



PATIENT PRESENTING CLINICAL SIGNS

Tidbit Mclver Mild ALT elevation and marked ALP elevation. Hepatomegaly visible on radiographs. Abnormal PE/Chem/CBC/UA Results: ALT 186, ALP 1031.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine **Urinary System**

BREED The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Jack Russell Terrier

SEX The right kidney is normal in size (5.03 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Spayed Female

AGE The left kidney is normal in size (4.57 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

13 Years

WEIGHT Adrenal Glands

The right adrenal gland is normal in size (0.56 cm at the cranial pole and 0.60 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

The left adrenal gland is normal in size (0.61 cm at the cranial pole and 0.70 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

IMAGING PERFORMED BY

Dr. Sarah Barthelémy

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

HOSPITAL NAME

Liver

Signal Hill Animal Clinic

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is markedly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

REFERRING VET

Dr. Devall

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

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Gastrointestinal

DATE

6/14/23

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions



PATIENT

per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

Tidbit Mclver

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The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Canine

Pancreas

BREED

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Jack Russell Terrier

SEX

Free Abdomen

Spayed Female

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

AGE

13 Years

ULTRASONOGRAPHIC FINDINGS

WEIGHT

9.3 kg

- **Emerging mucocele** – Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.
- **Markedly heterogenous Liver** – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

IMAGING PERFORMED BY

Dr. Sarah Barthelemy

Further recommendations for this patient depend largely on clinical signs. If the liver enzyme changes reported as well as these ultrasound changes are incidentally discovered during a wellness exam, then potentially medical management of the gallbladder debris could be considered in the form of hepatic nutraceuticals +/- broad-spectrum antibiotics while closely monitoring for improvement versus progression. If improvement is noted, antibiotics should be continued until liver enzymes either normalize or plateau with a recheck every 2-3 weeks. However, if improvement is not noted and/or enzyme increase progresses, antibiotics should not be continued long-term.

HOSPITAL NAME

Signal Hill Animal Clinic

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Dr. Devall

If this patient is clinically ill and/or clinical signs develop such as decreased appetite, cranial abdominal pain, nausea, etc., medical management may not be the best option, and a transition to a more aggressive approach up to and including an exploratory laparotomy for planned cholecystectomy may be necessary, at which time a liver biopsy should also be performed.

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In the meantime, if a conservative medical approach is elected, a fine needle aspirate of the liver could be considered if patient's coagulation status is appropriate to more definitively rule out less likely but possible concurrent infiltrative liver disease.

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SPECIES

Canine

BREED

Jack Russell Terrier

SEX

Spayed Female

AGE

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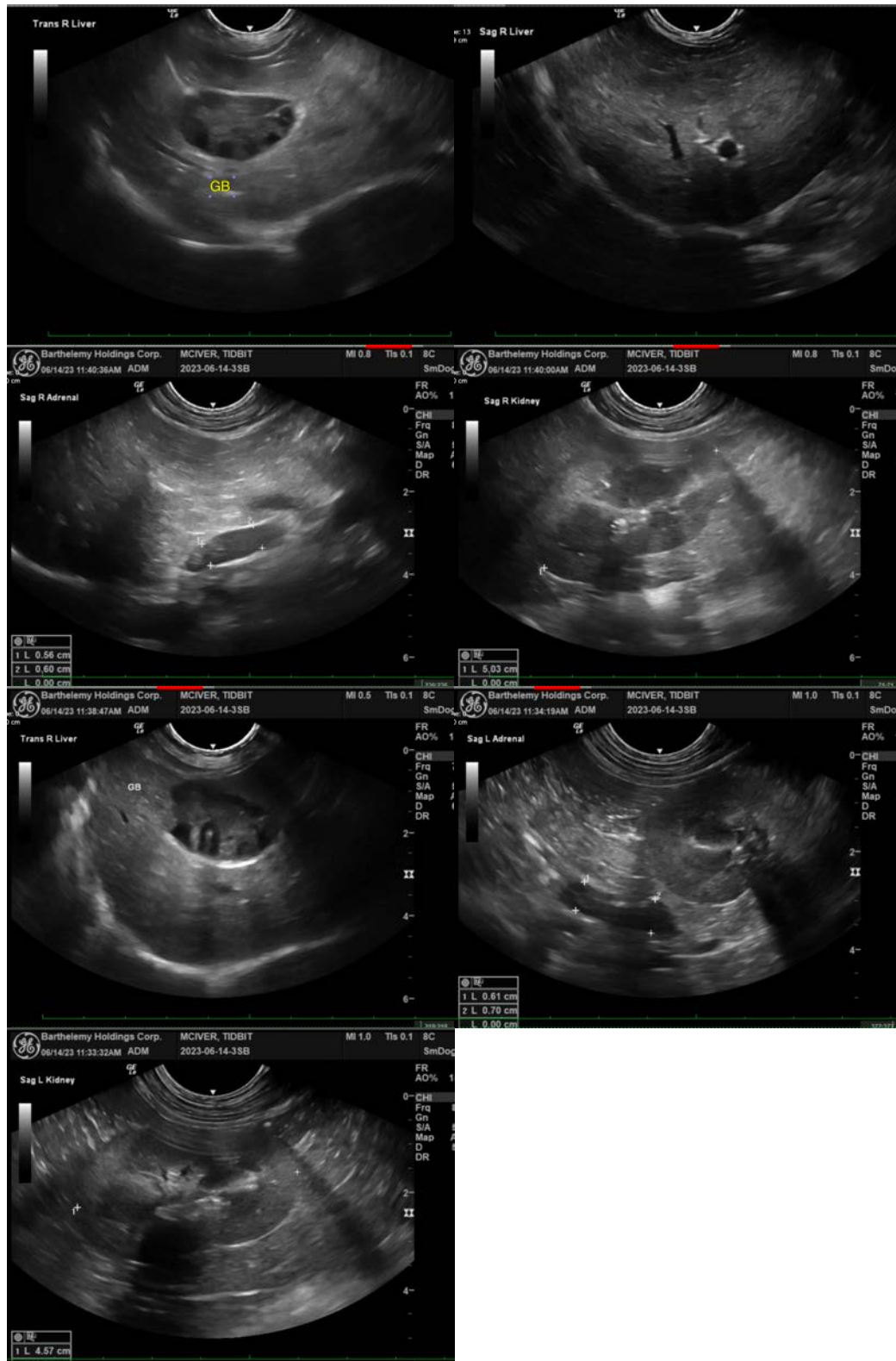
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Tidbit Mclver

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.

SPECIES

Canine

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.

BREED

Jack Russell Terrier

Beth Johnson, DVM, DACVIM
info@sonopath.com

SEX

Spayed Female

AGE

13 Years

WEIGHT

9.3 kg

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