



**PATIENT**

Day Day O'Brien

**SPECIES**

Canine

**BREED**

Yorkshire Terrier

**SEX**

Neutered male

**AGE**

13 years

**WEIGHT**

4.54 kg

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**IMAGING PERFORMED BY**

Dr. Carver

**HOSPITAL NAME**

Animal Emergency  
Hospital Volusia

**REFERRING VET**

Dr. Carver

**INVOICE**

99493

**DATE**

4/26/22

**PRESENTING CLINICAL SIGNS**

Lethargic the past 2 days, not eating the past day, drinking decreased. No V/D. P laterally recumbent for the last day

Abnormal PE/Chem/CBC/UA Results: PE: laterally recumbent, bradycardic, hypothermic BW: severe azotemia, hyperkalemia/hyponatremia, phos too high to read, USG 1.017

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is adequately distended.

A small amount of echogenic debris is present within the bladder lumen. The wall is very mildly thickened and irregular. The trigone and proximal urethra are not available for evaluation. There is no evidence of polyps or a mass. A cystolith, measuring 1.25 cm, is suspected based on the echogenic structure with acoustic shadowing that appears to be within the bladder and not the colon.

**Kidneys**

The **left** kidney measures 3.78 cm. Subjectively, the kidney appears mildly increased for a dog of Day Day's stature. The capsule is smooth. The cortex is hyperechoic, i.e., it is very mildly hyperechoic to the spleen. A mild loss of the normal definition of the cortico-medullary junction is present, which is not uncommon for a dog of Day Day's age. A very small number of mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. An accumulation of intrapelvic fat is present. There is no evidence of a medullary rim sign. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 4.31 cm. Subjectively, the kidney is enlarged. Findings are similar to the left kidney.

**Adrenal Glands**

The **left** adrenal gland measures 0.51 cm at the cranial pole, 0.55 cm at the caudal pole and 1.73 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. No obvious abnormalities are observed with the surrounding vasculature and mesentery.

The **right** adrenal gland measures 0.61 cm at the cranial pole and 0.56 cm at the caudal pole. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. No obvious abnormalities are observed with the surrounding vasculature and mesentery.

**Spleen**

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.



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**Liver**

Day Day O'Brien

There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver's echotexture is homogeneous and it is within normal limits in echogenicity. No obvious abnormalities are observed with the hepatic vessels visualized.

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The gallbladder wall is within normal limits in thickness and echogenicity. There may be a trivial amount of echogenic material within the GB in one view. The portion of the cystic duct visualized does not show signs of dilation or tortuosity. There are no obvious signs of an obstruction.

**BREED**

Yorkshire Terrier

**Gastrointestinal**

**SEX**

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The gastric wall is within normal limits in thickness and the wall layers are well defined. Comments cannot be made regarding peristalsis as still images were submitted.

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The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal.

There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction in the gastrointestinal tract.

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**Pancreas**

No overt abnormalities are observed with the parenchymal echogenicity or echotexture. There is no evidence of hyperechogenicity of the surrounding mesentery, i.e., signs of active pancreatitis and neoplasia are not present.

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**Other**

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**Lymph nodes**

No abnormalities are observed

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**Abdominal effusion** is not visualized.

**ULTRASONOGRAPHIC FINDINGS**

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- Bilateral renomegaly of unknown etiology. Acute kidney injury is suspected. Differential diagnoses include leptospirosis. Hypoadrenocorticism should not be excluded despite the adrenal glands being within the normal to high reference range. Exposure to a toxicity, such as raisins or xylitol (despite the absence of increased hepatic enzyme activities) cannot be eliminated as differential diagnoses.

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- Pyelonephritis cannot be excluded despite the absence of classical sonographic signs, however, it is considered less likely.

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- A single cystolith is suspected. Based on the appearance of the urinary bladder, a bacterial cystitis may be present. A urinalysis and urine culture and sensitivity are recommended.



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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A baseline cortisol is recommended.

A urinalysis and urine culture and sensitivity are recommended.

Treatment with ampicillin intravenously is suggested to treat for *Leptospira* pending PCR results, and doxycycline PO if serology is required.

Placement of a urinary catheter to monitor “ins and outs” and treat oliguria or anuria, as needed.

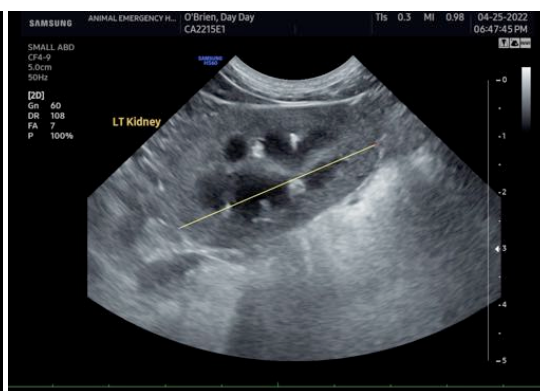
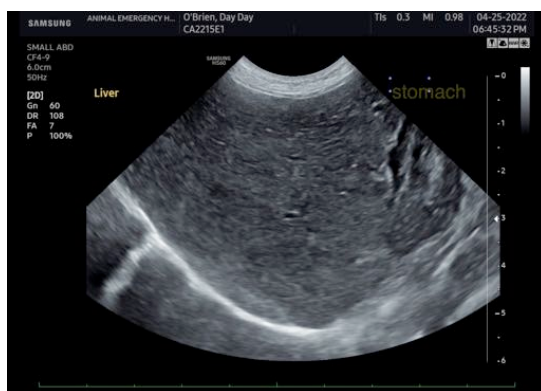
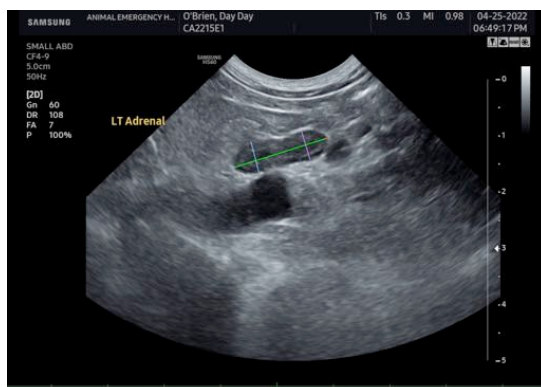
Increase fluid therapy rate

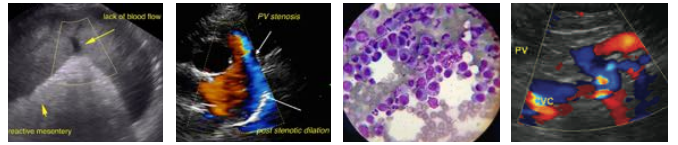
Monitor body weight twice a day.

Insulin therapy to decrease serum potassium concentrations, +/- calcium if no response to insulin.

If no response to the above, pending the cortisol, 0.05-0.08 mg/kg dexamethasone IV is suggested.

Referral to a board certified intensivist may be also be considered.





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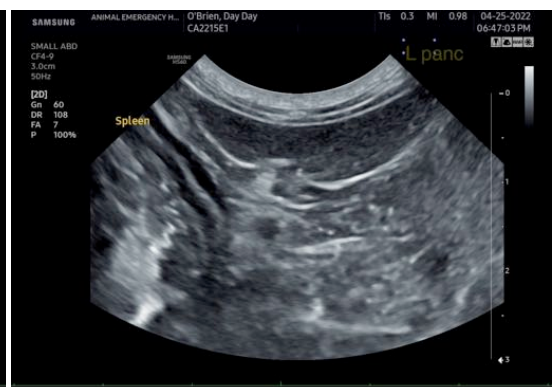
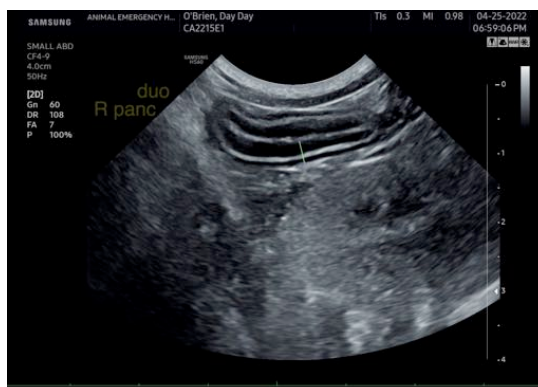
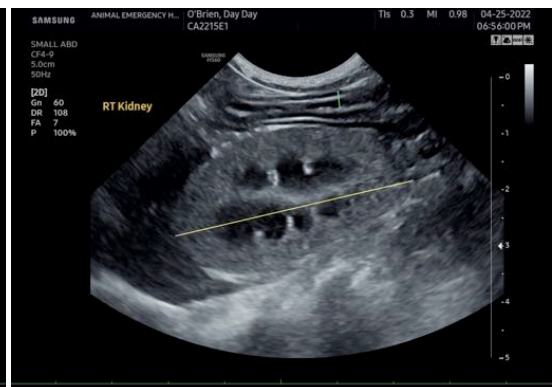
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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