



PATIENT PRESENTING CLINICAL SIGNS

Henry Lee Acute onset lethargy and decreased appetite. DID develop diarrhea after most recent exam but attributed to owners offering a variety of high value rewards in an attempt to get patient to eat.

SPECIES

Canine

BREED

Shih Tzu

Abnormal PE/Chem/CBC/UA Results: Missing OU (previously removed) Minor progressive weight loss, skin disease consistent w/ ongoing atopy, otherwise NSF on PE. Anal sacs palpate WNL. BW/UA: CHEM: hypercalcemia (12.2), increased GLOB (3.8), SDMA slightly elevated @ 15.3; creat = 1.3. Increased TP (7.5), increased triglycerides (393); ALB = 3.7 CBC: Thrombocytosis (416) TT4: WNL @ 1.2 UA: USG = 1.021 negative proteinuria, IS Thoracic rads (3 view): NSF Ionized calcium/pTH pending

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

SEX

Neutered Male

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

AGE

13 Years

Prostate is normal in size, echotexture and echogenicity for a neutered male.

WEIGHT

11.9

The right kidney is normal in size (3.66 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

The left kidney is normal in size (3.24 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

IMAGING PERFORMED BY

Mandy Foley

Adrenal Glands

The right adrenal gland is unable to be well visualized in these images.

HOSPITAL NAME

All Creatures Great &
Small

The left adrenal gland is normal in size (0.35 cm at the cranial pole and 0.36 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

REFERRING VET

Dr. Jessica Bailes

Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

INVOICE

44776

Liver

DATE

8/17/23

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.



PATIENT

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Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

SPECIES

Gastrointestinal

Canine

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

BREED

Shih Tzu

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

SEX

Neutered Male

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

AGE

13 Years

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

WEIGHT

11.9

Free Abdomen

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DACVIM

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

IMAGING PERFORMED BY

Mandy Foley

- **Bilateral medullary rim sign** - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.
- **Moderate gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- **Hyperechoic splenic nodules** - most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient's clinical signs are suspected to be at least in part related to the reported hypercalcemia. Therefore, as is reportedly already pending, further evaluation of the hypercalcemia is recommended in the form of a malignancy panel to include PTH, PTHrp, and ionized calcium.

In the meantime, supportive/symptomatic medical management is recommended in the form of fluid therapy, if indicated, potentially antiemetics to address subclinical nausea, appetite stimulation, etc.





PATIENT

Henry Lee

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.

SPECIES

Canine

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.

BREED

Shih Tzu

Beth Johnson, DVM, DACVIM
info@sonopath.com

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