

**DATE PRESENTING CLINICAL SIGNS**

10/29/21 History: vomiting off and on, jaundice.

PATIENT Current Medications: Not provided by the veterinarian.

Minnie Novak Lab Results: Elevated ALT, ALKP, Total Bili.

SPECIES Radiographs: Not provided by the veterinarian.

Canine Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

BREED Sedation: declined

Brussels Griffon Stat Report: not requested

SEX ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMENFemale Spayed *Urinary System*

The urinary bladder, trigone, and pelvic urethra are 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. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

AGE

3/15/15

WEIGHT

15 lbs.

The left kidney is normal size (4.80 cm in length); normal shape and architecture with 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. Renal vasculature is normal.

INTERPRETED BY

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

The right kidney is normal size (4.65 cm in length); normal shape and architecture with 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. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.58 cm at cranial pole) (0.56 cm at caudal pole) (1.78 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.

HOSPITAL NAME

Madonna Veterinary
 Clinic

The right adrenal gland is normal size (0.84 cm at cranial pole) (0.56 cm at caudal pole) (1.84 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.

REFERRING VET

Dr. Cangro

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.

INVOICE

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Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The gall bladder is mildly distended. The wall is diffusely thickened (up to 0.24 cm) and hyperechoic. Luminal contents are mostly anechoic. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is moderately 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. No obstructive disease is noted.

Pancreas

The pancreas is diffusely prominent to enlarged, particularly the left limb, with slightly irregular peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated. There is no evidence of peripancreatic effusion.

Free Abdomen

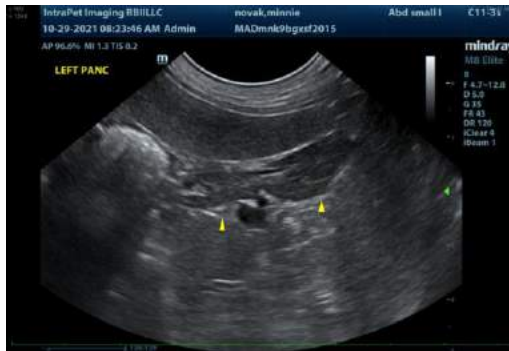
The peritoneal cavity is normal. There is no evidence of inflammation or effusion. One to two lymph nodes are visible in the mid-abdominal cavity, the largest measuring 1.14 cm.

ULTRASONOGRAPHIC FINDINGS

- The pancreatic changes could be consistent with mild to moderate acute or chronic pancreatitis.
- The gall bladder wall changes are most consistent with cholecystitis.
- Non-specific diffuse hepatopathy. Differentials include inflammatory/immune-mediated disease, leptospirosis, hepatotoxicity (i.e., copper), infiltrative neoplasia (less likely), other hepatopathy.
- The presence of ingesta in the gastric lumen despite fasting is suggestive of delayed gastric emptying.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Leptospirosis testing (i.e., blood and urine PCR, serology) is recommended.
2. Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
3. If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin Advanced). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.
4. Supportive care for pancreatitis/cholecystitis/cholangiohepatitis is recommended including IV fluid therapy, broad-spectrum antibiotics, gastric protectants, antiemetics, pain medication as needed, +/- fresh frozen plasma.
5. Consider a promotility agent (i.e., Metoclopramide) to aid in gastric emptying, particularly if the patient is still vomiting.





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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