



PATIENT PRESENTING CLINICAL SIGNS

Ida Estabrook

SPECIES

Canine

BREED

Labrador

SEX

Spayed female

AGE

1 year

WEIGHT

51 lbs

History: Patient has recent history of urinary incontinence and recurrent urinary tract infections despite appropriate antibiotic treatment (as dictated by urine culture results). Dog was spayed after 6 months of age at another veterinary clinic. Dog presented with urine leakage and pollakuria 7/13/22: u/a revealed pyuria, bacteruria. Treated with 10 days Clavamox and recheck U/A on antibiotics was wnl. Dog presented with recurrent lower urinary tract signs (pollakuria, stranguria) 7/29/22: urine culture significant E. coli infection. Treated with course Zeniquen and recheck u/a wnl and recheck culture negative. Dog continues to leak urine despite negative urine culture, prescribed Incurin: leakage continued intermittently for first several weeks. Rec add Proin: no leakage and dog is acting normally. Dog is now on tapering dose of Incurin with goal to stop in coming weeks. Recommended ultrasound to assess entire urinary tract.

Abnormal PE/Chem/CBC/UA Results: 7/13/22: u/a revealed pyuria, bacteruria 7/13/22: high normal creat 1.5, dog has UTI. 7/29/22: urine culture significant E. coli infection Sept 2022: Chem mild azotemia: SDMA 17, creat 1.6, all else wnl Na:K is 31 UA very dilute 1.006, pH 8.0, no protein and inactive sediment CBC all wnl. Urine culture follow-up: NEGATIVE.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** and trigone 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. Slight irregularity noted to the proximal urethra, yet the majority of the urethra was unremarkable.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Miranda Fritz

HOSPITAL NAME

Waterbury VH

REFERRING VET

Dr. Crawford

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Slight pinpoint mineralization was noted. The left kidney measured 5.32 cm. The right kidney measured 5.2 cm.

Adrenal Glands

The left **adrenal gland** was visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.5 cm. The right adrenal gland was not visualized.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

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Liver

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The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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Gastrointestinal

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

AGE

1 year

Pancreas

WEIGHT

51 lbs

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

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ULTRASONOGRAPHIC FINDINGS

Slightly thickened proximal urethra.

IMAGING PERFORMED BY

Miranda Fritz

Age related renal changes and slight mineralization.

Otherwise unremarkable abdomen.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There was no evidence of significant structural disease. Assessment of the vaginal vestibule for recessed vulva or urine pooling should be considered.

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Canine Chronic UTI Protocol

I recommend **Enrofloxacin** (5-10 mg/kg SID PO) (In patients > 1 year of age) in late pm after urination to maximize urinary concentrations overnight. This assumes that culture supports this use. Repeat **culture** at 3-4 weeks and continue treatment at least 7-10 days post negative urinary sediment and negative culture. *Note: Negative culture does not necessarily mean lack of UTI.* Other favorite antibiotics for chronic UTI include third generation Cefa (Ceftiafur or similar s.i.d. injectable) or Clavamox. If suspicion of occult urinary incontinence is present then **phenylpropanolamine (PPA)** (1-2 mg/kg BID) can be employed long term to enhance urethral tone.

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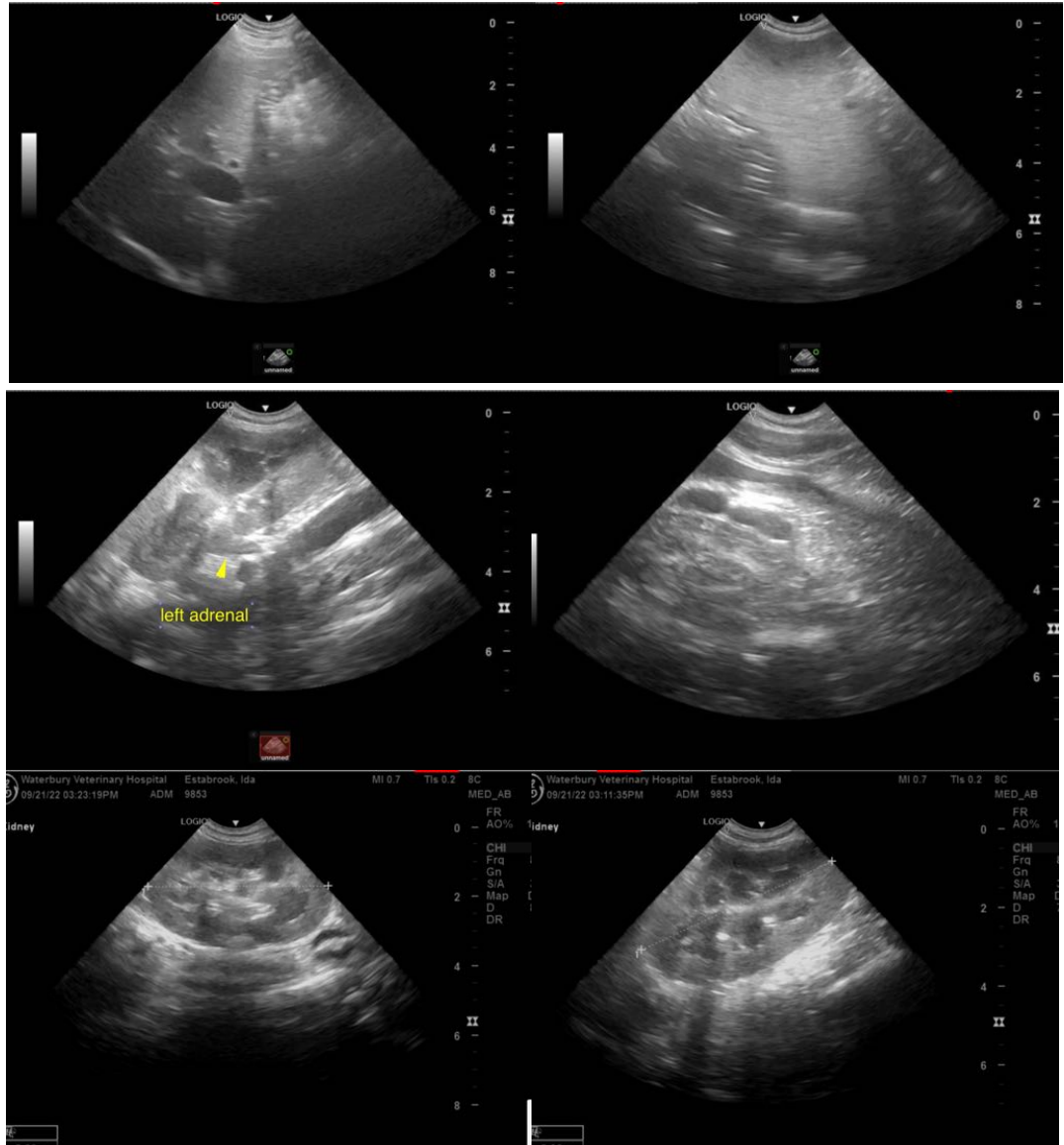
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com