



PATIENT PRESENTING CLINICAL SIGNS

Chaco Norenberg

SPECIES

Canine

BREED

Mixed

SEX

Spayed Female

AGE

10 years

WEIGHT

60.2 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Maggiulli

HOSPITAL NAME

Willamette VH

REFERRING VET

Maggiulli

INVOICE

13514

DATE

6.29.23

History: pt presents 6/28 on ER for Vomiting, restless and painful behavior. P is known to eat things that she should not, was panting excessively and was unable to get comfortable, appeared bloated to owner. Was urinating but did strain while defecating. Vomited up a piece of restaurant sauce packet and then vomited up more bile after that. Has been drinking. hx of hypothyroidism and is being treated. hx of liver enzyme elevations that have been progressively increasing. QAR, restless, painful to abdominal palpation, febrile (105.6), BCS 9/9, hyperemic mm, distended abdomen with comedones, scaled skin, large patches of alopecia, p very uncomfortable even sedated for ultrasound.

Abnormal PE/Chem/CBC/UA Results

Chem 17- ALKP (1029) H, ALT (536) H, BUN (6) L
CBC- lymphopenia (0.88), leukocytosis (17.28), neutrophilia (15.5) H
EPOC- LAC (3.21) H, BUN (5) L, K+ (3.5) wnl, HCT 50%
cPL- 802.4- abnormal

Repeat FAST scan - Hyperechoic mass on spleen. Heterogenous, mottled appearance to the liver. Mass in the retroperitoneal space.

Radiographs: Round mass near pylorus with calcification. Loss of serosal detail. Mass effect pushing small intestine to left body wall. No evidence of mechanical obstruction

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

The left kidney is normal in size (6.12 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. A small cortical cyst is observed at the lateral aspect. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (5.69 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. A small cortical cyst is observed at the lateral aspect. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Left Adrenal Gland

The left adrenal gland is normal in size (0.52 cm at cranial pole) (0.62 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.

Right Adrenal Gland

(No images provided).

Spleen

The spleen is normal in size (2.11 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. Several irregular hypoechoic nodules are observed at the region of the hilus. Splenic vasculature appears normal.



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Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic-to-isoechoic relative to the spleen and heterogenous in appearance, with several ill-defined hyperechoic and hypoechoic nodules throughout the organ. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. 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 mildly to moderately distended with echogenic fluid. 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 is normal in thickness 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.

Pancreas

The base of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

The mesentery in the cranial to midabdomen is mildly hyperechoic. There is no obvious evidence of free fluid. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The hepatic parenchymal changes are nonspecific and may be secondary to inflammatory disease, bacterial cholangiohepatitis, chronic hepatitis, hepatotoxicosis (i.e., copper), infiltrative neoplasia, regenerative nodular hyperplasia, age-related remodeling, vacuolar hepatopathy, other hepatopathy, or some combination thereof.
- Mild peritonitis, the cause of which is unclear. It may be secondary to mild pancreatic inflammation, gastroenteritis, underlying hepatic disease, other.

Secondary Findings

- Mild bilateral chronic renal changes
- The hyperechoic lesions adjacent to the splenic vessels are most consistent with myelolipomas. Although a neoplastic process within the spleen cannot be excluded, it is considered unlikely in this patient.
- Mild gastric ileus
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.



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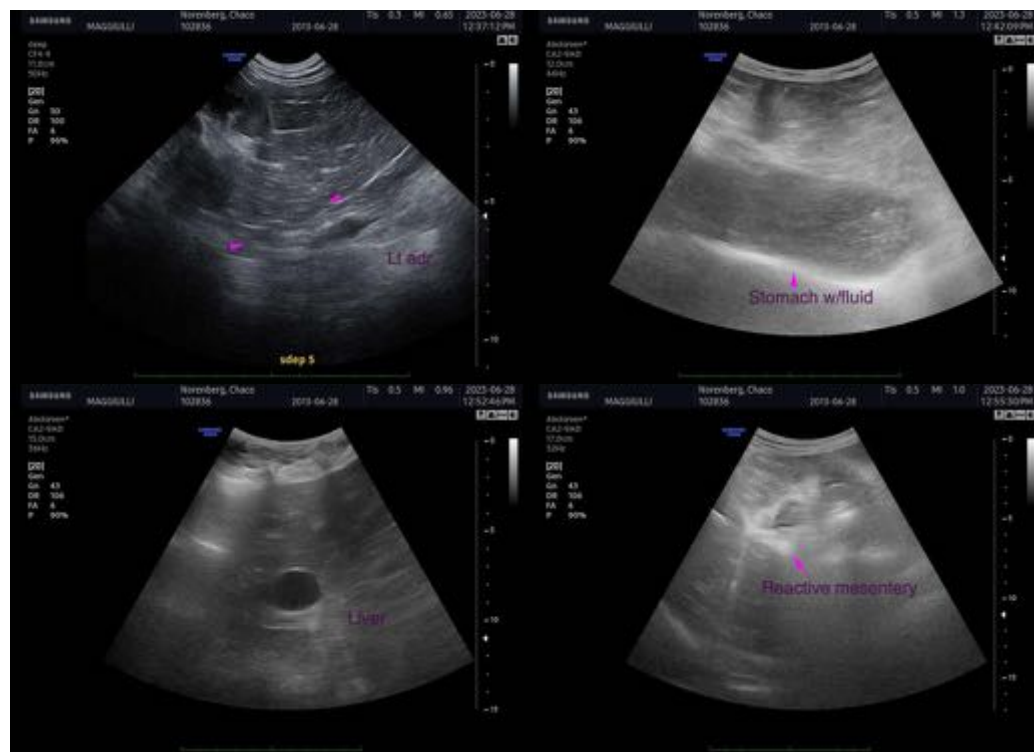
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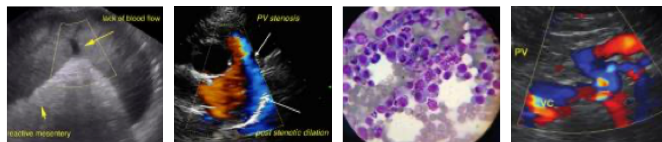
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the presence of a fever, consider the following:
 - 3-view thoracic radiographs are recommended to assess for aspiration pneumonia.
 - Urine culture and sensitivity to evaluate for occult pyelonephritis as a cause of fever.
 - Leptospirosis testing (i.e., blood and urine PCR, serology), particularly if the clinical suspicion for disease is high.
 - Orthopedic and neurologic evaluations to assess for non-metabolic causes of the patients fever and clinical signs.
- Regarding the elevated liver values, consider cytologic evaluation of the liver 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. If a more conservative approach is desired, consider empirical treatment for Cholangiohepatitis with amoxicillin-clavulanic acid along with hepatic antioxidants. If liver values do not begin to improve within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If values do improve, a 4-6-week course of treatment is recommended.





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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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com