IMAGING PERFORMED BY

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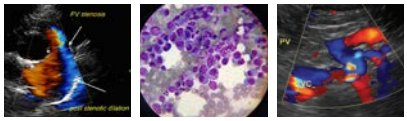

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

8/3/22

PATIENT

Lola Klaers

SPECIES

Canine

BREED

Shih Tzu

SEX

Spayed Female

AGE

3/1/15

WEIGHT

18.4 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Andi Parkinson RDMS

HOSPITAL NAME

Timonium AH

REFERRING VET

Dr. Stephens

INVOICE

40106

PRESENTING CLINICAL SIGNS

Received ProHeart injection on 7/22. Presented to Urgent Care on 7/31 for inappetence and lethargy. Has not eaten a significant amount
since then. Panhypoproteinemia found on bloodwork. Radiographs showed swollen, fluid-filled bowel loops and microhepatica

Current Medications: Entyce, Proviable, Cerenia, Famotidine, Metronidazole
Lab Results: Ca 7.4, TP 3.7, ALB 1.4, GLOB 2.3, Normal BUN, CREA, Tbili, GGT, CHOL.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

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.

The left kidney has a normal shape and size (4.27 cm). Overall echogenicity is normal with adequate 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.

The right kidney has a normal shape and size (4.71 cm). Overall echogenicity is normal with adequate 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.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.47 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.

The right adrenal gland is normal in size measuring 0.67 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.

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 borderline small in size, and echogenicity with 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 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 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. Some areas of small intestine had intact wall layering, but distinction was somewhat "fuzzy". Bowel loops follow a typical curvilinear path with distinct wall layering. Duodenum wall measured 0.35 cm. Jejunum wall measured 0.31, 0.40, 0.36 cm. 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 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

There is scant free abdominal fluid. Occasional prominent mesenteric lymph nodes are noted amidst hyperechoic mesentery. One lymph node measures 0.72 cm in diameter.

ULTRASONOGRAPHIC FINDINGS

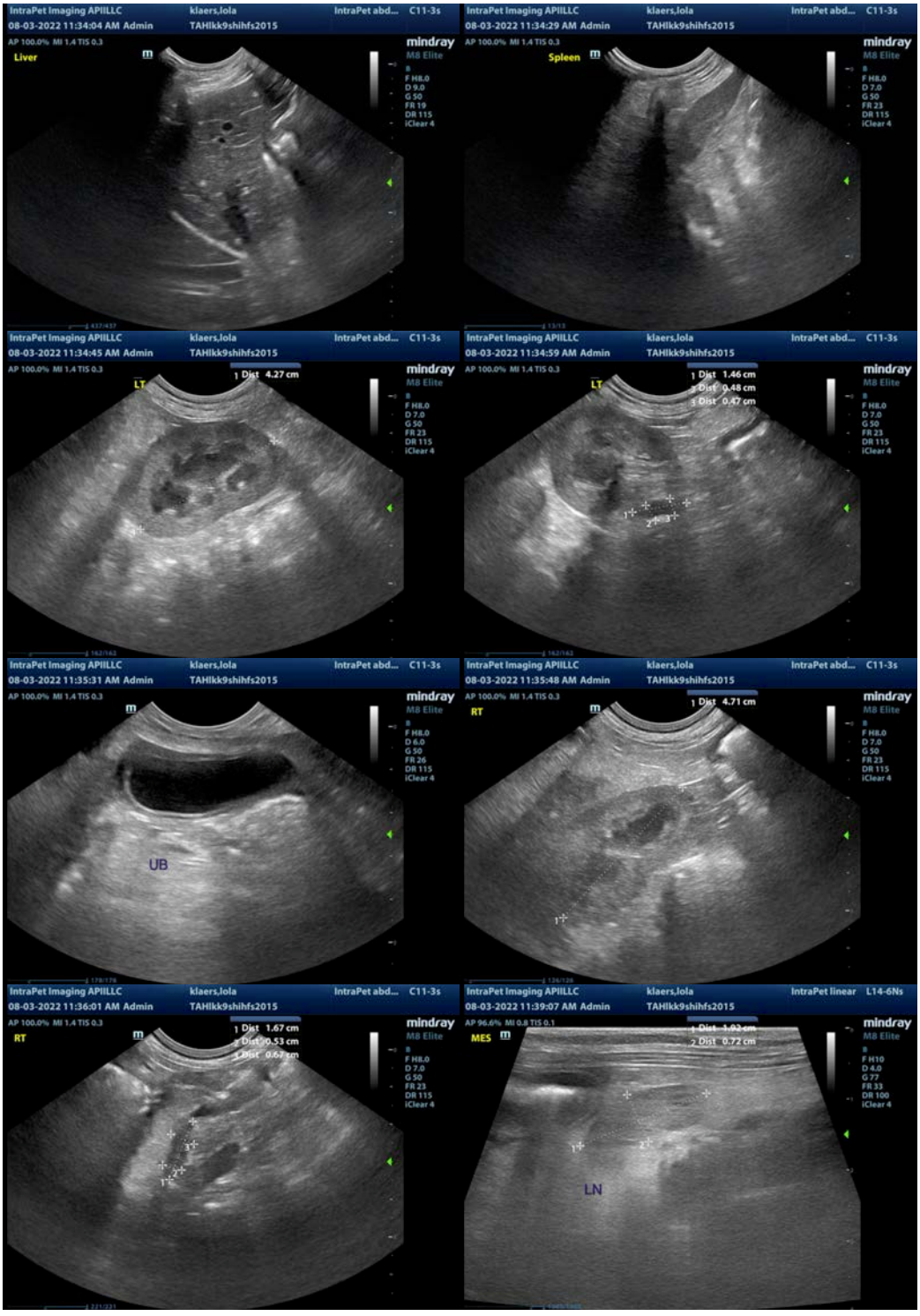
- Subjectively small liver – This can be seen as an anatomic variation secondary to a portosystemic shunt, etc.
- Subjectively thickened small intestine with mildly reduced detail of wall layering – The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease).
- Scant free abdominal fluid – The fluid is likely secondary to the hypalbuminemia reported.
- Occasional prominent mesenteric lymph nodes – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver appears somewhat small and is visualized between rib spaces, limiting complete evaluation. Recommend pre- and post-prandial bile acids to evaluate liver function. If bile acids are elevated, consider a contrast CT scan to look for evidence of a portosystemic shunt. None was visualized on today's exam, but some areas were difficult to see clearly.

Some of the areas of small intestine appeared subjectively thickened and had a somewhat "fuzzy" mucosal layer. This can be seen secondary to infiltrative disease as well as due to edema secondary to hypoalbuminemia. Recommend a liver function test and a urine protein to creatinine ratio and urinalysis. If liver function is normal and there is no evidence of proteinuria, then this is likely a protein losing enteropathy, and liver biopsies should be obtained to determine what type of small intestinal disease is present.

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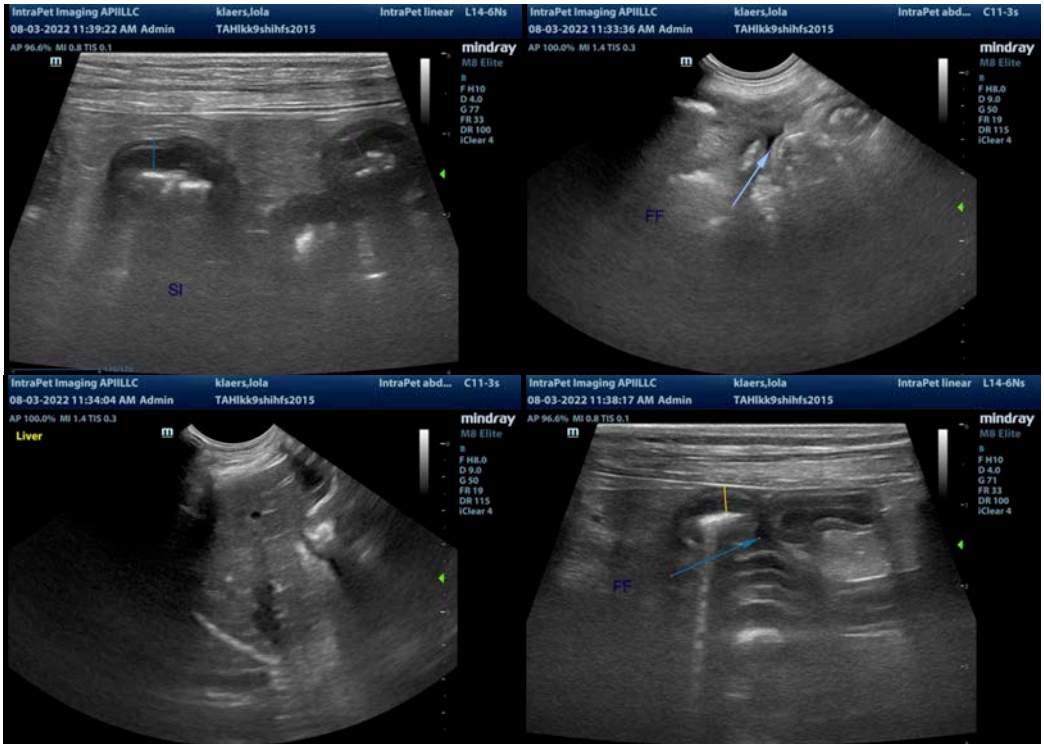

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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