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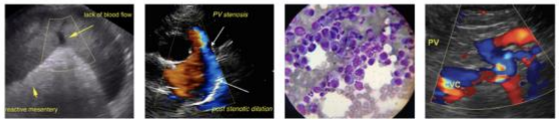


Charleston Mobile Veterinary Services
IMAGING PERFORMED BY
CharlestonMobile.Net 800.403.5408

PATIENT

Zeus Robinson

SPECIES

Canine

BREED

Pitx

SEX

Canine

AGE

09/08/2020

WEIGHT

55.4 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

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

HOSPITAL NAME

Brighton AH

REFERRING VET

Dr. Elizabeth Wetzel

INVOICE

10655

DATE

4/4/2022

PRESENTING CLINICAL SIGNS

Clinical Exam Findings: P has had an elevated ALT, not getting any better on denamarin and clavacillin
Abnormal labwork values: elevated ALT (in the 6700's). Not improving with medical management.
Current Medications: Denamarin
Radiographic Findings: n/a
Fine Needle Aspirates: Client approved Sedation Only

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

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.

The prostate is normal in size (0.97 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney presented normal size (5.95 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.

The right kidney presented normal size (The prostate is normal in size (xxx cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

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.

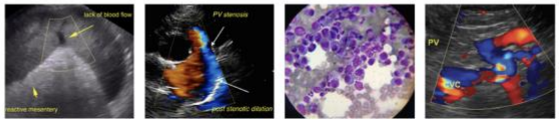
Adrenal Glands

The left adrenal gland is normal size (0.41 cm at cranial pole) (0.42 cm at caudal pole) (1.85 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.

The right adrenal gland is normal size (1.48 cm at cranial pole) (0.50 cm at caudal pole); 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.

Spleen

The spleen is normal in size (1.55 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.



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Liver

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The portal vein appears to enter the liver at the hilus and a normal fashion. The portal vein to caudal vena cava ration is <1: 1. However, the patient is sedated with Dexdomator.

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.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. 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 or overt infiltrative disease is noted.

Pancreas

The pancreas is normal in size with normal peripheral contours. The pancreatic duct is normal. The base and limbs of the pancreas are isoechoic to surrounding omental fat. No focal lesions are observed. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

Other

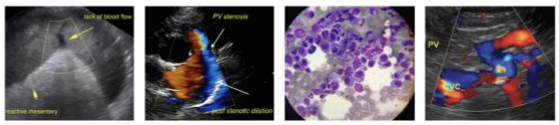
A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Unremarkable abdomen

  **An obvious cause for the patient's ALT is not identified in this study. A congenital portosystemic shunt is possible, but considered less likely, given the normal liver size and visualization of the portal vein entering the portal hilus in a normal fashion without turbulent



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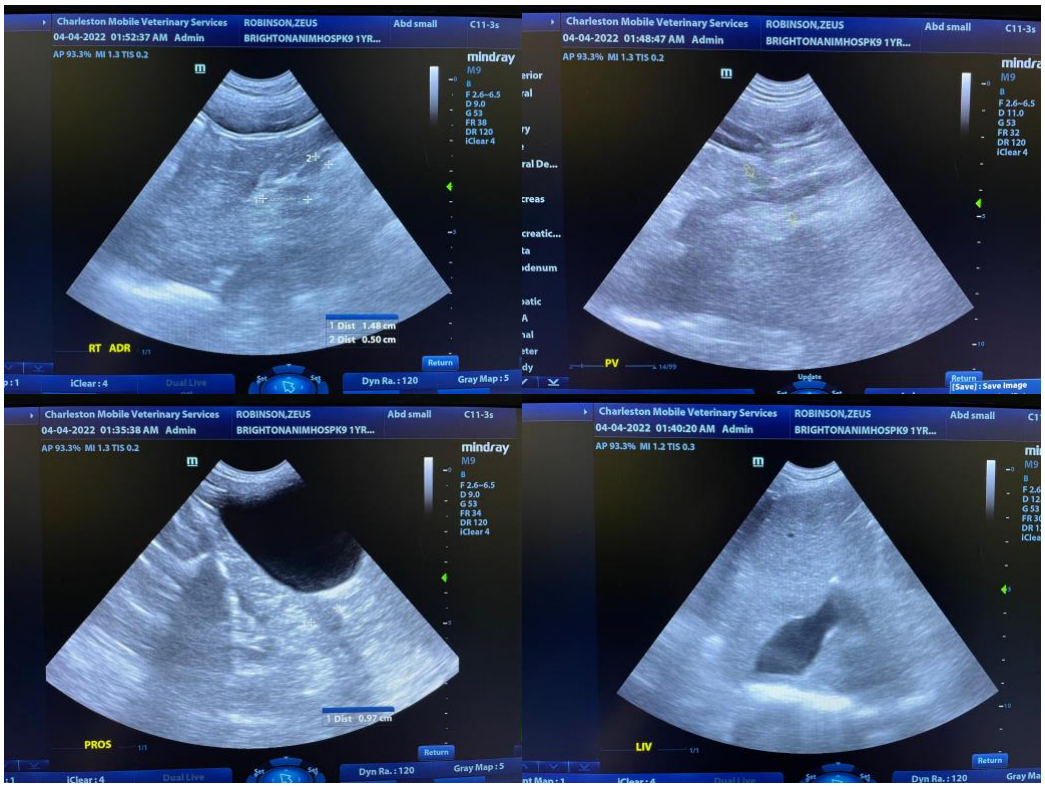
flow. Other considerations include an inflammatory hepatopathy (i.e., bacterial cholangiohepatitis), Leptospirosis, hepatotoxicosis (i.e., copper), Sago palm)), other hepatopathy

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Pre-and postprandial serum bile acids
- Leptospirosis testing (i.e., blood and urine PCR, serology)
- Ultimately, hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy) may be necessary to get a definitive diagnosis. Surgical biopsies would be ideal in that they are more likely to represent global organ pathology. If biopsies are pursued, acquisition of additional hepatic tissue samples for potential copper quantitation are recommended along with aerobic and anaerobic bile cultures. An abdominal CT scan would be useful prior to surgery to rule out intra- and extrahepatic shunting, particularly if the bile acids are substantially elevated.
- If a more conservative approach is desired, consider trial with a different antibiotic (i.e., fluoroquinolone) to determine if a resistant bacterial cholangiohepatitis is present. However, if no improvement in the liver values is seen within 10-14 days of initating therapy, antibiotics should be discontinued, and hepatic tissue sampling revisited.



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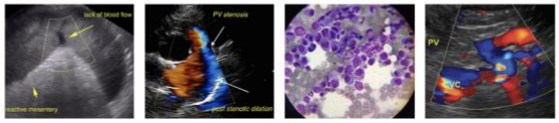

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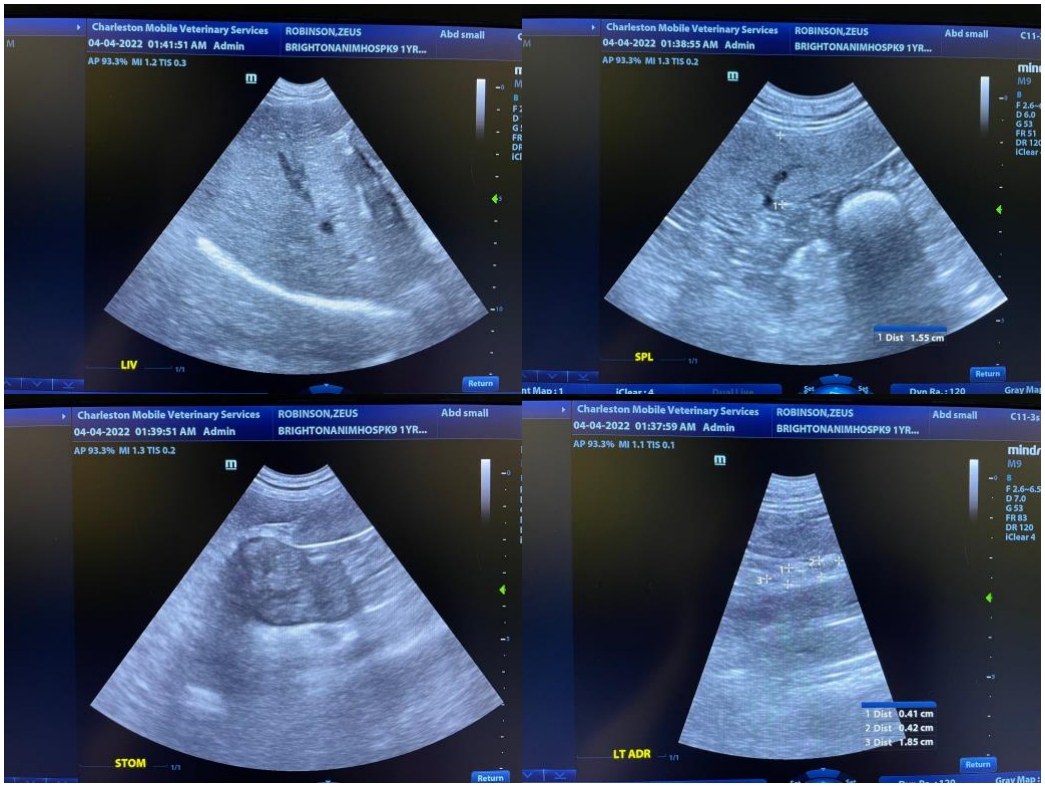

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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