



PATIENT PRESENTING CLINICAL SIGNS

Nacho Cebollero History: Presented for an abdominal ultrasound to evaluate increased liver enzymes. Pt has a history of having a cutaneous HSA that was removed near the prepuce. Pt otherwise doing well at home.

SPECIES Abnormal PE/Chem/CBC/UA Results: Fecal -negative BW: Chem - increased ALT 235 and ALP 503 Rest of Chem was WNL

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED *Urinary System*

Mixed The urinary bladder wall is 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.

SEX

Neutered Male The prostate is normal in size (0.51 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

AGE

8 years The left kidney is normal in size (8.16 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.

WEIGHT

66.2 lbs

The right kidney is normal in size (6.28 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 (0.62 cm at cranial pole) (0.53 cm at caudal pole) (2.66 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 in normal size (0.50 cm at cranial pole) (0.45 cm at caudal pole) (2.77 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.

INTERPRETED BY

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Animal Internal Medicine*)

IMAGING PERFORMED BY

Dr. Ferrer DVM

HOSPITAL NAME

Paseos VC

Spleen

The spleen is normal in size (1.24 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.

REFERRING VET

Dra. Maria Martes

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.

INVOICE

12251

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

DATE

2.20.23

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 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. 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. One to two medial iliac lymph nodes are visualized (the largest measuring 1.55 cm in length). One to two mesenteric lymph nodes are also visible (the largest measuring 1.37 cm in length). The nodes are normal in shape and echogenicity.

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), or reactive hepatopathy) cannot be excluded.

Secondary Findings

- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia.
- Gall bladder debris - incidental

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).
- Also consider pre-and postprandial serum bile acids to assess hepatic function.
- Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
- If a more conservative approach is desired, consider empirical treatment for cholangiohepatitis 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.



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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