



PATIENT PRESENTING CLINICAL SIGNS

Darla Davis

History: vomiting, diarrhea, anorexia, lethargy for 3-4 days. On metronidazole, thyroxine, vetprofen
Abnormal PE/Chem/CBC/UA Results: 9/14/22: ALT 173, ALKP 1421, Phos 6.5, Cl 121, Trig 110, PSL 507, platelets 413; UA: protein trace, USPG 1.019

SPECIES

Canine

BREED

Yorkie Mix

SEX

Spayed female

AGE

15 years

WEIGHT

16.5 lbs

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** presented a relatively uniform cortical hyperechogenicity when compared to the renal medulla, spleen and liver. No overt masses were noted. Corticomedullary definition was nebulous and the ratio favored the cortex slightly. The ureters were not visible and assumed to be normal. These changes are most consistent with chronic interstitial nephritis yet infiltrative disease could not be entirely ruled out without biopsy though neoplasia is not suspected. The right kidney measured 5.43 cm with slight pyelectasia. The left kidney measured 5.11 cm.

Adrenal Glands

The **adrenal glands** appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins was noted. No overt suspicion of neoplasia was noted. This is considered likely a hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. The left adrenal gland measured 2.3 x 0.8 cm at the caudal pole and 0.92 cm at the cranial pole. The right adrenal gland measured 2.35 x 0.75 cm at the cranial pole and 0.65 cm at the caudal pole.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Diane McFadden, RVT

HOSPITAL NAME

Mount Olive VH

REFERRING VET

Dr. Logan

INVOICE

39697

DATE

9/29/22

Spleen

The **spleen** presented discrete and diffuse hypoechoic micronodular parenchyma. The capsule was generally smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. These changes are consistent with age related benign nodular hyperplasia. However, early hemangiosarcoma, lymphoma or mast cell neoplasia could not be entirely ruled out. Fine needle aspirate or biopsy following coagulation panel would be ideal especially if any weight loss is an issue. Otherwise, follow up ultrasound in 3-4 weeks to track these changes would be a more conservative approach.

Liver

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive



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sludge was present. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia.

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Gastrointestinal

The **stomach** revealed a mildly thickened wall without loss of mural detail. Minor luminal fluid accumulation was noted with prominent muscularis hypertrophy. The small intestines and colon were unremarkable.

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Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

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ULTRASONOGRAPHIC FINDINGS

WEIGHT

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Mild gastritis pattern.

Bilateral adrenal enlargement. Suspect PDH.

Moderate degenerative renal changes.

Age related hepatic changes.

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Eric Lindquist, DMV
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Supportive care for GI upset should prove effective in this patient. If the patient appears Cushingoid then work-up for pituitary dependent Cushing's is indicated. There was no evidence of foreign body or neoplasia.

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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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