


PATIENT PRESENTING CLINICAL SIGNS

Mina Zavala History: Presented for an abdominal ultrasound to further evaluate increased liver enzymes and clinical signs of Pu/PD that has worsen. Pt was started on Denamarin.

SPECIES Abnormal PE/Chem/CBC/UA Results: PE: Enlarged and distended abdomen, hepatomegaly Radiographs: Marked hepatic enlargement noted on lateral view BW: CHEM: ALT (502) 10 - 125 U/L, ALP (>2,000) 23 - 212 U/L GGT (12) 0 - 11 U/L, Cholesterol (441) 110 - 320 mg/dL rest of CHEM was wnl.

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
BREED

Shih Tzu *Urinary System*

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

Intact Female

The left kidney is normal size (3.84 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. The cortex is hyperechoic. There is poor distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

AGE

10 years

The right kidney is normal size (4.65 cm in length) with a slightly irregular shape. The cortex is mildly hyperechoic. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. A few nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, or hydroureter.

WEIGHT

14.2 lbs

Adrenal Glands

The left adrenal gland is enlarged (1.14 cm at cranial pole) (1.77 cm at caudal pole) (2.85 cm in length) with an irregular shape. A 1.29 x 1.05 cm hypoechoic to slightly heterogenous nodule is observed at the cranial pole. In addition, a 1.89 x 1.80 cm hyperechoic to heterogenous nodule/mass is observed at the caudal pole. Both lesions cause capsular expansion and loss of glandular detail. In the larger lesion, hyperechoic foci are present within the lesion, along with one to two small cavitated areas. There is no obvious evidence of vascular invasion.

INTERPRETED BY

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 Animal Internal Medicine*)

IMAGING PERFORMED BY

Dr. Gabriel Ferrer

HOSPITAL NAME

Paseos VC

Spleen

The spleen is normal in size (0.95 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is subtly mottled in appearance. No focal lesions are observed. Splenic vasculature is normal.

REFERRING VET

Dra Michelle Biello

Liver

The liver is subjectively enlarged with swollen 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

11971

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated, partially dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

DATE

12.28.22

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly fluid-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 ileocecolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

Pancreas

The right limb of the pancreas is normal in size with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic 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 bilateral adrenal changes could be consistent with bilateral tumors (i.e., adenomas, adenocarcinomas), a unilateral tumor with contralateral benign nodular hyperplasia or excessive bilateral nodular hyperplasia.
- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.

Secondary Findings

- Gall bladder debris – incidental
- Bilateral degenerative renal changes with nonobstructive nephrocalcinosis
- Minor age-pancreatic remodeling

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Further testing for Cushing's Disease (i.e., low-dose dexamethasone suppression test) is recommended. If confirmed, given that it is unclear whether bilateral tumors are present, medical therapy with trilostane is recommended.
- A baseline blood pressure measurement should also be considered.
- A urinalysis is also recommended, if not already performed. If proteinuria is present, a UPC +/- urine culture and sensitivity may also 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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