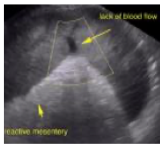
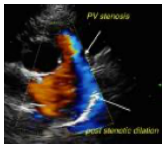
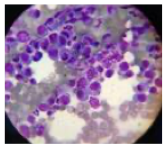
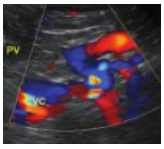
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Eve Archer

SPECIES

Canine

BREED

Red Heeler

SEX

Female Spayed

AGE

7 years

WEIGHT

23.13 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Patti Mayfield DVM

HOSPITAL NAME

Highland VH

REFERRING VET

Rachel Poet DVM

INVOICE

13360

DATE

6.14.23

PRESENTING CLINICAL SIGNS

History: 6/5/2023 at Banfield Pet Hospital: -- P presented for wellness and dental evaluation. No complaint, no VDCS and P continues to EDUD normally. -- Last year had potential cracked tooth, back in 2021 slab fracture 208 noted. O declined Cerenia. O declined dental radiographs -- Pre-anesthetic bloodwork today reveals Hepatopathy- delay dental procedure until workup RX: O declines Denamarin -- Discussed hepatopathy seen today pre-anesthesia. Delay anesthetic procedure until liver workup. Discussed liver function test (bile acids) vs referral to specialty center (veterinary referral center) vs abdominal ultrasound in-house. -- O declines Denamarin, referral. -- O would like to take to Highland for further workup. PPH: Hepatopathy Undergoing Therapy Fear/Anxiety Stable/Persistent/Chronic Dental Calculus Undergoing Therapy Deafness, Congenital Stable/Persistent/Chronic

Abnormal PE/Chem/CBC/UA Results: 6/5/2023: PE: -- Oral: Grade 3/4 dental calculus, closed slab fracture at 208 6/5/2023: CBC: -- HCT: 56.8 % (slight increase) -- All else WNL CHEM: -- Marked increase in ALT 1970 (10-125) -- moderate increase in ALKP 623 (23-212) -- Elevated Tbili 6 (0 -0.9) -- GGT 18 (0-11) Fecal (float): nos 4DX: NEG x 4

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and visible portion of the proximal urethra are normal.

The left kidney is normal in size (5.63 cm in length) with a normal shape, architecture and 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 is normal in size (5.25 cm in length) with a normal shape, architecture and 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 in size (0.43 cm at cranial pole) (0.41 cm at caudal pole) (2.41 cm in length) 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.

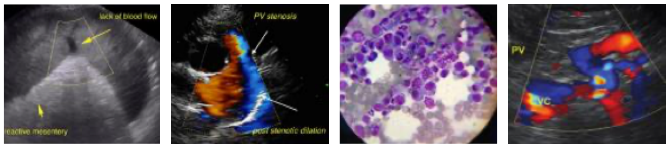
The right adrenal gland is normal in size (1.67 cm at cranial pole) (0.52 cm at caudal pole) (2.71 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (2.25 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 appears normal.

Liver

The liver is normal to slightly small in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and homogenous in appearance. No focal lesions are observed.



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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 lumen is mildly distended with ingesta. The gastric wall is normal in thickness with a normal layering pattern. The small intestinal lumen is segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecocolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional 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.

ULTRASONOGRAPHIC FINDINGS

Findings

- Questionable mild microhepatica. An obvious cause for the patient's severely elevated liver enzymes is not definitively identified in this study. Considerations include infection (i.e., Leptospirosis, bacterial cholangiohepatitis), hepatotoxicity (i.e., copper), other), chronic hepatitis, fibrosis, neoplasia (unlikely), congenital disease, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Leptospirosis testing (i.e., blood and urine PCR, serology) is recommended.
- Consider hepatic tissue sampling (i.e., fine-needle aspirate or biopsies (i.e., laparoscopic, or surgical). Biopsies are the preferred method, as chronic hepatitis and copper hepatotoxicosis require larger tissue sampling to diagnosis definitively. If pursued, aerobic and anaerobic bile cultures are recommended, along with hepatic copper quantitation.
- If a more conservative approach is desired, consider empirical treatment for cholangiohepatitis/Leptospirosis 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.
- Consider initiation of hepatic antioxidants (i.e., Denamarin +/- vitamin E).

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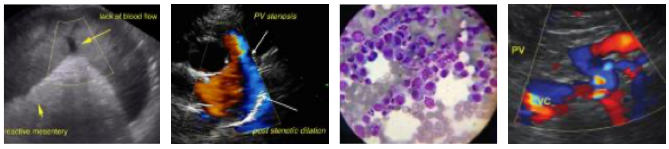

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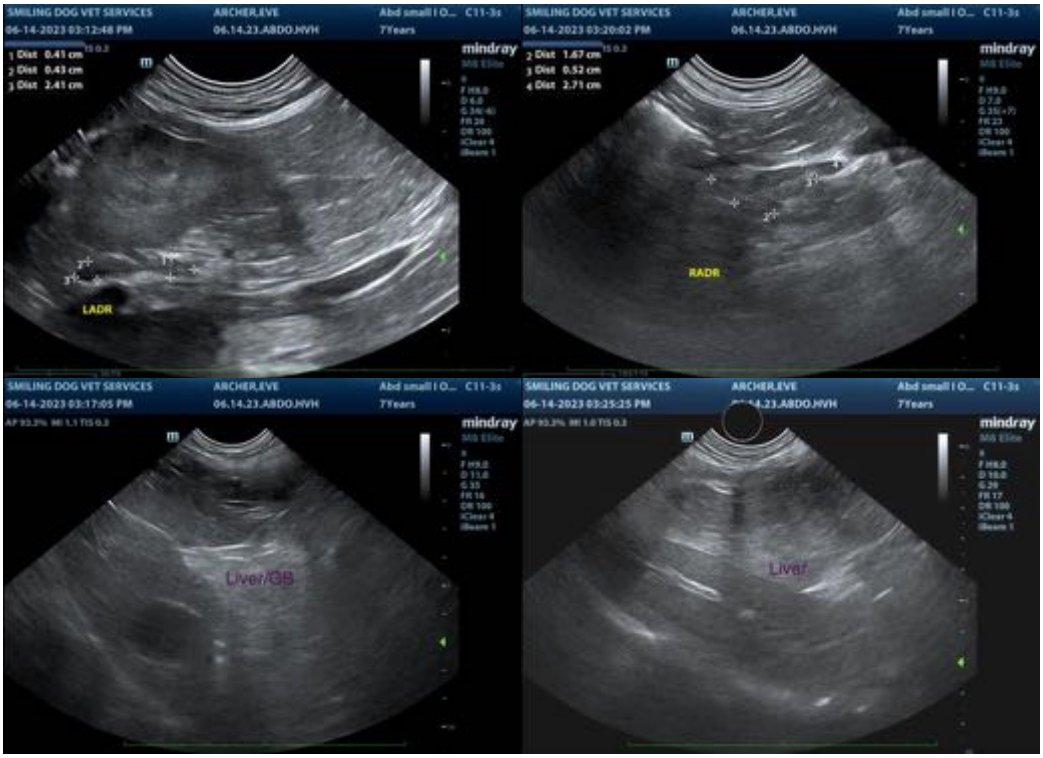

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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