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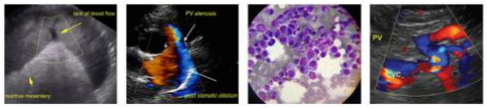

SonoPath
Clinical Sonography & Telecytology
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PATIENT

Maximus Chung

SPECIES

Canine

BREED

Boxer Mix

SEX

Neutered Male

AGE

7 Years

WEIGHT

42 kg

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

New England AMC

REFERRING VET

Dr. Kerri Papanicholas, DVM

INVOICE

13125

DATE

12/20/21

PRESENTING CLINICAL SIGNS

History: Presented with intermittent diarrhea x one month. Metronidazole has helped in the past, but not with recent course. Also, recent vomiting. BW shows low albumin. Developed edema in his pelvic limbs. Still eating and drinking well. One month ago, suddenly became blind. BP 120 mmHg. Problem list: Diarrhea/hypoalbuminemia - r/o PLE vs PLN vs Liver disease vs other. Sudden onset blindness - r/o vascular accident vs SARD vs neoplasia vs glaucoma vs other. Post-prandial for study.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 5.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture measuring 0.87 cm in width.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 6.8 cm in length. The right kidney measured 7.7 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.51 cm width at the caudal pole and 0.47 cm width at the cranial pole.

No overt pathology in the area of the right adrenal gland, although not definitively visualized.

Spleen

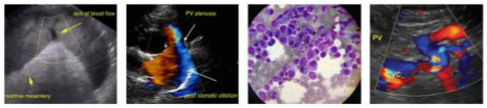
The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate ingesta with areas of distal acoustic shadowing. The present of gastric ingesta was consistent with reported history of postprandial presentation.



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The small intestine presented intact wall layering with subjective generalized propensity for mildly prominent mucosa. Mild duodenojejunal mucosal speckling was present. No evidence of loss of intestinal wall layering or overt intestinal masses.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

No overt lymphadenopathy. Mild peritoneal effusion was present. Subtle evidence of mild periintestinal reactive mesentery.

ULTRASONOGRAPHIC FINDINGS

- Enteropathy exhibiting mild duodenojejunal mucosal speckling
- Gastric ingesta- consistent with postprandial presentation
- Scant peritoneal free fluid
- Sonographically unremarkable liver and bilateral kidneys

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

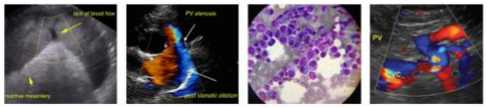
Given the structurally normal liver and assuming no evidence of significant proteinuria, intestinal protein loss is likely in this case. Protein losing enteropathy (i.e., IBD, lymphangiectasia or potential infiltrative enteropathy) probable in the face of gastrointestinal signs. Intestinal biopsies would be ideal for a definitive diagnosis, if albumin levels are >2.0. If not done, urinalysis +/- UPC recommended to rule out proteinuria.

Empirically, some or all of the following may be considered:

PLE Therapy

Part or all of this protocol may be considered based on your clinical impression of the patient:

OBJECTIVE: keep albumin levels > 2 g/dl, avoid thromboembolism and cavitary effusions, monitor concurrent PLN (Wheaton Terrier PLE/PLN) and liver disease:
Plasma 10 mL / kilogram IV over 4 hours
Or **Human albumin** 2 ml/kg/h over 10 hours. Total daily volume 20.l/kg/day
And Colloids/Hetastarch
10 to 20 mL per kilogram per day and dogs
10 to 15 mL per kilogram per day cats
(Can bolus first 1/3 of dose over 15 minutes)
& maintain on LRS maintenance otherwise.
Metronidazole (10-20 mg/kg po bid)
Famotidine 1 mg/kg Iv Im po dc Sid /bid
Sucralfate 0.5-1 g po tid dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid
Diet: Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal Canine HP or similar.



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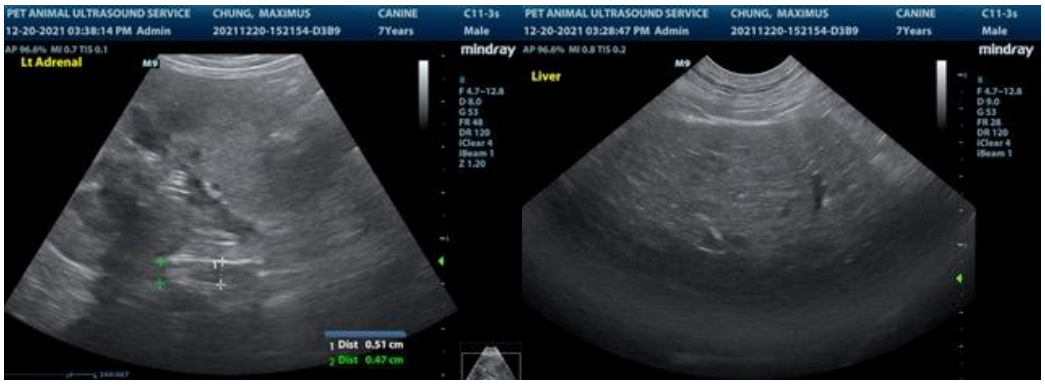
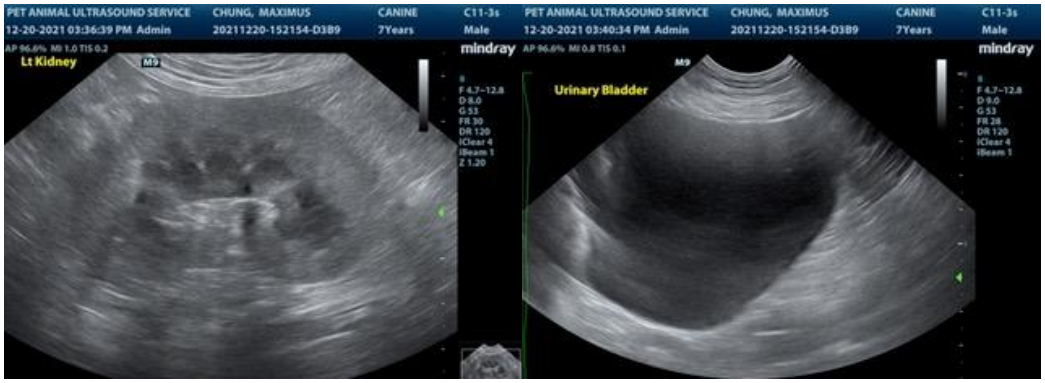
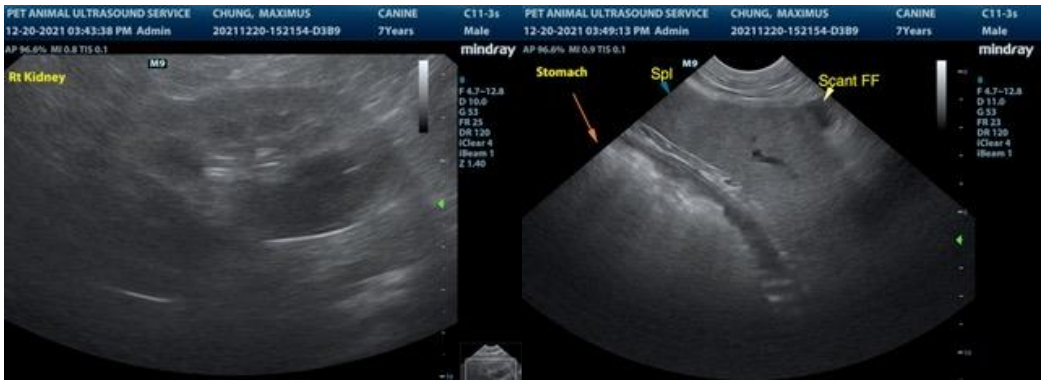
Prednisone or prednisolone 2 mg/kg bid x 3-5 days then 2 mg/kg sid. **Chlorambucil** in refractive severe IBD/alimentary lymphoma cases (monitor cbc for rare bone marrow suppression) 4 mg/m^2 Q 24-48 hours.
Cobalamine (B12) 250-1500 ug/dog weekly x 6 weeks.
Calcium supplementation if necessary.
Aspirin 0.5-1 mg/kg/day **or Clopidrel** (Plavix) 1-5 mg/kg/day.







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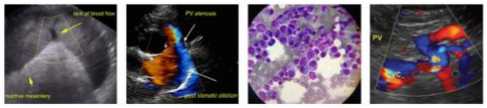

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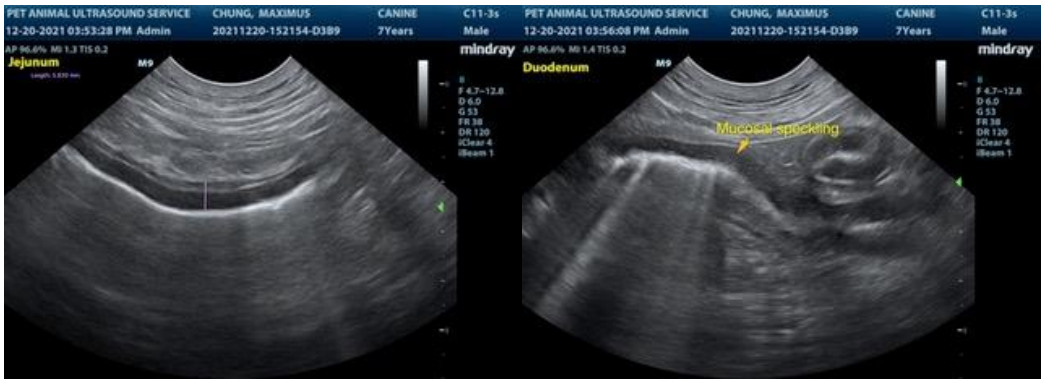

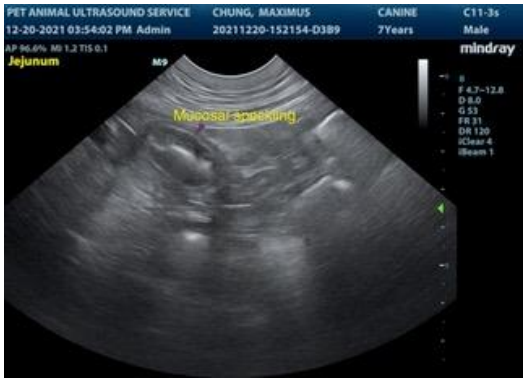

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
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