

**DATE PRESENTING CLINICAL SIGNS**

4/5/23

Bridget had a collision with her larger lab housemates, then had Grand mal seizure following head trauma. Blood pressure is very elevated despite meds today. Ultrasound to rule out possible fluid and/or trauma in abdominal cavity seen near right kidney.

PATIENT

Bridget Price

Previous history significant for pyometra with surgery 3/11/21, previous owner surrender. 10/21/22 presented for incontinence. NSF, has been on incurin since that time and incontinence resolved within 3 weeks.

SPECIES

Canine

Current Medications: Methadone, Mannitol, Cerenia. Incurin .5mg eod.
Lab Results: See attached.

BREED

Yorkshire Terrier

Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, BS, RDMS.

SEX

Spayed Female

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**AGE**

3/11/20

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.

WEIGHT

6.6 Pounds

The left kidney has a normal shape and size (3.46 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

Kathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)

The right kidney is large, measuring 9.8 cm in length. There is a very severe renal pelvic dilation consistent with hydronephrosis, measuring at 4.87 cm x 8.94 cm. There appears to be a small rim of cortical tissue in the cranial aspect measuring 0.74 cm. The proximal ureter is visualized at the level of the kidney, dilated at 0.50 cm. This can be followed in the mid abdomen measuring 0.65 cm, and at the level of the urinary bladder at 0.38 cm, consistent with hydroureter.

HOSPITAL NAME

Animal Emergency
Hospital

Adrenal Glands

The left adrenal gland is normal in size measuring 0.53 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.

REFERRING VET

Dr. Saubier

The right adrenal gland is not clearly visualized, obscured by the large right kidney.

INVOICE

46419

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and 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.

Liver

The liver is normal/borderline small in size, with normal echogenicity and smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains a moderate to large amount of shadowing ingesta. 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 layers 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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 area of 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 did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.
- Large shadowing ingesta within the gastric lumen – Correlate with the feeding history and abdominal radiographs. If the patient was adequately fasted consider such differentials as delayed gastric emptying, a partial outflow tract obstruction (none seen) or ingested foreign material.
- Right-sided hydronephrosis/hydroureter – The dilation extends down to the level of the urinary bladder. No stones or point of obstruction is clearly visualized.
- Borderline small liver – The liver is difficult to visualize due to the shadowing ingesta and the enlarged right kidney. Consider pre- and post-prandial bile acids to rule out a portosystemic shunt.

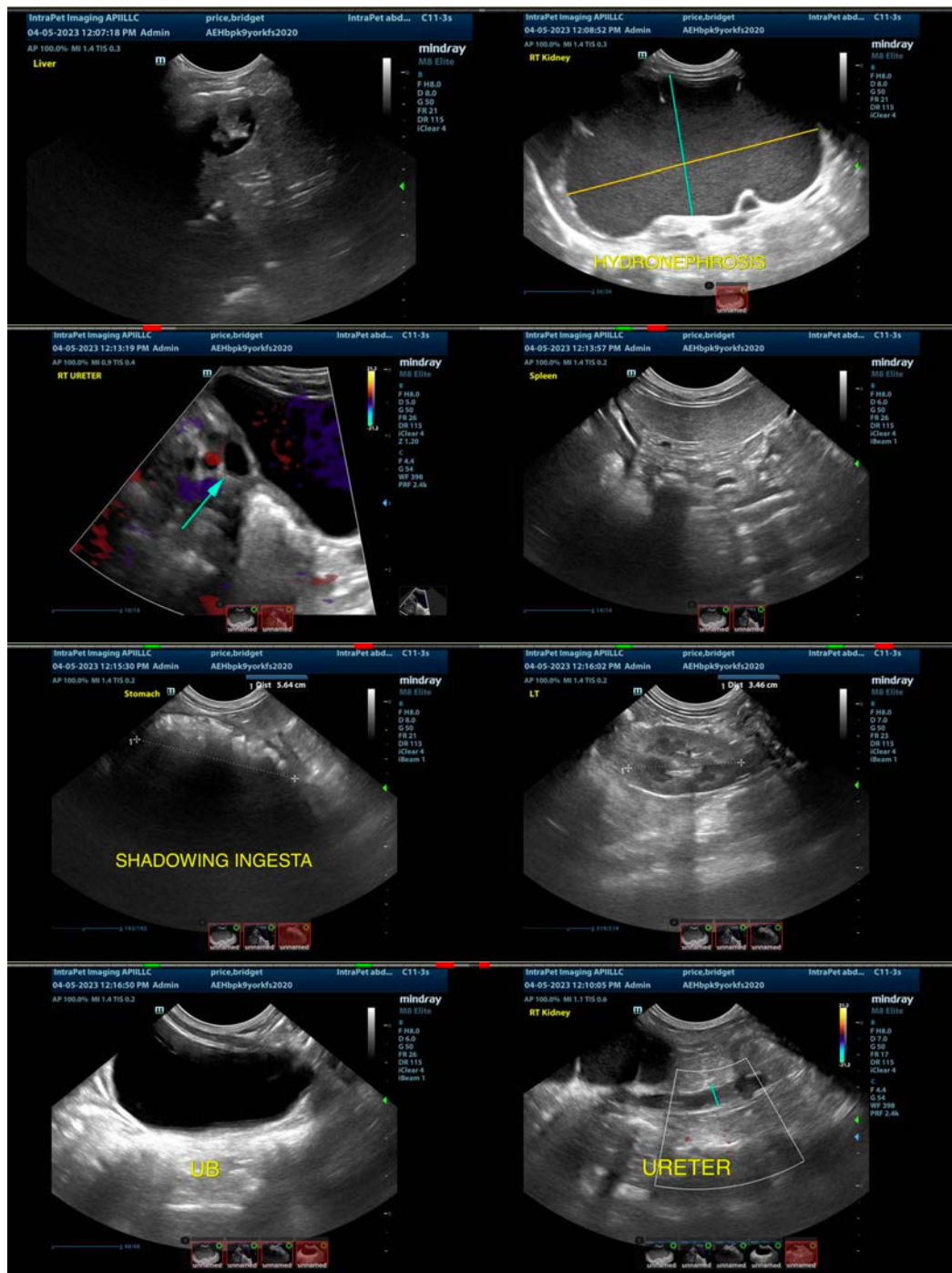
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

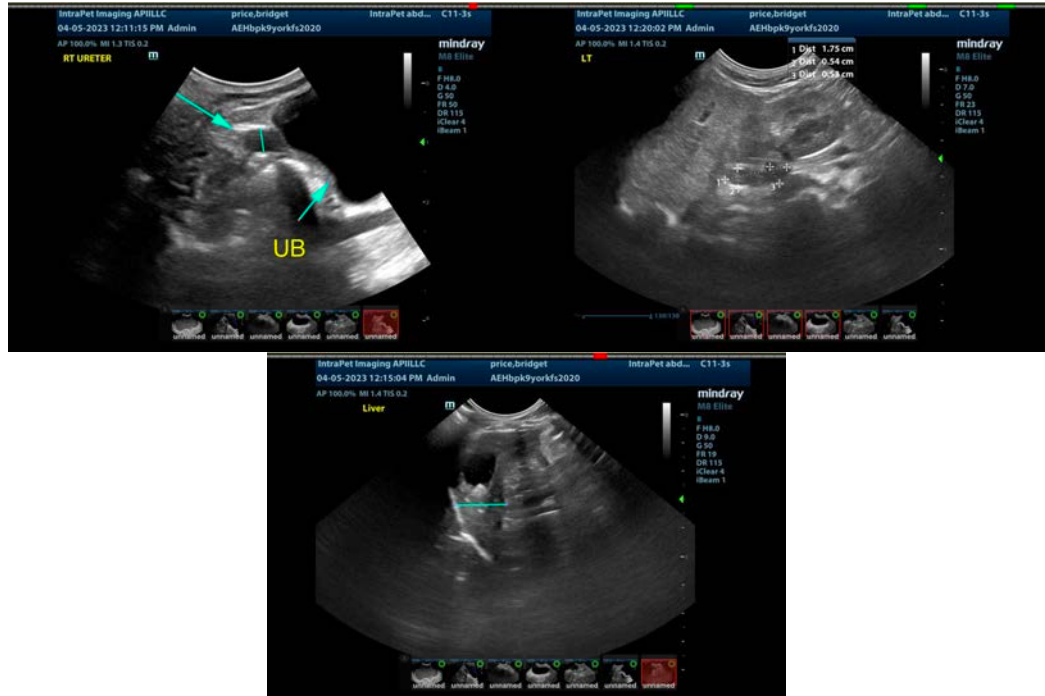
There is significant right-sided hydroureter and hydronephrosis. This appears to extend to the level of the urinary bladder. This could be a surgical complication post pyometra surgery, due to a stricture, stone, etc. Consider nephrectomy with monitoring of the renal function of the remaining kidney, and also consider evaluation of the urine visualized within the kidney to ensure it is not infected and that antibiotic therapy is not recommended.

The liver is challenging to clearly visualize due to the gastric ingesta and the large right kidney. Consider

pre- and post-prandial bile acids to rule out a possible shunting vessel, as this patient has had a complicated medical history for such a young dog, and if abdominal surgery is being planned, this would be a good time to rule this out.

Additionally, palpation of the skull, looking for possible open fontanelle, which could be imaged, should be performed, as this could increase the potential risk of head trauma.





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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
kathleen.sennello@sonopath.com