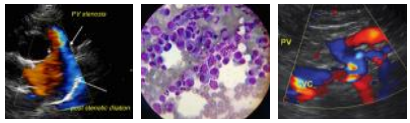
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

8.15.2023

PATIENT

Diamond McCain

SPECIES

Canine

BREED

Great Dane

SEX

Female Spayed

AGE

2/20/2016

WEIGHT

108 lbs

INTERPRETED BY

Andrea Nicastro, DMV, Diplomate DACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Madonna VC

REFERRING VET

Dr. Cangro

INVOICE

14106

PRESENTING CLINICAL SIGNS

Intermittent diarrhea since March 2023. Edema in all distal limbs, low protein levels in bloodwork.

Current Medications: None.
Lab Results: Total protein 4.6, Alb 1.8, Amylase 1566, UA WNL.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone is normal.

The left kidney is normal in size (8.48 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (8.35 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size (1.07 cm at cranial pole) (0.69 cm at caudal pole) (3.37 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is small in size (0.60 cm at cranial pole) (0.64 cm at caudal pole) (2.34 cm in length) with a slightly flattened contour. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is subjectively normal in size with a normal capsular contour. The parenchyma is subtly mottled in appearance. A few, small, ill-defined, multiseptated cystic nodules are observed (the largest measuring 1.00 cm in diameter). Splenic vasculature is normal.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric

outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The base and left limb of the pancreas are visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

The mesentery throughout the abdomen is hyperechoic and slightly stranding. A moderate amount of echogenic free fluid is present. A 2.99 x 0.71 cm lymph node is observed at the aortic trifurcation. In addition, a few prominent mesenteric lymph nodes are seen (the largest measuring 3.25 x 1.10 cm).

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Given the patient's clinical history and sonographic changes, a protein-losing enteropathy (i.e., inflammatory bowel disease, lymphangiectasia, infectious/parasitic disease, emerging lymphoma) is suspected. However, other differentials for hypoalbuminemia (i.e., protein-losing nephropathy, hepatic dysfunction, hypoadrenocorticism) cannot be excluded.

- The ascites is likely secondary to low oncotic pressure.

- The splenic nodules may represent benign cystic lesions or emerging vascular tumor (i.e., hemangioma, hemangiosarcoma).

Secondary Findings

- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.

- The flattened left adrenal gland may be a normal variant for this patient or may represent atrophy secondary to early hypoadrenocorticism.

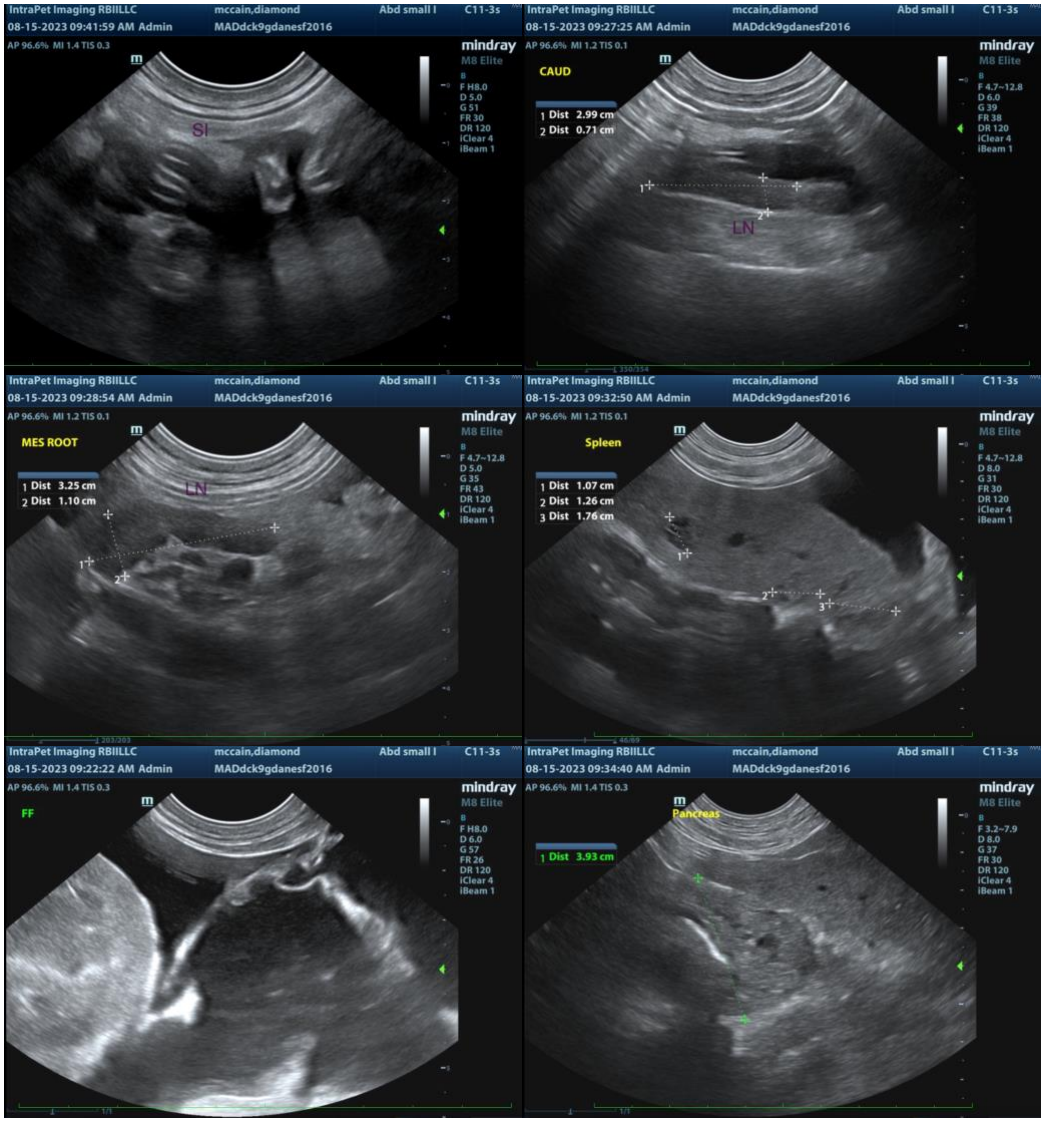
- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

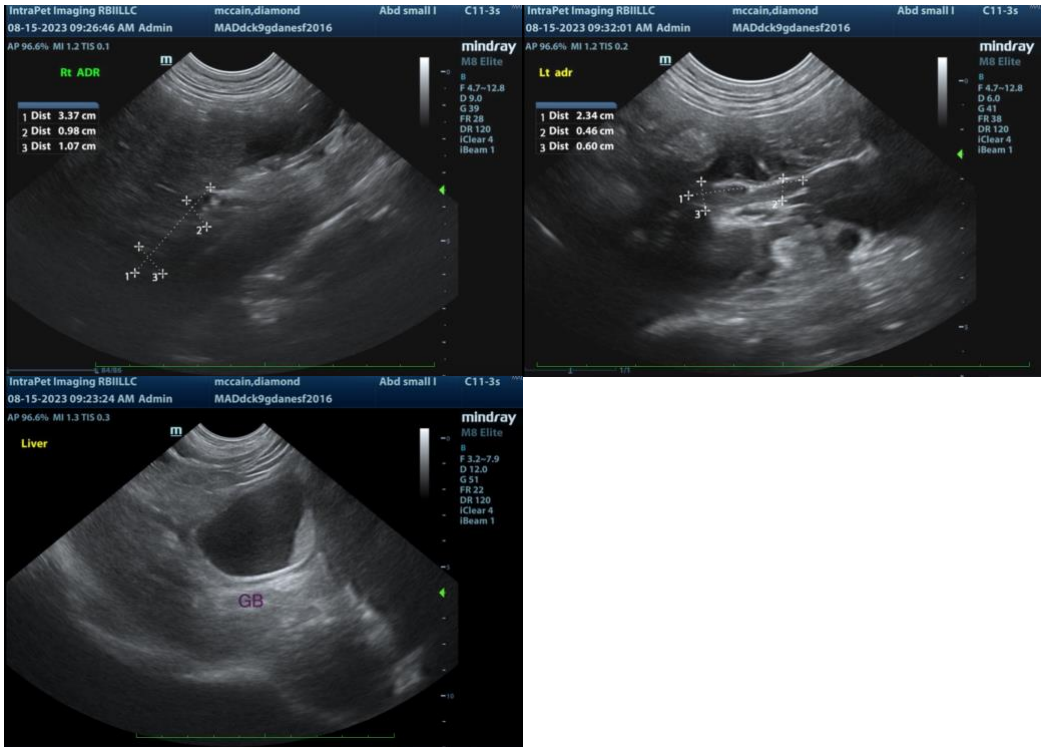
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Fecal evaluation for internal parasites
- Prophylactic deworming with Fenbendazole with Fenbendazole is recommended.
- A Texas GI panel including serum cobalamin and folate, TLI, PLI and resting cortisol level should also be considered.

- A low-fat, hydrolyzed protein or limited antigen or hydrolyzed protein diet should also be initiated.
- Ultimately, endoscopic, or surgical GI biopsies may be necessary to get a definitive diagnosis. Surgical biopsies are preferred in that all areas of bowel can be accessed. However, there is more risk of bowel dehiscence with surgical biopsies, given the patient's hypoalbumic state. If biopsies are pursued, three-view thoracic radiographs should be performed prior to anesthesia to assess cardiopulmonary status.
- To rule out other causes of hypoalbuminemia, consider pre-and postprandial serum bile acids and a UPC (if proteinuria is present on the urine dipstick).

Regarding the splenic lesions, a recheck ultrasound is recommended in 4-6 weeks to assess for growth.





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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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