

**DATE PRESENTING CLINICAL SIGNS**

9/7/21

Patient presented by pet sitter 7/28/2021 for blood in urine, PU/PD. U/A showed hematuria, bacteriuria, treated with Cefpodoxime. Recheck 8/13/21, clinical signs resolved, but blood and bacteria still present in urine. CBC/Chem/lytes, U/A, Urine c/s performed (see lab work) - treated with Doxycycline based on c/s. 9/2/21 - Finished antibiotics, hematuria still present.

PATIENT

Annie Smith

SPECIES

Canine

Current Medications: Nitrofurantoin 150 mg TID
 Lab Results: attached
 Date of Previous IntraPet Ultrasound: No previous
 Sedation: not needed
 Stat Report: not requested

BREED

Retriever

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Spayed Female

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

AGE

2011

The left kidney has a normal shape and size (6.52 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

64 Pounds

The right kidney has a normal shape and size (7.25 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

Kathleen Sennello DVM,
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 (Small Animal Internal
 Medicine)

Adrenal Glands

The left adrenal gland is normal in size measuring 0.47 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

HOSPITAL NAME

Hickory Vet Hospital

The right adrenal gland is normal in size measuring 0.7 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

REFERRING VET

Dr. McNesby

Spleen

The spleen is large in size. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

INVOICE

25204

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measured 0.4 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity revealed a small amount of anechoic free fluid. No lymphadenopathy. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is generally of normal uniform echogenicity.

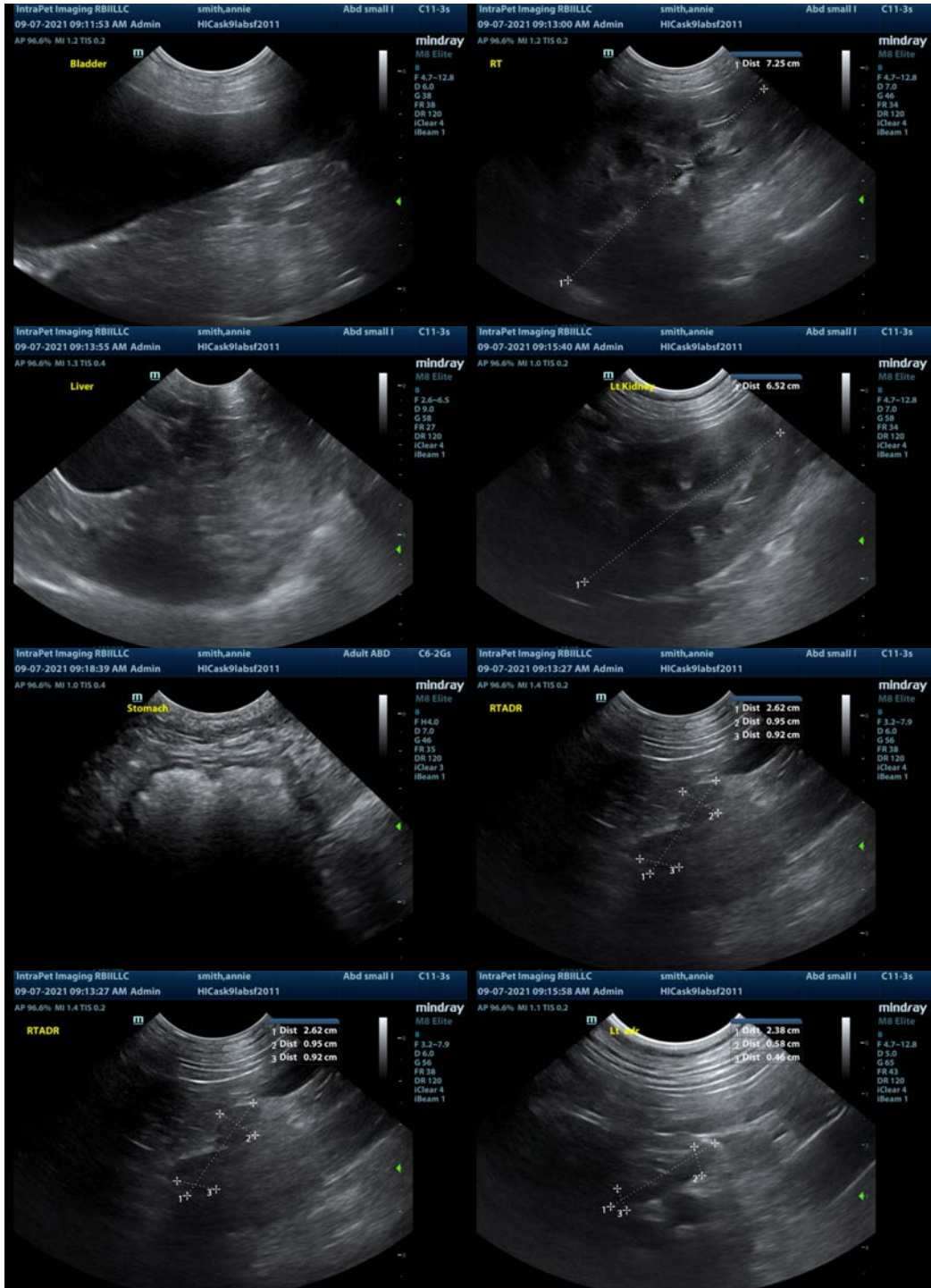
ULTRASONOGRAPHIC FINDINGS

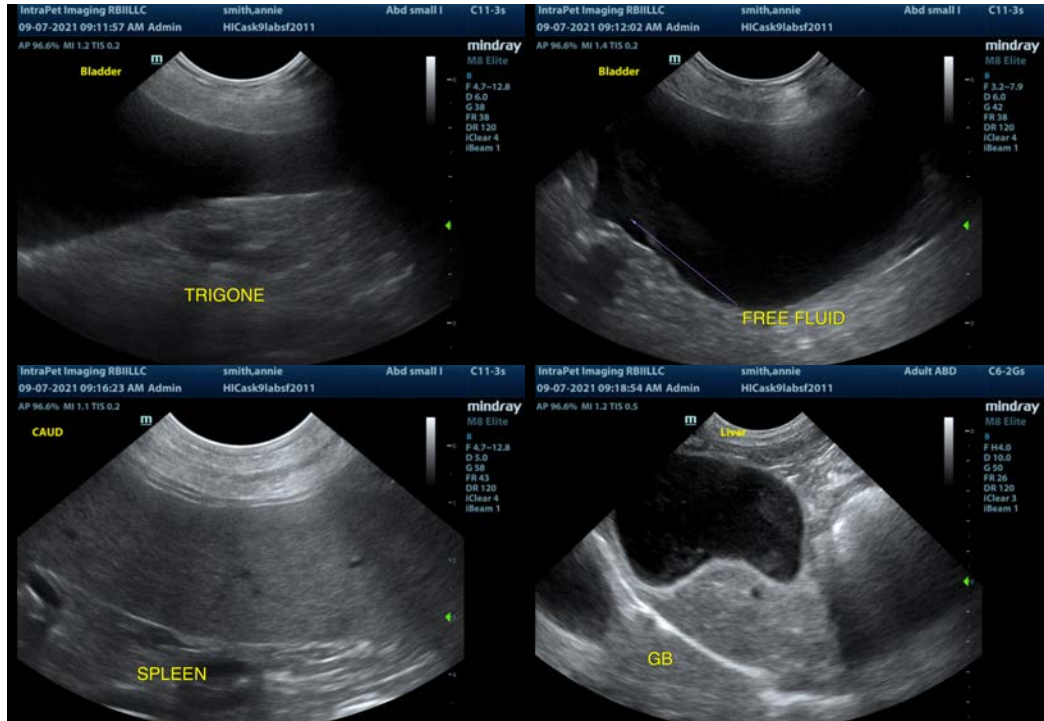
- Large, mottled spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- Small amount of free abdominal fluid – this could be inflammatory secondary to the urinary tract infection. If a suitable pocket is located, sampling could be considered for fluid analysis and cytology.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The bladder is normal, therefore the source of the hematuria is likely the urinary tract infection identified. The changes to the spleen and liver are somewhat non-specific and subjective. In some pets, Doxycycline can cause liver enzyme elevations. Consider a liver function test and rechecking values. If they are persistently elevated, consider testing for Leptospirosis, and a fine needle aspirate of the liver. Likewise, the mottling of the spleen is a subjective finding and could be normal for this patient. The cause for the fluid visualized in the abdomen is not 100% clear. This could be iatrogenic from cystocentesis (?), inflammatory, etc. If a pocket is located in an area that can be sampled, consider fluid analysis and cytology. You could consider a fine needle aspirate of the spleen.

Enterococcus UTIs can be a challenge to treat. It is only recommended to treat them if there is a concurrent cystitis (which there is). Therefore, diligent treatment based on culture and sensitivities should be instituted, and considered starting probiotic therapy, as these are often secondary to chronic antibiotic use.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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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