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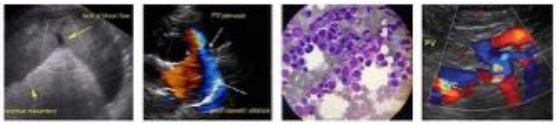


THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 infoethefocalzone.com

PATIENT

Dexter Krukowski

SPECIES

Canine

BREED

Sheltie

SEX

Male, neutered

AGE

9 Yrs.

WEIGHT

25 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Maples AH

REFERRING VET

Dr. Kazienko

DATE

8/9/22

PRESENTING CLINICAL SIGNS

History: elevated liver enzymes
Abnormal PE/Chem/CBC/UA Results: ALT 763 (12-118), AST 110 (15-66), ALKP 216 (5-131), Chol 15 (2.38-10)

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 cystourethral junction and the visible portion of the proximal urethra are normal.

The prostate is not visualized in its entirety due to its pelvic location. In the visualized portion, it is prominent in size (1.66 cm in width) with a normal shape and homogeneous parenchyma. The prostatic urethra is not overtly dilated.

The left kidney is normal size (4.35 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (5.10 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is mildly enlarged (0.87 cm at cranial pole) (0.96 cm at caudal pole) (3.03 cm in length) with a slightly irregular shape. The parenchyma is heterogeneous with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (1.96 cm at cranial pole) (0.66 cm at caudal pole) (2.43 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.

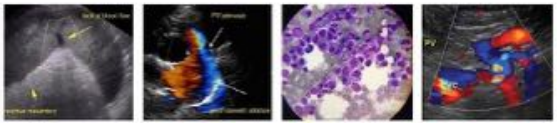
Spleen

The spleen is normal in size (1.70 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.

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 gall bladder lumen is moderately distended. The wall is thin and smooth. A scant amount of echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal



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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 pyloric outflow tract is patent. 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 disease is noted.

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

Primary Findings:

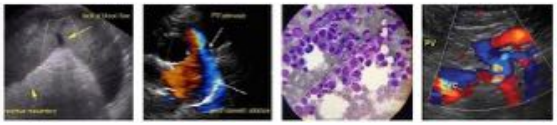
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, infiltrative neoplasia (less likely)) should be considered.

Secondary Findings:

- Minor age-related degenerative renal changes.
- The left adrenal changes are most consistent with hyperplastic change. However, an emerging tumor cannot be excluded.
- The prominent prostate may be a normal variant for this patient or may be secondary to an emerging tumor.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- If the liver enzyme elevations are acute in nature, consider Leptospirosis testing (i.e., blood and urine PCR, serology). If an aggressive approach is desired, consider hepatic tissue sampling (i.e., fine needle aspirate or surgical biopsy). Hepatic cytology is most useful for identifying vacuolar hepatopathy and round cell neoplasia but is less beneficial in diagnosing other hepatopathies. Surgical biopsies are more likely to yield a definitive diagnosis. If pursued, additional hepatic tissue samples should be acquired for potential copper quantitation. Bile cultures for aerobic and anaerobic culture should be obtained. Three-view thoracic radiographs and clotting times (i.e., PT/PTT) should be performed prior to anesthesia.
- If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis/Leptospirosis (amoxicillin-clavulanic acid, Denamarin +/- metronidazole). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.



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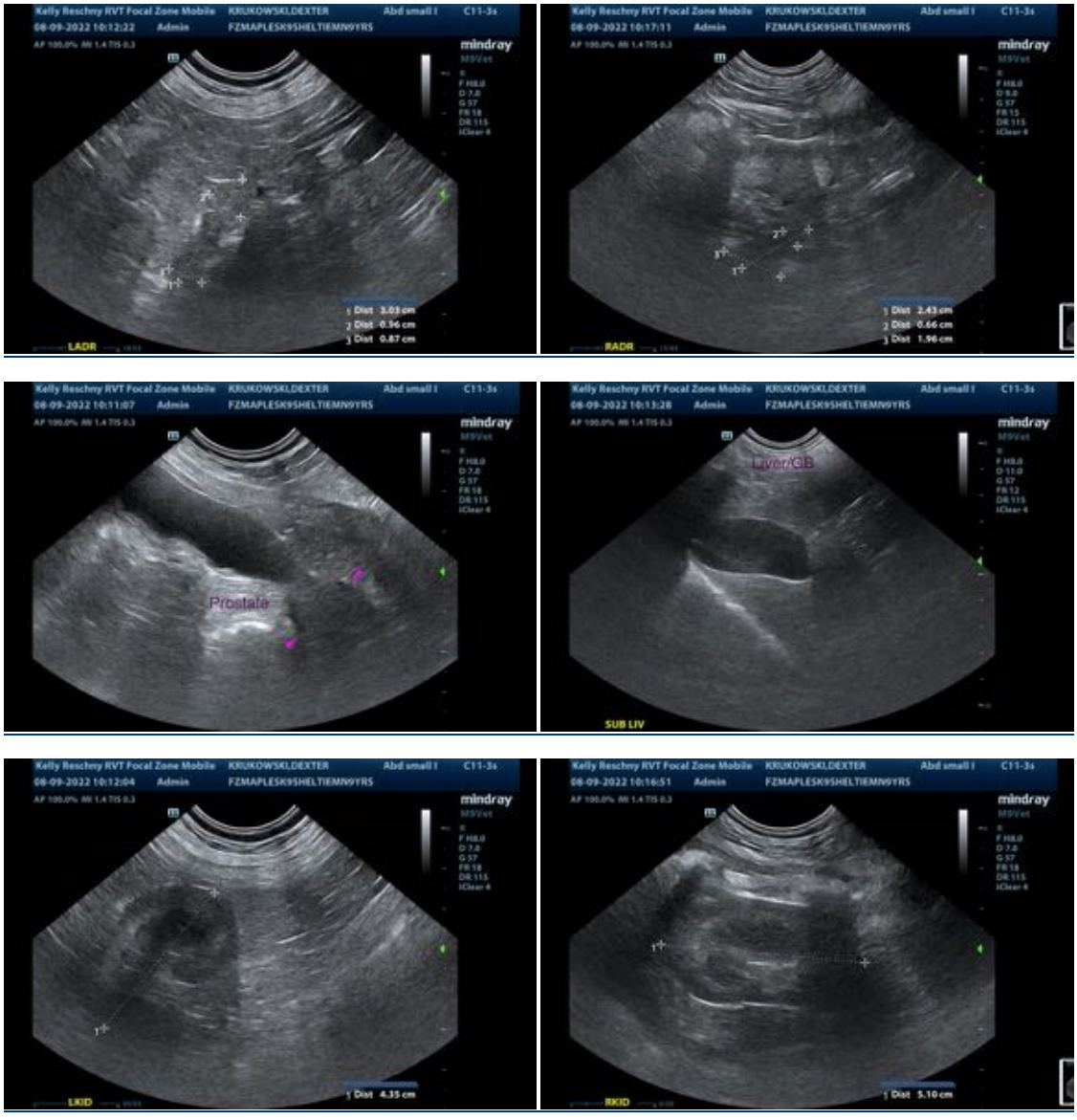
- Regarding the prostate, a rectal examination is recommended to further assess for prostatomegaly. Also consider a repeat ultrasound in 3-4 weeks or a urine BRAF test to further evaluate for prostatic neoplasia, particularly if the clinical suspicion is high. It should be noted that a negative BRAF test does not completely rule out the possibility of cancer. If a negative test is obtained, additional testing may be necessary.



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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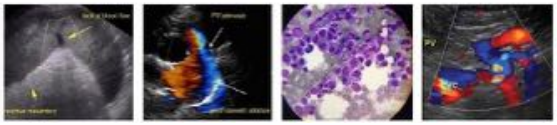

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