IMAGING PERFORMED BY

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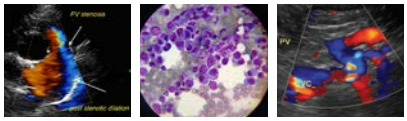

SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

6/9/22

PATIENT

Baby Berube

SPECIES

Canine

BREED

Chihuahua

SEX

Intact Female

AGE

7/30/09

WEIGHT

8 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Pleasantville AH

REFERRING VET

Dr. Gounaris

INVOICE

38590

PRESENTING CLINICAL SIGNS

Presented 6/4 with illness starting 6/1 with ADR, inappetence, vomiting, diarrhea with small amounts of blood. Vomiting has resolved with inpatient care and diarrhea is resolving but ADR and inappetence remain.

Current Medications: cerenia 0.4 mL SID, ondansetron 2 mg BID
ampicillin sulbactam 75 mg BID given twice, augmentin currently 75 mg BID, entyce 0.4 mL SID, metronidazole 50 mg BID, buprenorphine 0.06 mg SID-BID, pantoprazole 4 mg SID, IVF therapy
Lab Results: positive snap CPL, hypoalbuminemia most recent chem with albumin 1.6, cbc wnl
Radiographs: hazy cranial abdomen, no obvious masses, potential ileus, thoracic cavity WNL
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 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.

The right kidney is normal in size (3.55 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (3.5 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is mildly pump in appearance, measuring 1.53 cm long x 0.70 cm at the cranial pole and 0.63 cm at the caudal pole. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is mildly plump in appearance, measuring 1.48 cm long x 0.55 cm at the cranial pole and 0.66 cm at the caudal pole. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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.

Liver

Liver is subjectively enlarged. Margins are smooth but round. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

GB is moderately distended with anechoic bile and gravity dependent echogenic sediment. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) 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 intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm), but the muscularis layer is diffusely thick relative to the mucosa. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents appear liquid in nature.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

The uterus appears mildly fluid distended. The ovaries are unremarkable.

PRIMARY FINDINGS

- Diffusely thick muscularis – this finding has been associated with infiltrative bowel disease. Infiltrative neoplasia is possible, but considered much less likely.

SECONDARY FINDINGS

- Mildly plump adrenal glands bilaterally – normal patient variant versus hyperplasia secondary to pituitary dependent hyperadrenocorticism.

- Hyperechoic hepatomegaly – most consistent with benign steroid (endocrine) hepatopathy or reactive or idiopathic hepatopathy. Infiltrative neoplasia such as round cell neoplasia is also possible, but considered less likely.

- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

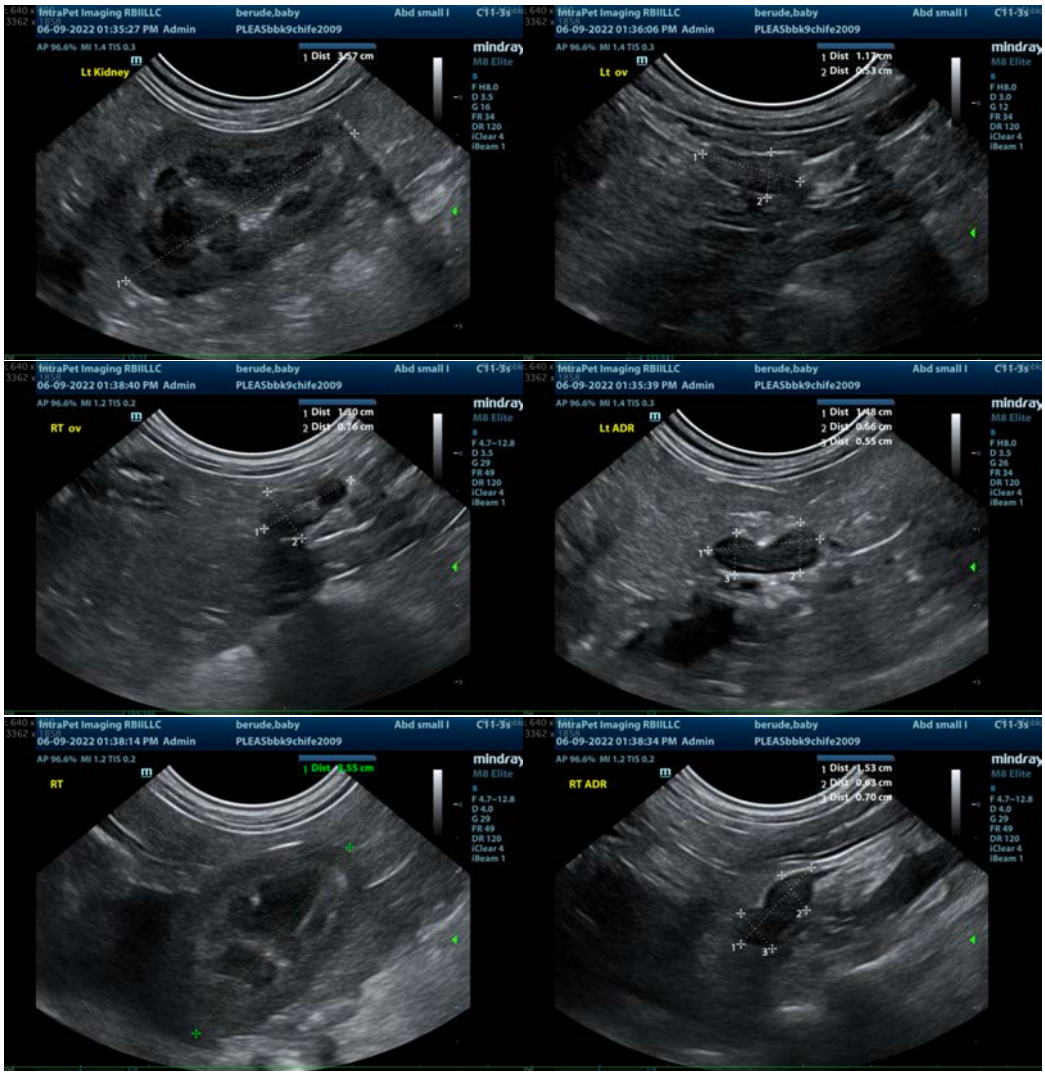
Given the low albumin and gastrointestinal signs, recommendations include a gastrointestinal malabsorption panel including TLI, PLI, folate and cobalamin for further evaluation of gastrointestinal absorption.

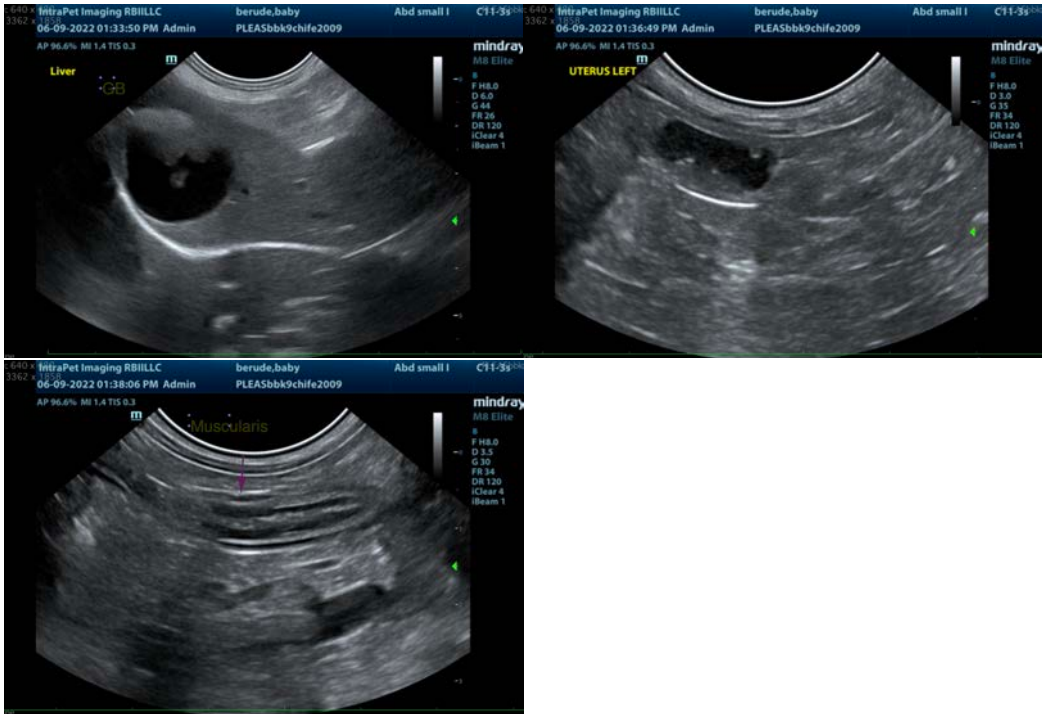
A urinalysis is recommended if not recently evaluated, with a follow up urine protein to creatinine ratio, if there is protein present in otherwise quiet sediment.

Ultimately, biopsies of the bowel may be required to definitively diagnosis, and therefore ultimately manage the underlying cause of this patient's gastrointestinal signs and hypoalbuminemia.

The appearance of the adrenal glands, liver and gallbladder in this patient are all suggestive of possible hyperadrenocorticism. Therefore, if there are clinical signs of hyperadrenocorticism including polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc., testing in the form of a low dose Dexamethasone suppression test is recommended. However, without clinical signs, no further action is recommended unless clinical signs develop.

In the meantime, transition to a low-fat diet as well as a probiotic +/- cobalamin supplementation after drawing a sample for cobalamin analysis is recommended to begin therapy empirically for suspected protein losing enteropathy.





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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