

**DATE PRESENTING CLINICAL SIGNS**

5/19/22 Recently diagnosed diabetic. Newly painful cranial abdomen with lethargy and inappetence.

PATIENT

Current Medications: Starting Humulin-n 2 units BID. Started 2 days ago but inappetent and not given insulin over the last 24 hours.

Yankee Rosse

Lab Results: See attached.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**BREED**

Yorkie

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, or masses. There is a small amount of echogenic debris in the urinary bladder and a small focus of shadowing hyperechoic debris, most consistent with a small stone or mineralized debris.

SEX

Neutered Male

The prostate is normal in size and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

AGE

5/5/12

The left kidney has a normal shape and size (4.43 cm) with mild pyelectasia at 0.26 cm and small non-obstructive nephroliths. 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 infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

15 Pounds

The right kidney has a normal shape and size (4.47 cm) with non-obstructive nephroliths. 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 0.80 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

Andi Parkinson RDMS

The right adrenal gland is normal in size measuring 0.87 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

Belvedere Vet Center

REFERRING VET

Dr. Mouldar

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.

INVOICE

37789

Liver

The liver is large in size with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. There are numerous ill-defined, hypoechoic nodules visualized in the parenchyma, measuring 0.77, 0.83 cm.

The gallbladder lumen is moderately distended. The wall of the gall bladder 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 is dilated with a large amount of fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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. Duodenum wall measured 0.40 cm with mucosal striations. 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. Consistent with severe pancreatitis.

Free Abdomen

There is a small amount of free abdominal fluid. No lymphadenopathy is noted. The mesentery is severely inflamed and hyperechoic in the region around the pancreas.

ULTRASONOGRAPHIC FINDINGS

- Severely enlarged, hypoechoic, irregular pancreas –The pancreatic changes are most consistent with severe pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving. These changes are so severe, I am concerned about potential necrotizing pancreatitis.
- Small amount of focal mineralized debris in the urinary bladder – Correlate with abdominal radiographs. This could be consistent with mineralized debris or a small focal stone.
- Decreased corticomedullary distinction in both kidneys with non-obstructive nephroliths and mild pyelectasia – The bilateral renal findings are consistent with age-related change. Pyelectasia of the left/right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Large, hyperechoic liver with ill-defined hypoechoic nodules – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy. Findings are most consistent with a diabetic hepatopathy. The hypoechoic nodules trend towards a more benign appearance.
- Large, shadowing debris within the gastric lumen – Correlate with feedings history and abdominal radiographs. If adequately fasted then consider such differentials as delayed gastric emptying or a partial outflow tract obstruction (none visualized).
- Thickened small intestine with mucosal striations – The bowel wall thickening could be consistent

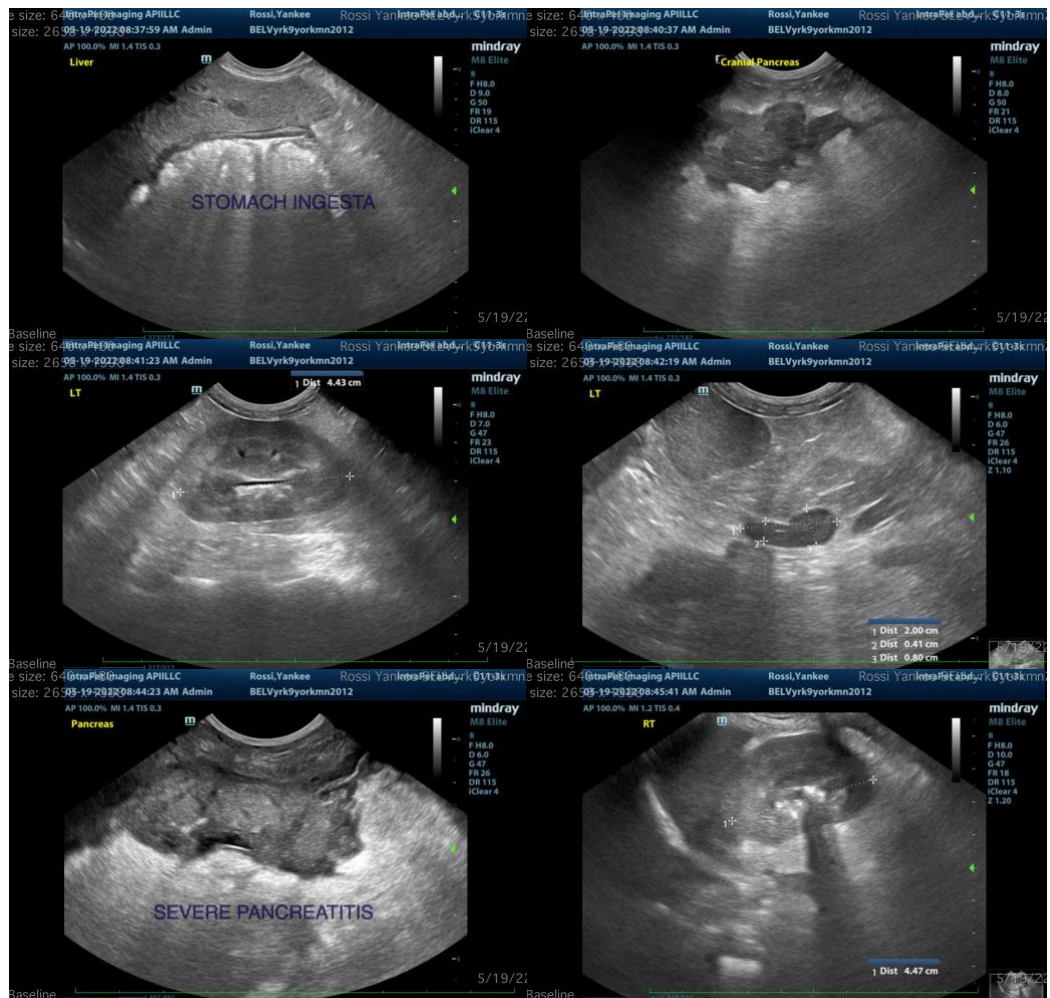
with inflammation, edema, or infiltrative neoplasia.

- Scant free abdominal fluid with severely hyperechoic mesentery surrounding the pancreas – findings are most consistent with focal peritonitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pancreas is large and severely irregular and hypoechoic with surrounding edema, fluid, and hyperechoic mesentery. Findings are most consistent with severe pancreatitis and potential necrotizing pancreatitis. Recommend aggressive medical therapy including continued administration of insulin (or DKA will develop), pain medications, nausea medications, treatment for gastric ileus, and continued monitoring for the development of a pancreatic abscess. Recommend 3-view thoracic radiographs.

There is a small amount of echogenic debris and shadowing debris within the urinary bladder. Recommend a urinalysis and culture.





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.

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