

PATIENT PRESENTING CLINICAL SIGNS

Dexter Alexander History: Patient presented for a history of limping on LH and was diagnosed with chronic cranial cruciate rupture and hip dysplasia. On labs it was noted that he had a very elevated ALP, mild ALT elevation and elevated urine protein. R. O Cushing's disease vs primary liver. On Rimadyl 25mg BID.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: Plts 1235, K 5.9, ALT 295, ALP 2210, Urine protein 2+.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED

Chihuahua Mix

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is mildly distended. Luminal contents are mostly anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

SEX

Intact Male

The prostate is enlarged (2.50 cm in width) with slightly irregular peripheral contours. Parenchyma is isoechoic to hyperechoic relative to surrounding omental fat and mildly heterogenous in appearance, with several small, ill-defined cortical cysts. The prostatic urethra is not overtly dilated.

AGE

10 years

The left kidney is normal in size (4.81 cm in length) with a slightly irregular shape. The cortex is variably thickened and isoechoic relative to the spleen. There is poor corticomedullary distinction. A 0.64 cm complex cortical cyst is observed at the lateral aspect. A small focus of mineralization is observed in the lateral cortex. There is no evidence of pyelectasia, infarcts or hydroureter.

WEIGHT

26.2 lbs

The right kidney is normal in size (5.36 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. The cortex is isoechoic relative to the spleen. There is poor corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is borderline enlarged (0.41 cm at cranial pole) (0.52 cm at caudal pole) 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.

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

The right adrenal gland is in normal size (0.42 cm at cranial pole) (0.48 cm at caudal pole) 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.

HOSPITAL NAME

Anchor AH

Spleen

The spleen is subjectively normal in size with a normal capsular contour. There is appropriate echogenicity and echotexture. A 0.32 cm hypoechoic nodule is observed near the lateral aspect. Splenic vasculature is normal.

REFERRING VET

Kristen Lavin, DVM

Liver

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

INVOICE

12487

The gall bladder lumen is moderately distended. The wall is thin and smooth. A 0.67 cm cholelith is observed within the lumen, along with a scant amount of aggregated debris. The cystic and common bile ducts are normal/not seen.

DATE

3.23.23

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. There is disruption in the normal 1:3 muscularis: mucosal ratio in some segments. Discreet masses are not identified. The ileocecal colic junction and colonic wall are normal. No obstructive disease is noted.

Pancreas

The right limb is prominent in size with minimal deviation from the normal peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and mottled in appearance. A few small, irregular hypoechoic nodules are observed (the largest measuring 0.34 cm in diameter). The pancreatic duct is visible but not overtly dilated.

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

- Diffuse hepatopathy. Top differentials include vacuolar hepatopathy (i.e., idiopathic/endocrine), regenerative nodular hyperplasia. However, inflammatory disease (i.e., bacterial cholangiohepatitis, chronic hepatitis), hepatotoxicosis (i.e., copper), reactive hepatopathy, and/or other hepatopathies cannot be completely excluded.
- Nonobstructive cholelith - incidental

Secondary Findings

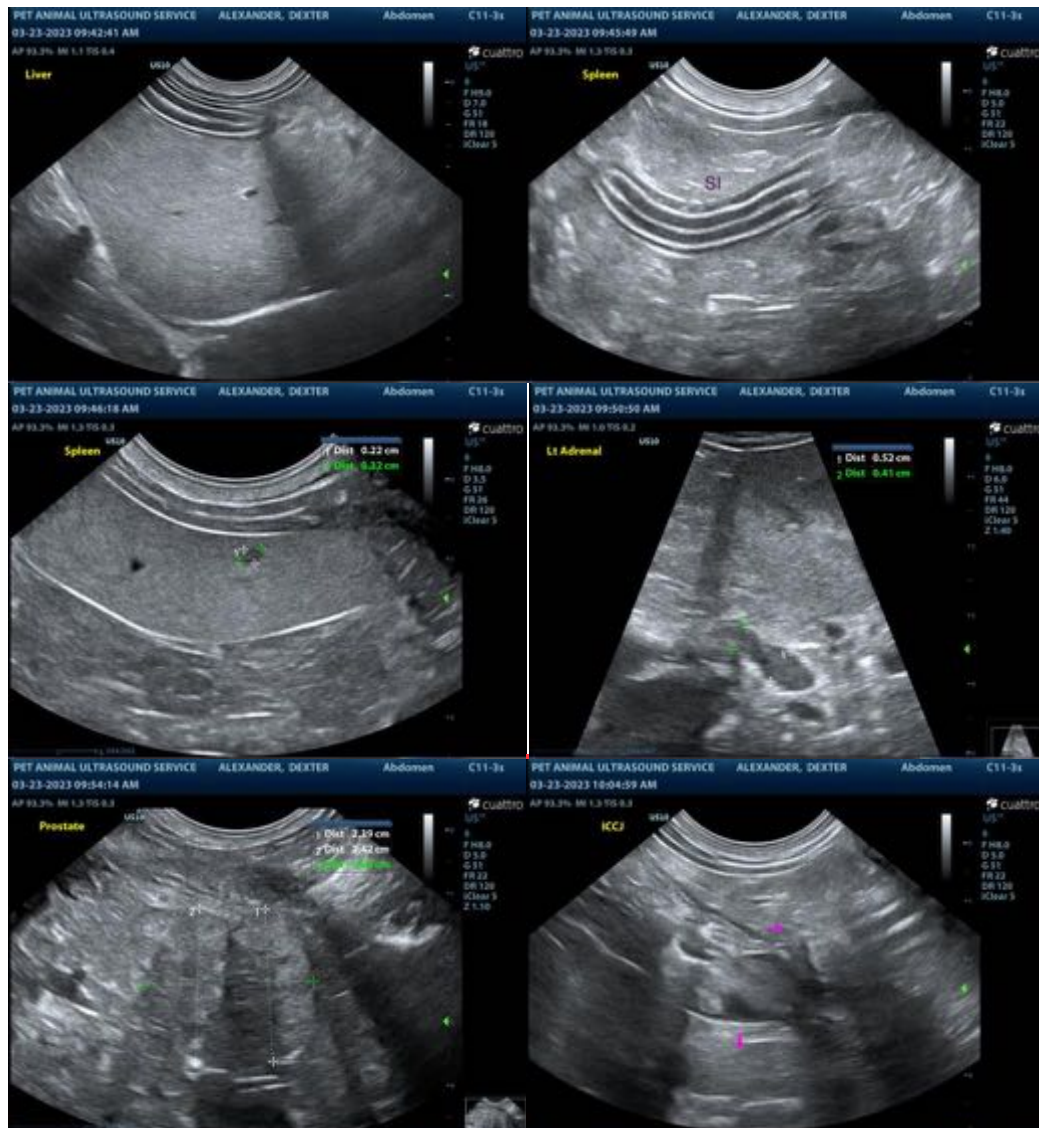
- Bilateral chronic renal changes with subtle dystrophic mineralization
- The hypoechoic splenic nodule trends toward the benign (i.e., focus of lymphoid hyperplasia or similar) with a lower possibility of an emerging tumor.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- The small intestinal wall changes are suggestive of inflammatory bowel disease. However, correlation with the patient's clinical history is recommended.
- The prostate changes are most consistent with benign cystic prostatic hyperplasia.

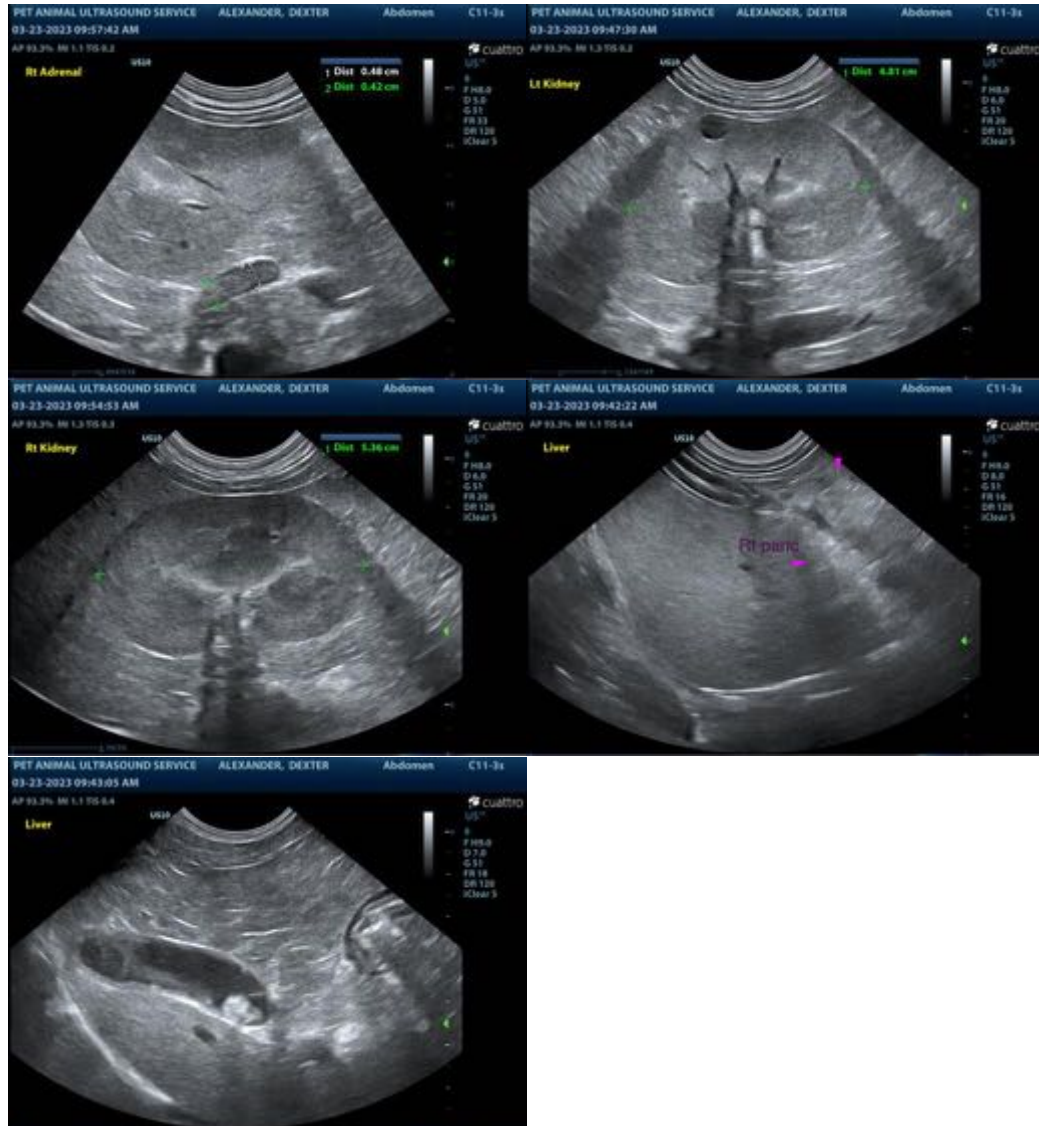
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the proteinuria, a UPC is recommended.
- Consider a fine-needle aspirate of the liver (if clotting status is appropriate). A 25-gauge needle should be used. If aspiration is not pursued at this time, serial monitoring (i.e., every 3-4 months) of

the patient's liver values is recommended. If values continue to increase, a repeat abdomen ultrasound +/- a more advanced hepatic work-up (i.e., tissue sampling) may be warranted.

- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop.





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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