



**PATIENT PRESENTING CLINICAL SIGNS**

Teddy McLean

BAR. urine wnl. no glucose present. px: no more vomiting but ongoing inappetence on PE, dehydrated with mild skin tent gi tract feels empty Discussed risk of fatty liver with prolonged inappetence rec'd hospitalization with abdominal ultrasound (more detailed than x-ray). o cost concerned to do sq fluid demo, force feed recovery and add on oral cerenia meds: gabapentin, forti flora, metronidazole, cerenia, mirtizapine

**SPECIES**

Feline

Abnormal PE/Chem/CBC/UA Results: SG of urine 1.028 High HCT of blood 52.7% High HGB of blood 17.0g/dL Low EOS of blood  $0.06 \times 10^9/L$  High GLU 13.08mmol/L High UREA 17.4mmol/L High GLOB 55g/L Low Na 149mmol/L Low P 3.4mmol/L Low Ca 106mmol/L

**BREED**

Himalayan

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**SEX**

Neutered Male

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**

9 Years

The left kidney has a normal shape and size (4.42 cm). Overall echogenicity is slightly hyperechoic with poor 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**

4.2 kg

The right kidney has a normal shape and size (4.64 cm). Overall echogenicity is slightly hyperechoic with poor 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,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.48 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.

**IMAGING PERFORMED BY**

Kelly Reschny

The right adrenal gland is normal in size measuring 0.52 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.

**HOSPITAL NAME**

BPH Ancaster

**Spleen**

The spleen is subjectively normal in size (0.66 cm at the level of the hilus), 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.

**REFERRING VET**

Dr. Davis

**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.

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The gallbladder lumen is moderately distended. The wall is mildly hyperechoic and thickened at 0.23 cm. There are minimal luminal contents. The cystic and common bile ducts are normal/not visible.

**DATE**

6/16/22

**Gastrointestinal**


**PATIENT**

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The stomach is severely distended with intraluminal fluid. It measures at a normal thickness of <0.36cm 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 obvious obstruction is visualized at the outflow tract, but distention is severe, and concern for an obstructive process persists.

**SPECIES**

Feline

Most of the visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal/moderate 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 0.13-0.38cm in wall thickness) and the jejunum measured as normal (between 0.15-0.36cm.) Visualized peristalsis appears appropriate. There is an isolated view of what appears to be small intestine with intraluminal hypoechoic shadowing material. There is concern for a possible obstruction.

**BREED**

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**SEX**

Neutered Male

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**
**AGE**

9 Years

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**
**WEIGHT**

4.2 kg

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.

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**PRIMARY FINDINGS**

- Severe gastric fluid distention – Possible differentials would include an outflow tract obstruction, upper GI obstruction, severe gastric ileus, or a recent large liquid meal.
- Mildly reduced corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- 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. If liver enzyme elevations are not present, this could be within normal limits.
- Focal hypoechoic shadowing visualized within the small intestine – There is concern for possible small intestinal foreign material/obstruction.

**SECONDARY FINDINGS**

- Hyperechoic, prominent gallbladder wall – The significance of this is currently unclear. If liver enzyme values are normal, then recommend continued monitoring.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The stomach is severely distended with fluid, causing concern for a possible obstructive process. Correlate with abdominal radiographs and feeding history (has this patient been force fed a liquid diet recently, etc.). An obvious pyloric outflow tract obstruction is not visualized, but not all obstructions can



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be clearly seen. There are some fluid dilated bowel loops in the proximal GI tract, and there is a loop of small intestine that has a hypochoic shadowing structure within the lumen, which is concerning for a possible focal intraluminal foreign material.

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Correlate these findings with abdominal radiographs and clinical findings. If this patient has been fasted and has an obstructive pattern on radiographs, I would consider surgical evaluation with GI biopsies obtained (particularly if an obstruction is not identified). Additionally, you could consider placement of a feeding tube at the time of surgery if you do not suspect a rapid recovery.

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Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

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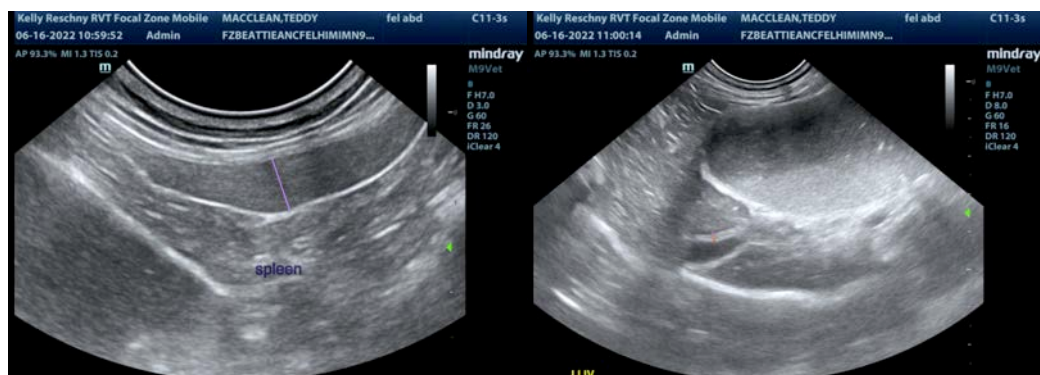
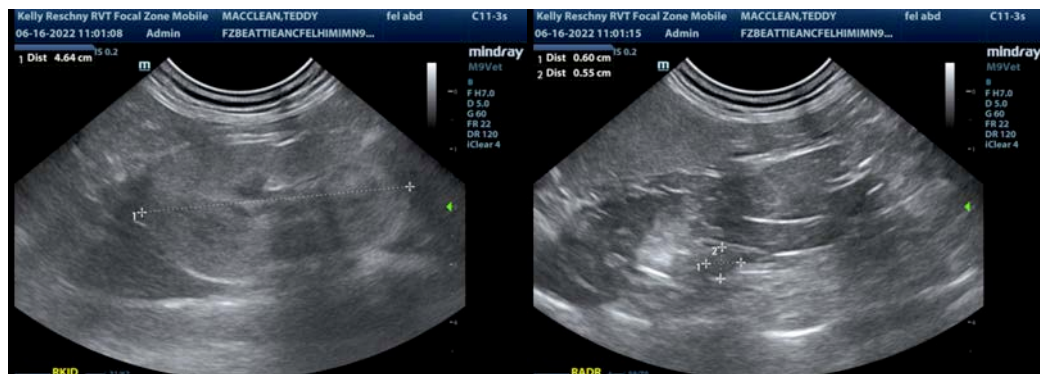
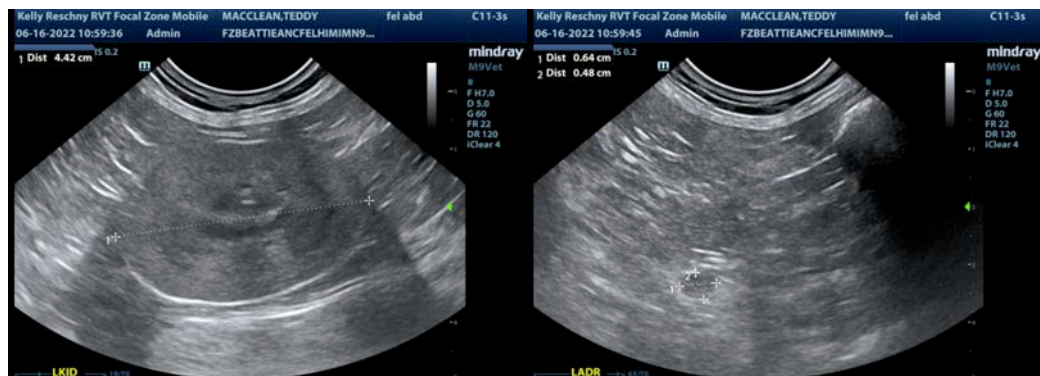
Dr. Davis

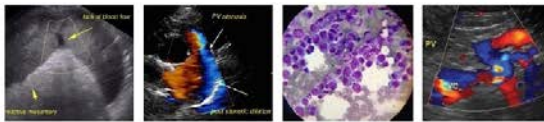
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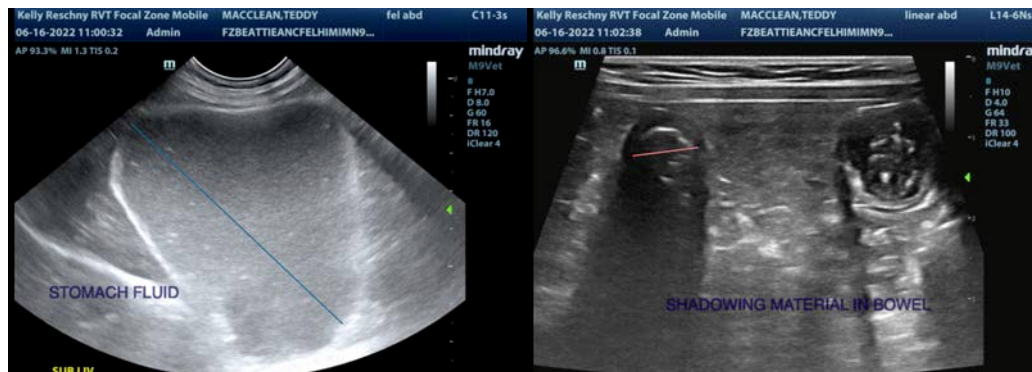
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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