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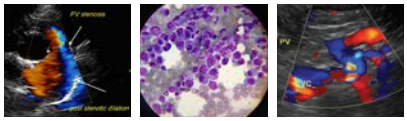
IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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**DATE**

7/12/22

**PATIENT**

Charlie Daley

**SPECIES**

Canine

**BREED**

Maltese X

**SEX**

Neutered Male

**AGE**

7/11/14

**WEIGHT**

10.3 Pounds

**INTERPRETED BY**

Beth Johnson, DVM DACVIM

**IMAGING PERFORMED BY**

Rachel Brilhart RDMS

**HOSPITAL NAME**

Animal Emergency Hospital

**REFERRING VET**

Dr. Nacke-Horney

**INVOICE**

39417

## PRESENTING CLINICAL SIGNS

Vomiting started on Thursday; continued to vomit several times until it became just bile. Friday morning went to the rdvm, bw okay, rads on ern for some opaque matter in the stomach, not an obstruction. Slightly elevated temperature. Went home, eating a little bit, then stopped. Still drinking sm amt of water. Has not defecated since Thurs--- known to get into things.

Current Medications: Ampicillin, Buprenorphine, Cerenia, Protonix.
Lab Results: See attached.
Radiographs: No obvious FB, stomach small, gas pattern moved.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

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.

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male.

The right kidney is normal in size (4.1 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.

The left kidney is normal in size (4.21 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.

### *Adrenal Glands*

The right adrenal gland is normal in size (1.4 cm long x 0.56 cm at the cranial pole and 0.59 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.84 cm long x 0.52 cm at the cranial pole and 0.55 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

### *Spleen*

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.

### *Liver*

The liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is mildly overdistended with anechoic bile as well as suspended and gravity dependent echogenic debris, including mineral sand. The wall is mildly thick and hyperechoic. There is no evidence of cystic or common bile duct dilation. There is no evidence of fluid or inflammation in the immediate area.

### *Gastrointestinal*

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

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

### *Pancreas*

Pancreas is prominent (enlarged) in size and mildly irregular in shape with a slightly undulating contour. Parenchyma is coarse in echotexture and heterogenous to hypoechoic in echogenicity.

### *Free Abdomen*

Portal lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail. Enhanced hyperechoic tissue is surrounding the nodes.

There is no apparent lymphadenopathy noted in these images.

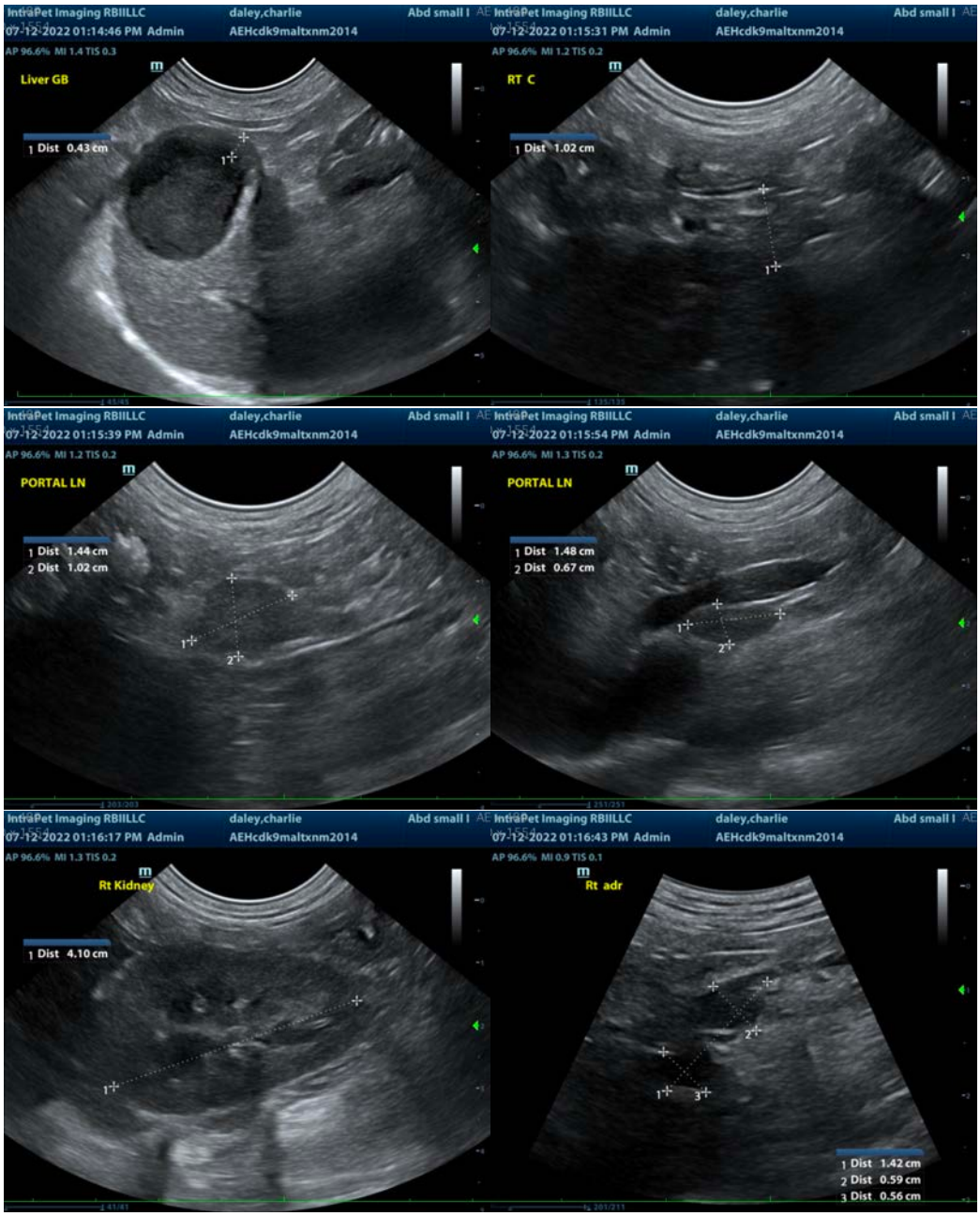
## ULTRASONOGRAPHIC FINDINGS

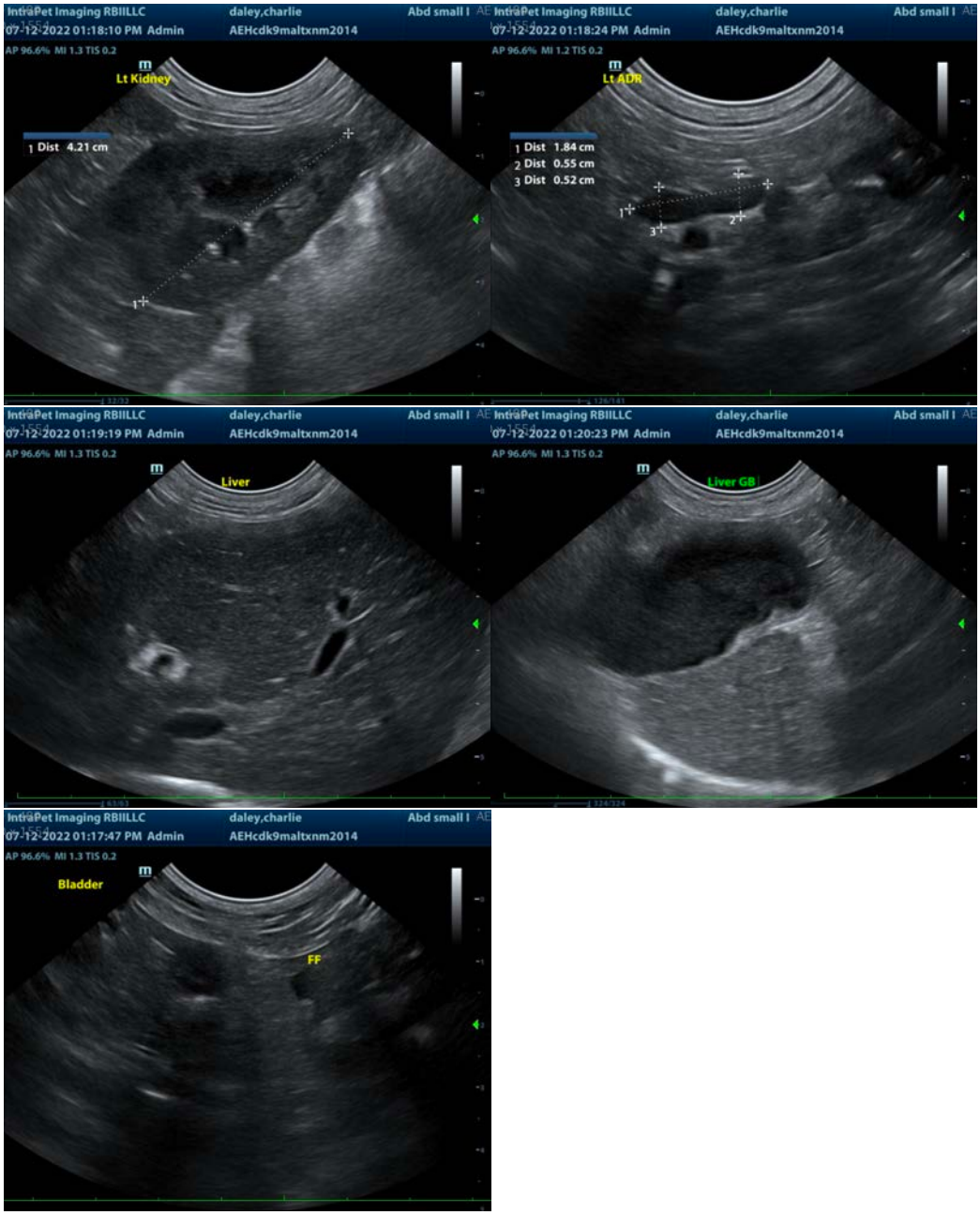
- Hypoechoic hepatomegaly – This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.
- Concurrent reactive portal lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- Concurrent gallbladder debris/sand in a mildly distended gallbladder with a mildly thick wall
- Chronic active pancreatitis

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- The ultrasound findings in this patient are suggestive of cholangitis/cholangiohepatitis, which could be the cause of this patient's gastrointestinal signs. However, the lab work was reportedly historically normal. Therefore, recommendations include recheck CBC/Chem panel, electrolytes, and urinalysis if not recently evaluated. In the meantime, medical management of cholangiohepatitis with fluid therapy (if indicated), antiemetics, gastroprotectants, hepatic nutraceuticals such as Ursodiol and/or Denamarin, and broad-spectrum antibiotics could be considered.
- A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.
- Pending lab work changes and patient response to medical management, next more invasive diagnostic steps to consider could include a fine needle aspirate of the liver (if patient's coagulation

status is appropriate) and/or a fine needle aspirate of the enlarged portal nodes. Testing for Leptospirosis is appropriate if bloodwork suggests a hepatopathy as suspected.






**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.

**Beth Johnson**, DVM, DACVIM
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