SonoPath
Clinical Sonography & Telecytology
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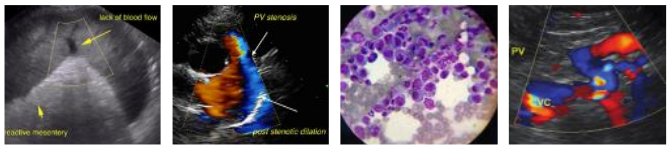

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Nick Mercaldi

SPECIES
Canine

BREED
Yorkshire Terrier

SEX
Neutered Male

AGE
10 Years

WEIGHT
7.9 Pounds

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

IMAGING PERFORMED BY
Dr. Lynette Reyes

HOSPITAL NAME
Chain of Lakes AC

REFERRING VET
Dr. Angela Chesanek

INVOICE
13920

DATE
10/21/21

PRESENTING CLINICAL SIGNS

History: Pet has a history of decreased Albumin (2.2) in July 2020, pet was prescribed Benazepril but owner discontinue. Urinalysis was repeated in September 2021 and his UPC was at 7.0. Owner re started Benazepril 5 mg (1/4 tab BID) recently. Then this past Friday he presented for weakness episode and sudden onset of blindness. On PE he had retinal detachment, Intraocular pressure were WNL. His BP were low at about 90, 92. BW was repeated that day. Pet went to see Ophthalmologist Monday AM and his BP were in the 300. He confirmed retinal detachment. Today owner mentioned that Nick is not eating, vomited once, has soft stools and his urine is brown in color. He also appears lethargic. Currently taking Benazepril 5 mg, 1/4 tab SID

Abnormal PE/Chem/CBC/UA Results: UPC: 15.2 USG: 1.019 Prot: 3+ Occ Blod: 3+ Alb: 1.9 r/o PLN and PLE Bun: 90 Creat: 3.6 phosp: 9.7 Amyl: 1313 PSL: 274

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder lumen is mildly distended. The wall in the region of the apex is slightly thickened (up to 0.29 cm) with an irregular mucosal surface. A moderate amount of suspended echogenic debris is observed within the lumen. No cystic calculi are seen. The region of the trigone is normal.

The prostate is not definitively visualized due to its pelvic location.

The left kidney is normal in size (4.74 cm in length); with a slightly irregular shape. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. A few small cortical cysts are visualized. Hyperechoic shadowing diverticular foci are visualized. Moderate to severe pyelectasia is present (0.65 cm in the longitudinal plane). There is no evidence of hydroureter. Renal vasculature is normal. A scant amount of subcapsular fluid is seen.

The right kidney is prominent in size (4.74 cm in length); with smooth peripheral contours. The cortex is variably thickened. A few cortical cysts are seen. There is poor corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. Moderate to severe pyelectasia is present (0.73 cm) in the longitudinal plane. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.48 cm at cranial pole) (0.50 cm at caudal pole) (1.32 cm in length); normal shape; 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 normal in size (0.52 cm at cranial pole) (0.42 cm at caudal pole) (1.59 cm in length); normal shape; homogenous parenchyma. 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 (0.78 cm at the level of the hilus) with slight rounding of the cranial pole. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

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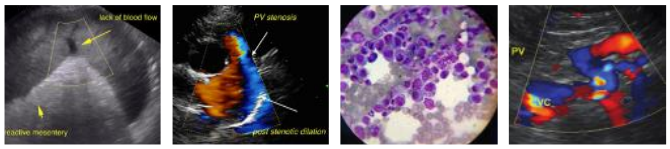

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Liver
The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The gall bladder lumen is mildly distended. The wall is slightly thickened (up to 0.24 cm), hyperechoic and irregular. A moderate amount of aggregated echogenic partially dependent debris is observed within the lumen as well as a small amount of adherent debris. 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 mildly distended with echogenic fluid. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal (xxx cm) with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

Pancreas
The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen
A small amount of free fluid is present. The mesentery throughout the abdomen is mildly hyperechoic. The abdominal lymph nodes are normal/not visible.

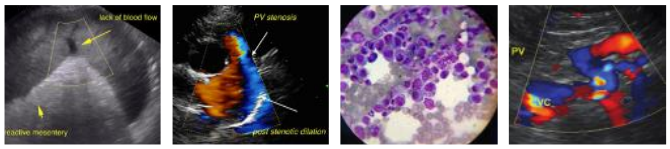
ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Bilateral chronic nephropathy with moderate to severe pyelectasia and left subcapsular fluid accumulation. These findings in conjunction with the clinical history are consistent with a protein-losing nephropathy (PLN)/Nephrotic Syndrome.
- The ascites is likely secondary to low oncotic pressure.
- Pleural effusion

Secondary Findings

- Urinary bladder debris
- The bladder wall changes could be consistent with cystitis pr may be artifactual due to lack of full repletion.
- The gallbladder wall changes could be consistent with benign age-related hyperplasia and/or cholecystitis. Correlation with clinical findings is recommended.
- Mild gastric ileus



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

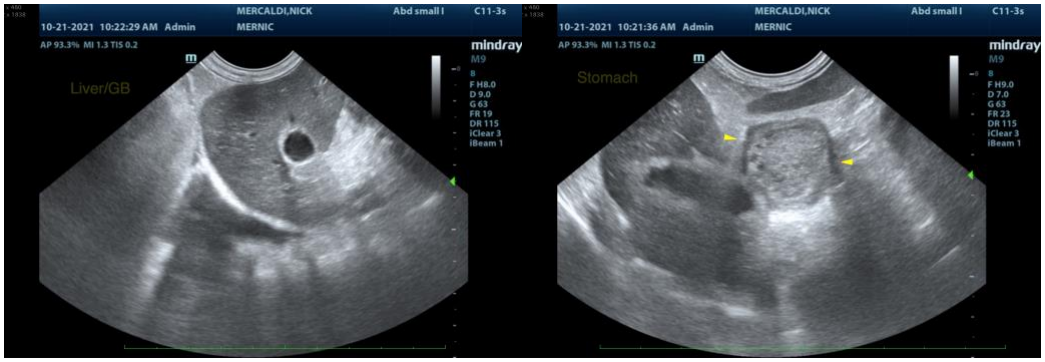
- Supportive care for nephrotic syndrome/acute on chronic renal failure is recommended. Caution must be used with fluid therapy due to the patients' low oncotic pressure and the potential for additional third spacing of fluids.
- A therapeutic thoracocentesis may be indicated, particularly if the patient is tachypneic/dyspneic

Additional treatment recommendations for protein-losing nephropathies include the following:

1. Angiotensin receptor blocker
2. Antithrombotic therapy (i.e., Clopidogrel)
3. Medical management of hypertension
4. Omega-3 fatty acids at 60-65 mg per kg, by mouth daily of EPA and DHA combined

Other diagnostic considerations include the following:

1. Three-view thoracic radiographs to further evaluate the pleural effusion
2. Urine culture and sensitivity
3. Further testing for infectious diseases (i.e., heartworm, tick-borne) as underlying causes for PLN



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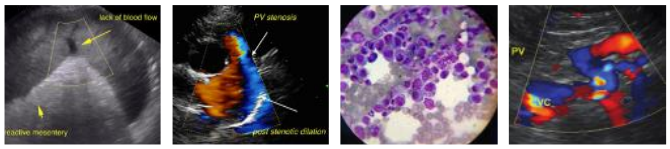

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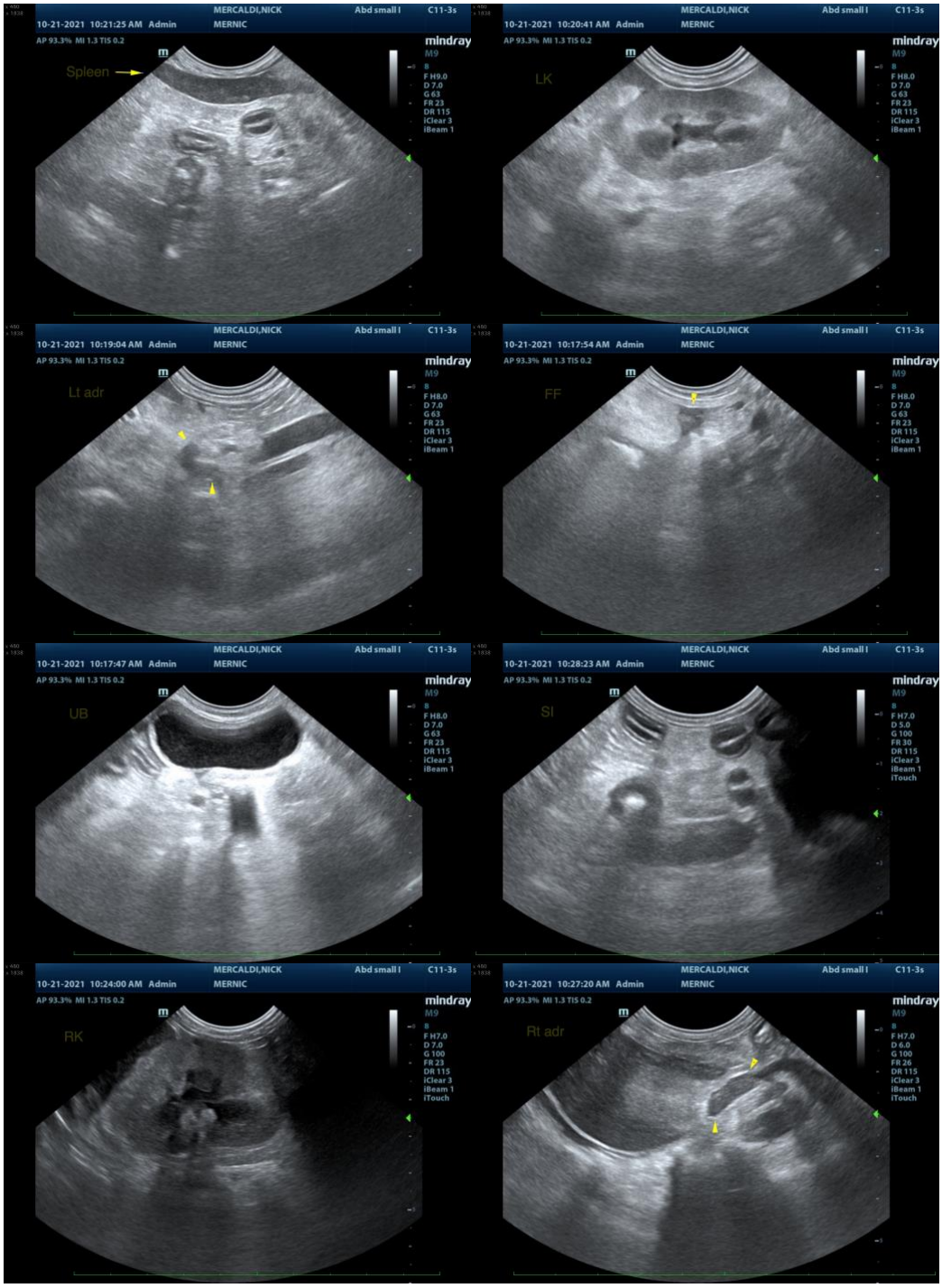

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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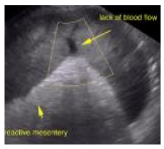
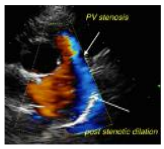
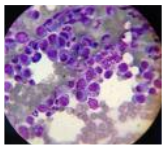
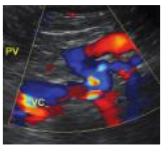

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