



**PATIENT PRESENTING CLINICAL SIGNS**

PJ Upton

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

13.5 Years

**WEIGHT**

10.7 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Dr. Haley  
Harasimowicz

**HOSPITAL NAME**

Waterbury VH

**REFERRING VET**

Dr. Haley  
Harasimowicz

**INVOICE**

46214

**DATE**

3/28/23

History of recently diagnosed hyperthyroidism and gallop rhythm in October 2022 proBNP was 1360 at that time. Was started on 2.5 mg felimazole BID and T4 decreased to 2.2 in December. Echocardiogram performed at that time showed HCM with persistent gallop rhythm - patient was started on atenolol (6.25mg q 12h) and clopidogrel (18.75mg/day). Over the last few weeks p has had 3 episodes of vomited with collapse (and defecation) shortly afterwards. P seems wobbly and dazed but responsive for about 90 seconds following the collapse, but then is back to normal energy and mentation between episodes. No recent diet change or other environmental changes. P has chronic mild atopy which is being controlled with topical therapies as needed.

Abnormal PE/Chem/CBC/UA Results: 3/27/23 P has lost 0.52 pounds since December. Gallop rhythm still present with HR of 150-160 in exam room. No murmur noted. Abdomen soft and non-painful to palpation. BP via doppler (tail, p not stressed): Average of 113 mmHg CBC: WNL Chemistry: SDMA - 16, K+ of 3.3, Na:K ratio - 47 T4: 2.4 UA: USG - 1.016, pH of 6, trace protein, 50-75 rbc phpf, 0-2 wbc phpf, otherwise quiet sediment proBNP pending 3/28: 3-view thoracic/abdominal rads today show mild mineralization within kidneys with no mineral opacities within the urinary bladder. Large amount of fecal material in colon.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with incidental suspended lipid in a cat, possibly combined with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. In some images, there is an almost 2.0 cm long, non-shadowing, echogenic density along the dependent wall that is believed to be debris, possibly mineral debris, or potentially a radiolucent cystoliths, given the lack of observation on radiographs. The density is not visible in all images, and the colon does create a similar appearance along the urinary bladder wall. However, given the appearance of anechoic urine surrounding the density in some images, an intraluminal density is believed to be real. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (4.4 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Punctate non-obstructive nephroliths noted.

The left kidney is normal in size (4.0 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Punctate non-obstructive nephroliths noted.

**Adrenal Glands**

The right adrenal gland is normal in size (0.35 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.39 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.



**PATIENT**

**Liver**

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The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

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**Gastrointestinal**

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

**WEIGHT**

10.7 Pounds

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

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**Pancreas**

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

**Free Abdomen**

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

**IMAGING PERFORMED BY**

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**ULTRASONOGRAPHIC FINDINGS**

**HOSPITAL NAME**

Waterbury VH

- Bilateral punctate non-obstructive nephroliths
- Urinary bladder debris with mineral/sand debris and possibly a radiolucent cystoliths suspected.

**REFERRING VET**

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Harasimowicz

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

This patient's urinary findings are likely incidental and unrelated to the patient's vomiting/collapse episodes. Given those episodes, further evaluation of the reported underlying cardiac disease, potential medication adjustments, etc. may be considered. However, if the hyperthyroidism is well controlled and vomiting persists, further evaluation of the pancreas and gastrointestinal tract could be considered to look for evidence of occult gastrointestinal and/or pancreatic disease, beginning with a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory.

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Again, the significance of the urinary bladder changes is unknown. Given the atypical appearance and the lack of support radiographically, a contrast study could be considered to try to definitively confirm a radiolucent cystolith or other space occupying density.



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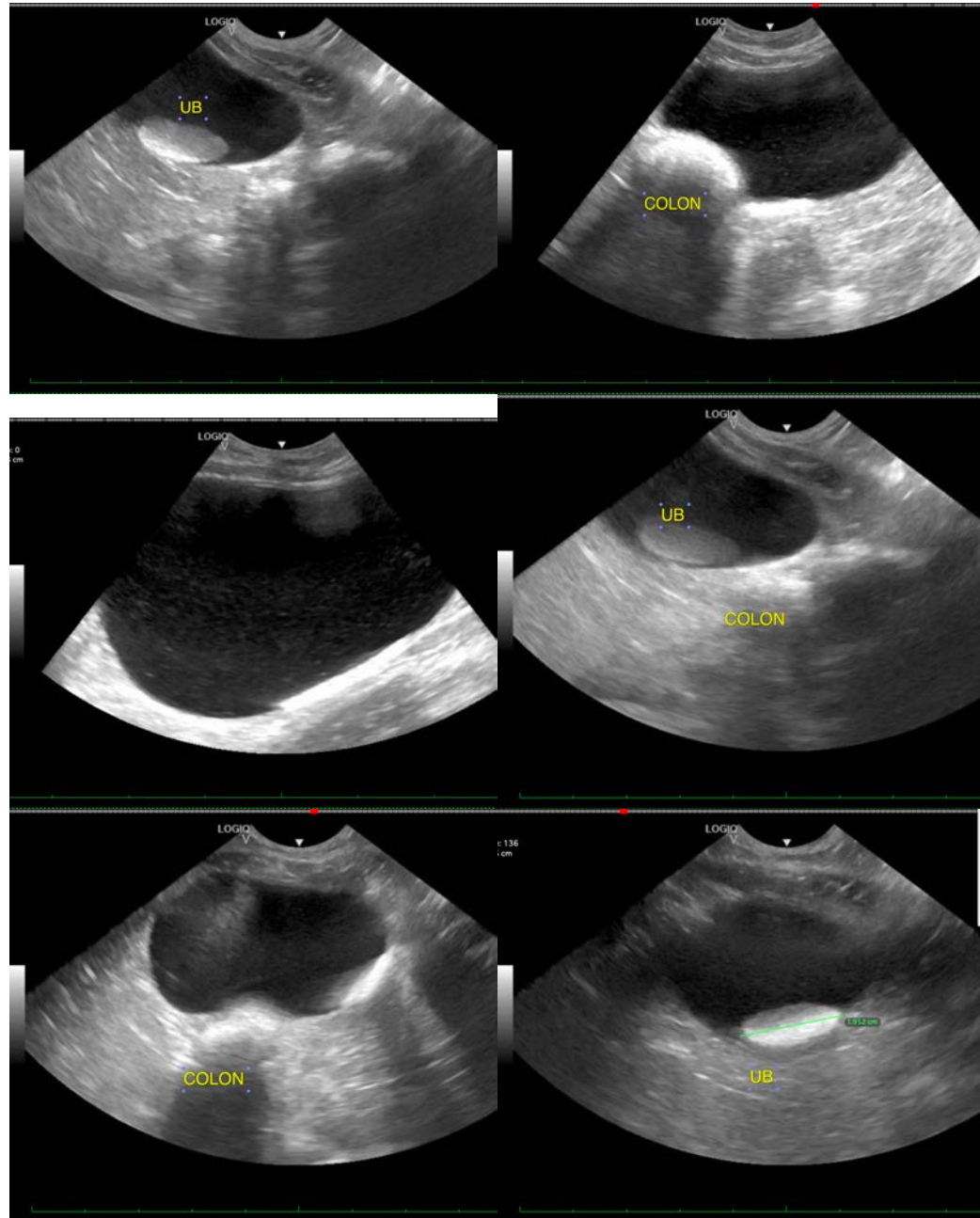
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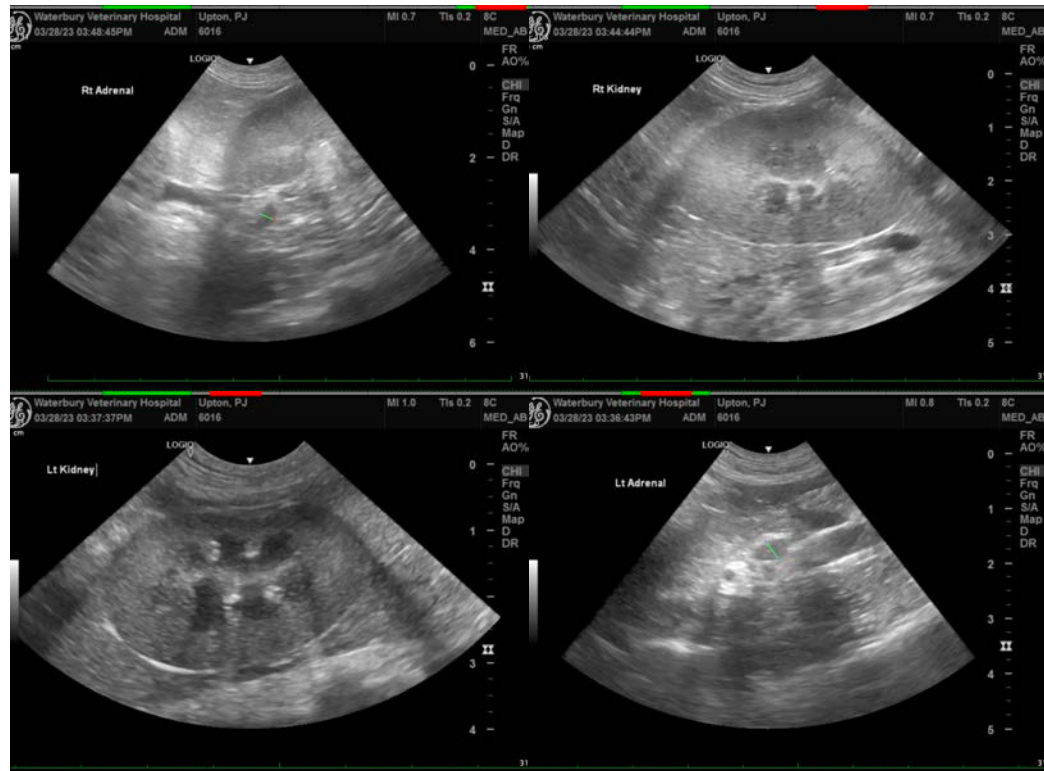
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
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