

**DATE**

11/30/21

**PRESENTING CLINICAL SIGNS**

History: Presenting Complaint: Lethargic. Date: 11-29-2021 Notes: Oliver is a 7 y/o MI pug who presents for lethargy, not eating and increased drinking - known diabetic - not eaten a meal since Friday, Owner tried various foods, did eat a small piece of cheese and white bread - not able to get medications into, seen by RDVM this AM, given injectable medications - more lethargic today - Vomited clear liquid, no diarrhea - seen previously for eating less, treated outpatient, see previous discharge Medications: - Vetsulin 6u BID - 10a and 10p - Ketorolac 1 drop OU SID in the PM - Tobramycin 1 drop OU SID in the PM - Convenia 11/29 given at RDVM - Cerenia 11/29 given at RDVM

**PATIENT**

Oliver Pusey

**SPECIES**

Canine

Assessment: lethargic, anorexia, known diabetic, increased drinking unregulated diabetic vs neoplasia vs pancreatitis vs other. Plan: Offered hospitalization 3-5 days, IVF, full bloodwork, insulin CRI, UA, culture, and AUS. Discussed prognosis guarded depending on underlying cause, concern due to elevated WBC previously, another disease process underlying such as infectious, cancerous, or other metabolic disease.

**BREED**

Pug

Current Medications: Ketorolac, Tobramycin, Pantoprazole.

Lab Results: Attached separately.

Radiographs: Attached separately.

**SEX**

Intact male

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**AGE**

5/28/14

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****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**

12.9 lbs

The prostate is large in size (1.35 x 2.35 cm) but has a regular shape with smooth external margins. The parenchyma is heterogenous but no discrete focal lesions are present. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

**INTERPRETED BY**

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

The left kidney has a normal shape and size (4.88 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. Mild pyelectasia was noted at 0.12 cm and pinpoint, non-obstructive nephroliths. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

**IMAGING PERFORMED BY**

Rachel Brillhart RDMS

The right kidney has a normal shape and size (5.2 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. Mild pyelectasia was noted at 0.11 cm and pinpoint, non-obstructive nephroliths. There is evidence of significant peri-nephric inflammation and a small amount of anechoic effusion. Renal vasculature is normal.

**HOSPITAL NAME**

Animal Emergency  
Hospital

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.51 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. Thompson

The right adrenal gland is normal in size measuring 0.4 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.

**INVOICE**

94206

### ***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 subjectively large 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 gallbladder 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 contains minimal luminal contents. 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 uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. The duodenum measured 0.5 cm and the jejunum measured 0.3 cm. Mild mucosal speckling is evident. 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 large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. This is consistent with mild/moderate pancreatitis.

### ***Free Abdomen***

There is a small amount of anechoic effusion particularly observed around the right kidney in the area of the right limb of the pancreas. There is no lymphadenomegaly observed. The omentum is of increased echogenicity particularly around the right limb of the pancreas and right kidney.

### ***Other***

The right and left testicles are visualized and no significant lesions are observed.

## **ULTRASONOGRAPHIC FINDINGS**

### **PRIMARY FINDINGS:**

- Prominent, hypoechoic pancreas surrounded by hyperechoic mesentery and mild effusion. The pancreatic changes are most consistent with moderate pancreatitis/pancreatic infiltration. I recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider FNA if not improving.

- Large, hyperechoic, heterogenous 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. The findings are most consistent with a diabetic hepatopathy.
- Mildly reduced corticomedullary distinction in both kidneys with mild pyelectasia and right-sided peri-nephric inflammation. The findings are most consistent with age related change. I recommend urinalysis and culture due to the pyelectasia. The right-sided peri-nephric inflammation is likely associated with the localized inflammation due to the pancreas.
- Mild small intestinal thickening with mucosal speckling. Bright mucosal speckling has been proposed to represent dilated lacteals or focal accumulation of mucus, cellular debris etc. in the mucosal crypts of the small intestine.

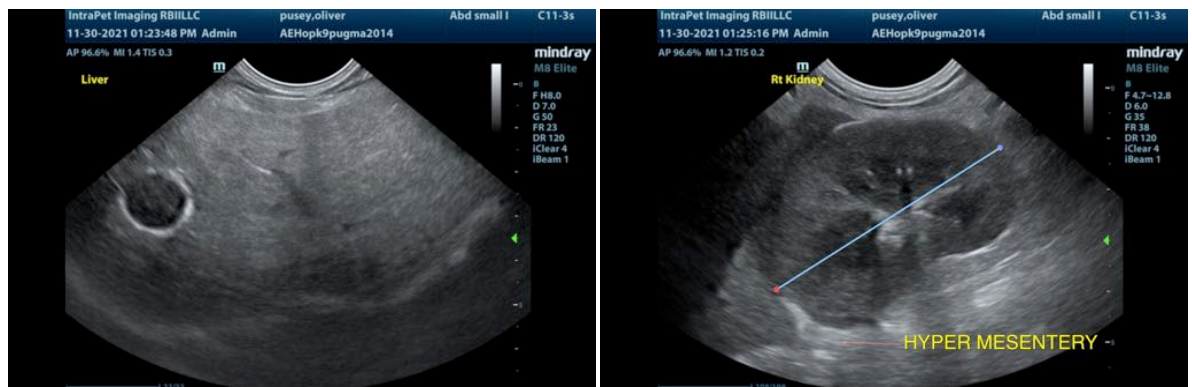
#### SECONDARY FINDINGS:

- Prominent enlarged prostate. Prostatic changes are most consistent with benign prostatic hyperplasia. Other differentials include bacterial prostatitis and prostatic neoplasia. However, given the lack of lower urinary tract symptoms, these differentials are considered less likely in this patient.
- Some volume of free abdominal fluid. This is likely associated with inflammatory changes in the abdomen.

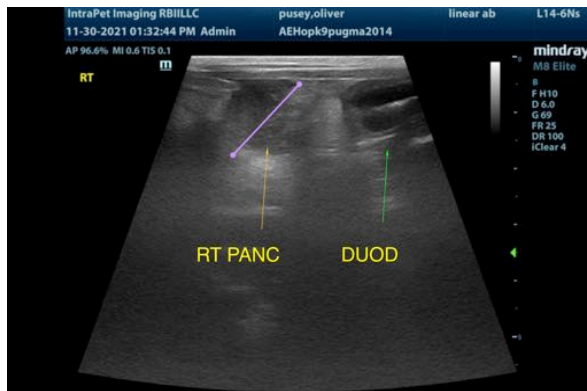
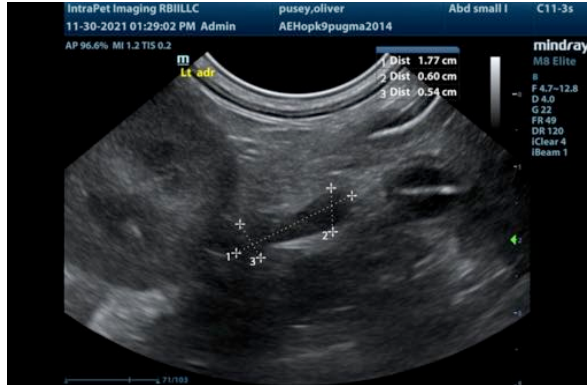
#### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pancreas is prominent and hypoechoic particularly in the area of the right kidney there is some free fluid and focal inflammation. I recommend a GI panel if quantitative PLL, TLI, cobalamin and folate to further evaluate the pancreatic inflammation and to look for evidence of concurrent small intestinal disease. I recommend treatment for pancreatitis as well as reregulation of the diabetes.

The history reports a urinalysis and culture pending. This is very appropriate considering the enlarged prostate, history of diabetes, and mild bilateral pyelectasia present.







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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