



**PATIENT PRESENTING CLINICAL SIGNS**

Ruby Huxley

History: Presented for a few days history of intermittent ataxia and vocalization on October 15th. Had a history of THC ingestion in August (resolved) and was known to be eating potato plants/leaves in the backyard. On PE, Ruby had normal mentation but a delayed menace bilaterally. CBC showed a mildly increased HCT. GGT was low, and (single) bile acids were elevated. Ruby was sent home with lactulose. The next day, a pre and post prandial bile acids test was submitted with an elevated pre sample and a normal post. This study was to look for obvious hepatic pathology and/or a portosystemic shunt. Ruby only had one dose of lactulose on the 15th and has had no other episodes of ataxia or vocalization. She had a normal menace response on the day of this exam (October 19th).  
Abnormal PE/Chem/CBC/UA Results: 10/15/2021: HCT=50.2% (upper limit 47.7%) GGT=1 (4-16) Bile acids= 45.5 (0-15) 10/16/21: Pre-prandial bile acids: 41.8 (0-15) Post-prandial: 4.6 (0-22)

**SPECIES**

Canine

**BREED**

Miniature Aussie

**SEX**

Female

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

**AGE**

4 months

**WEIGHT**

8 kg

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 4.84 cm. The right kidney measured 5.58 cm.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 1.91 x 0.29 cm at the caudal pole and 0.22 cm at the cranial pole. The right adrenal gland measured 1.42 x 0.28 cm.

**IMAGING PERFORMED BY**

Dr. Markland

**HOSPITAL NAME**

Mahalo VH

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

**REFERRING VET**

Dr. Markland

**INVOICE**

92534

**DATE**

10/20/21



**PATIENT** *Liver*

Ruby Huxley The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular volume was normal. There was no evidence of intrahepatic or extrahepatic shunting. The portal vein to vena cava ratio was 1:1 and each measured 0.5 cm. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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**Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. There was retention of ingesta noted in the stomach. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. The mesenteric lymph nodes were reactive.

**Pancreas**

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**ULTRASONOGRAPHIC FINDINGS**

Unremarkable abdomen.

**IMAGING PERFORMED BY**

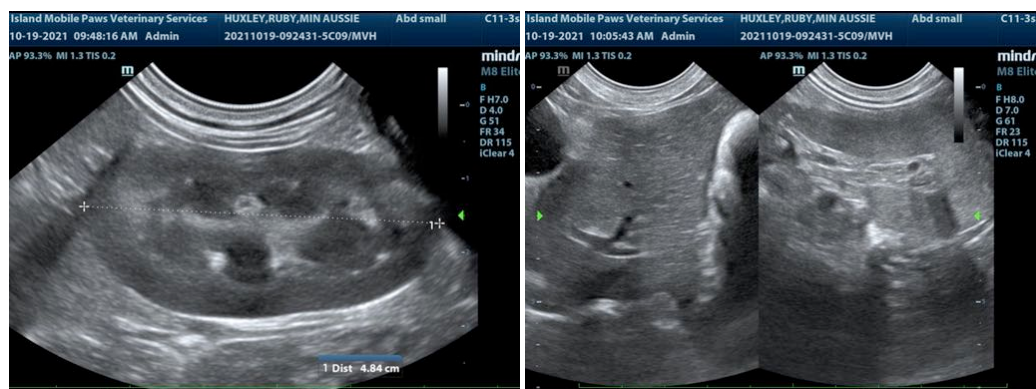
Dr. Markland

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Spurious elevation of the bile acids is suspected. Temporary hepatic insult may have occurred. I recommend supportive care and reassessment of the clinical signs.

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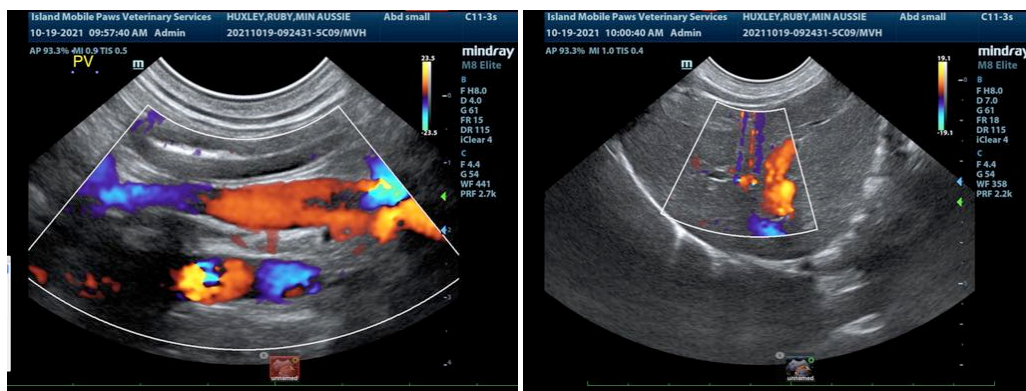
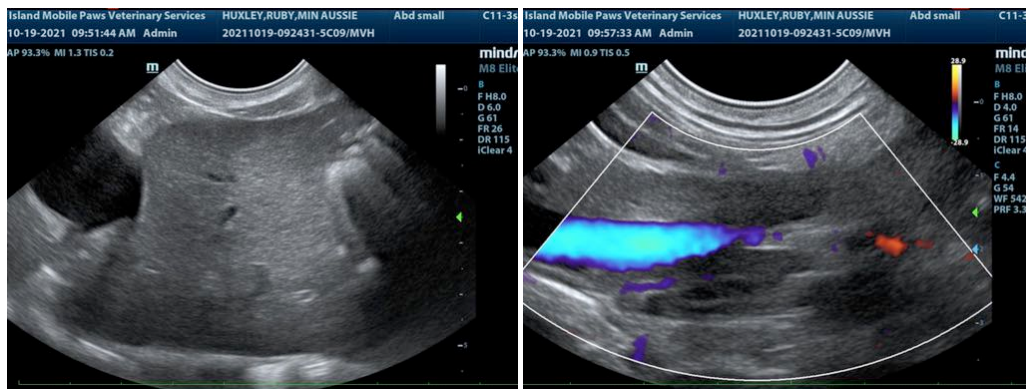
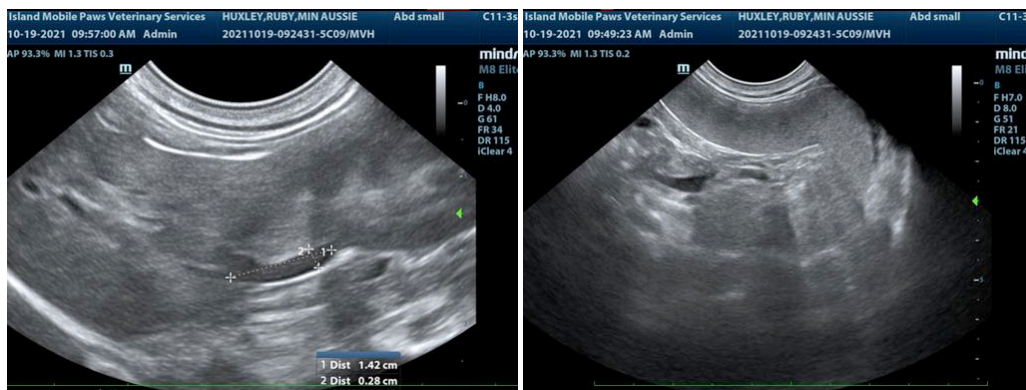
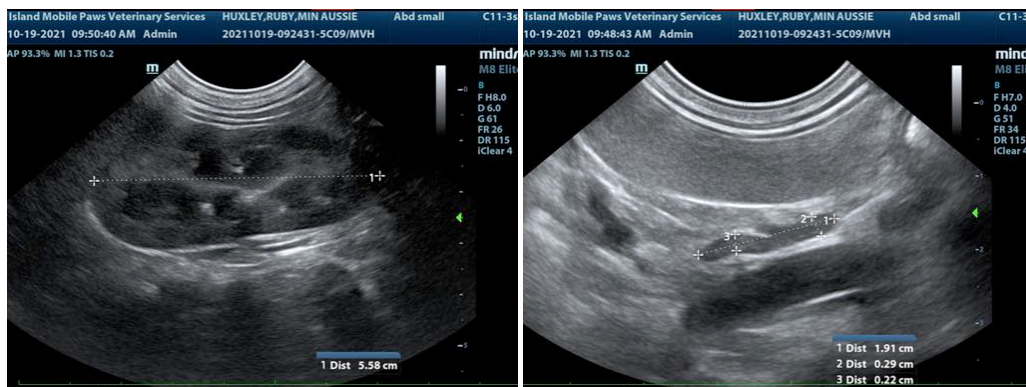
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**PATIENT**

Ruby Huxley

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.

**SPECIES**

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**Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com**  
info@SonoPath.com

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