (Ursodiol) at 10-15 mg/kg once a day is recommended. Serial sonographic monitoring (e.g., every 4-6 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/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.

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