



PATIENT PRESENTING CLINICAL SIGNS

Sushi Denorch History: P presented for an annual exam. O noted some mild lethargy in the last few months. On lab-work, increases in liver values and calcium were seen. AUS today to evaluate liver. **P is on 2.5 mg (~0.4 mg/kg) prednisone SID for atopic dermatitis management**

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: Chem 27/CBC/UA/T4 performed ALKP: 1103 U/L ALT: 216 U/L Calcium: 12.5 mg/dL NSF on rest (including bilirubin, GGT, etc.)

BREED

Shih Tzu

Urinary System

The urinary bladder is minimally to mildly distended with anechoic urine. The wall is diffusely thickened (up to 0.38 cm) with a slightly irregular mucosal surface. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2-3 cm, are normal.

SEX

Neutered Male

The prostate is normal in size (0.43 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

AGE

11 years

The left kidney is normal in size (3.85 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. The cortex is isoechoic relative to the spleen. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

WEIGHT

14.2 lbs

The right kidney is normal in size (4.34 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. The cortex is isoechoic relative to the spleen. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is normal in size (0.42 cm at cranial pole) (0.36 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

Dr. Saum Hadi

The right adrenal gland is in normal size (0.45 cm at cranial pole) (0.47 cm at caudal pole) (xxx 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.

HOSPITAL NAME

Bethany Family PC

Spleen

The spleen is normal in size (0.76 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

Dr. Saum Hadi

Liver

The liver is subjectively prominent in size with swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

INVOICE

12020

The gall bladder is moderately distended. The wall is normal in thickness with areas of mineralization. a small amount of gravity dependent, echogenic debris is observed within the lumen along with a small amount of suspended debris. Mineralized sand/small choleliths are present. The cystic and common bile ducts are normal/not seen.

DATE

1.11.23

Gastrointestinal

The gastric lumen is mildly distended with ingesta and gas. 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 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. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy (i.e., secondary to corticosteroid administration), regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- The mineralization of the gall bladder wall (aka “porcelain” gall bladder) is most consistent with cholecystitis. Mineralized luminal sand/choleliths are present and are likely an incidental finding.

Secondary Findings

- Bilateral chronic renal changes with subtle dystrophic mineralization
- The urinary bladder wall changes could be consistent with cystitis or may be artifactual due to lack of full repletion. Correlation with the patient’s clinical history and urinalysis findings is recommended.

*An obvious cause for the patient’s hypercalcemia is not definitively identified in this study. Considerations include occult neoplasia, primary hyperparathyroidism, fungal disease, hypoadrenocorticism, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- A rectal examination is recommended to assess for anal sac tumors (if not already performed).
- Thoracic radiographs should also be performed to assess for occult neoplasia in the chest.
- An ionized calcium/PTH/PTHrP should also be considered.
- 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.





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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