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Clinical Sonography & Telecytology

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DATE PRESENTING CLINICAL SIGNS

3/21/23 Patient presents for routine evaluation and labwork with no concerns at home. PE is WNL. Inflammatory/left shift leukogram noted on routine labwork. Workup/follow up for this.

PATIENT

Leo Marr
Current Medications: None current.
Lab Results: CBC: WBC: 33.5 (3.9 - 19), Neutrophils: 21.105 (2.62 - 15.17), Lymphocytes: 11.055 (0.85 - 5.85). Chemistry: BG: 69 (72 - 175)
BUN: 38 (16 - 37), TCO2: 26 (12 - 22). UA: USG 1.052, 3+ protein. T4: 3 (0.8 - 4.7)

SPECIES

Feline
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Declined, recommended for further imaging.
Stat Report: Not requested.

BREED

Maine Coon
Imaging Performed By: Rachel Brillhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Neutered Male
The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

AGE

1/1/10
Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia or infarcts observed. The left kidney measures 4.2 cm. The right kidney measures 4.3 cm. A small non-obstructive nephrolith ins noted in the left kidney.

WEIGHT

12.8 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Adrenal Glands

The right adrenal gland is normal in size (0.50 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.53 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

HOSPITAL NAME

Perry Hall AH

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.

REFERRING VET

Dr. Miller

Liver

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.

INVOICE

46054

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.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen is empty with no evidence of obstruction or foreign material.

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

Pancreas

Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.

Free Abdomen

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

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Inflammatory bowel disease (IBD) pattern** – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.
- Chronic active pancreatitis

SECONDARY FINDINGS

- Age related kidney changes with a small non-obstructive nephrolith in the left kidney

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

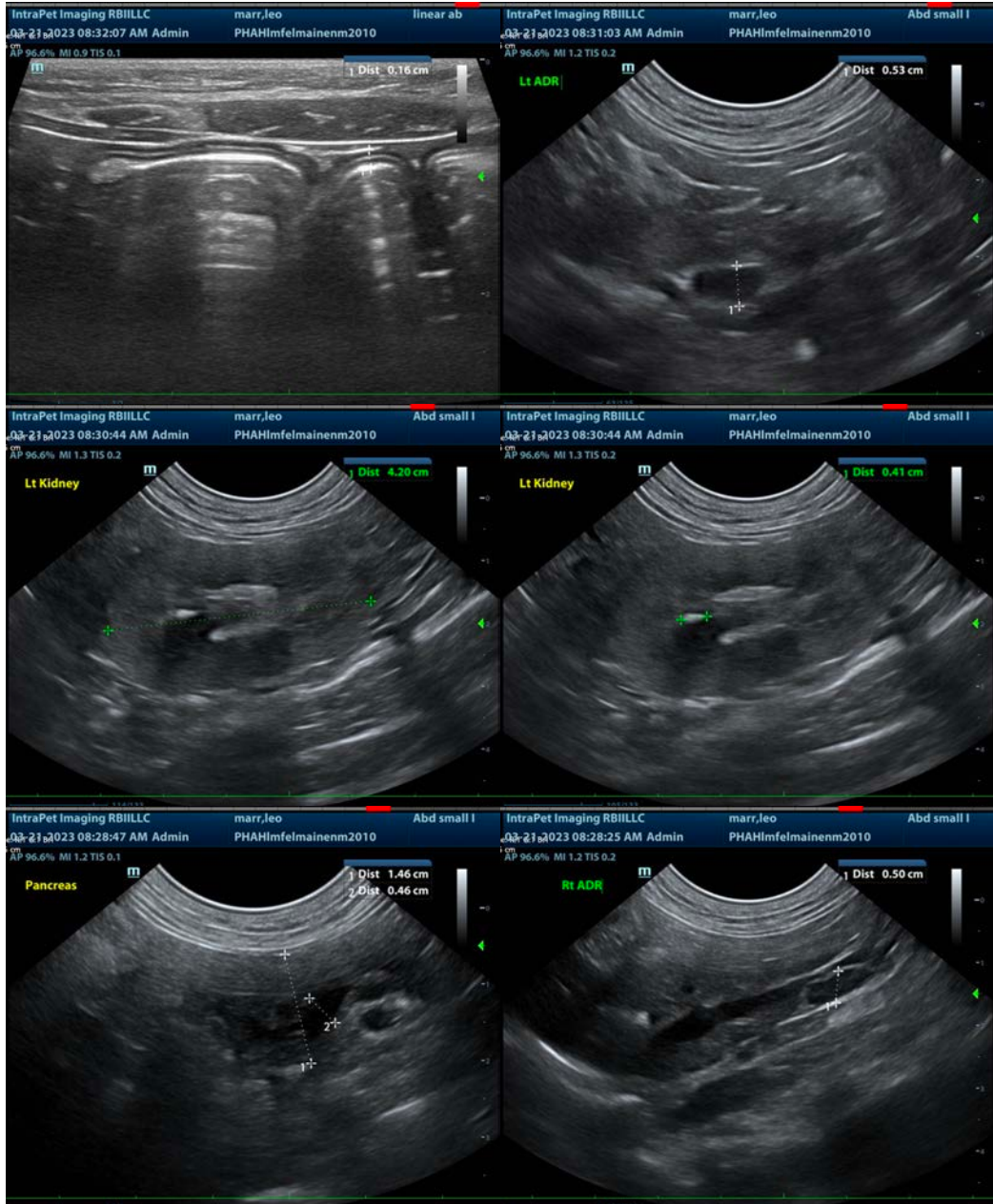
Further evaluation of this patient's marked lymphocytosis is recommended, beginning with a pathology review with differentials being lymphoma versus leukemia versus infectious disease if the finding is not artificial/spurious.

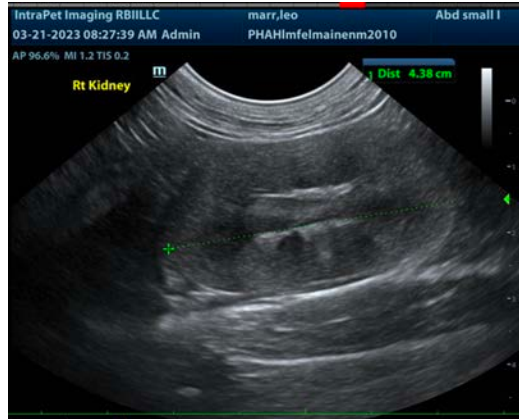
While the appearance of bowel, pancreas, etc. trends towards benign, inflammatory bowel disease cannot be ruled out, especially if this patient has any concurrent gastrointestinal signs, including weight loss, further evaluation could be considered.

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Ideally, biopsies of the GI tract, being sure to include ileum if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.

If biopsies cannot be obtained, empirical therapies could include diet change, empirical deworming with a 5 day course of Panacur, cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.). Other supportive therapeutic considerations could include fiber supplementation, especially with large bowel diarrhea and/or a probiotic.





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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