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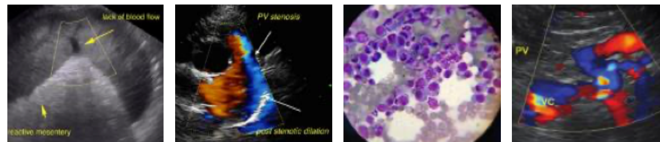
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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**PATIENT**
Rueben Marchlensky

**SPECIES**
Canine

**BREED**
Yorkshire Terrier

**SEX**
Neutered Male

**AGE**
8 years

**WEIGHT**
3.1 kg

**INTERPRETED BY**
Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

**IMAGING PERFORMED BY**
Dr. Sarah Barthelemy

**HOSPITAL NAME**
Cranston VH

**REFERRING VET**
Dr. Nielsen

**INVOICE**
12166

**DATE**
2.6.23

## PRESENTING CLINICAL SIGNS

History: No clinical signs. Pre-anesthetic screen showed mild BUN elevation and proteinuria.
Abnormal PE/Chem/CBC/UA Results: UPCR 3.1, granular casts.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*
The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal in size (2.96 cm in length) normal shape and architecture with smooth peripheral margins. The cortex is mildly thickened and there is moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal in size (3.32 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 (0.48 cm at cranial pole) (0.50 cm at caudal pole) 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 in normal size (0.47 cm at cranial pole) (0.46 cm at caudal pole) 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.

### *Spleen*
The spleen is normal in size (0.97 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

### *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 moderately distended. The wall is thin and smooth. A moderate amount of aggregated, echogenic partially dependent sludge is observed within the lumen. 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 thickness is normal 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 right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely hyperechoic 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***
There is no obvious evidence free fluid. The abdominal lymph nodes are normal/not visible.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- The bilateral renal changes are most consistent with chronic interstitial nephrosis/nephritis with dystrophic mineralization

### Secondary Findings

- The gall bladder sludge could be consistent with an emerging mucocele, cholestasis, or less likely, fasting.

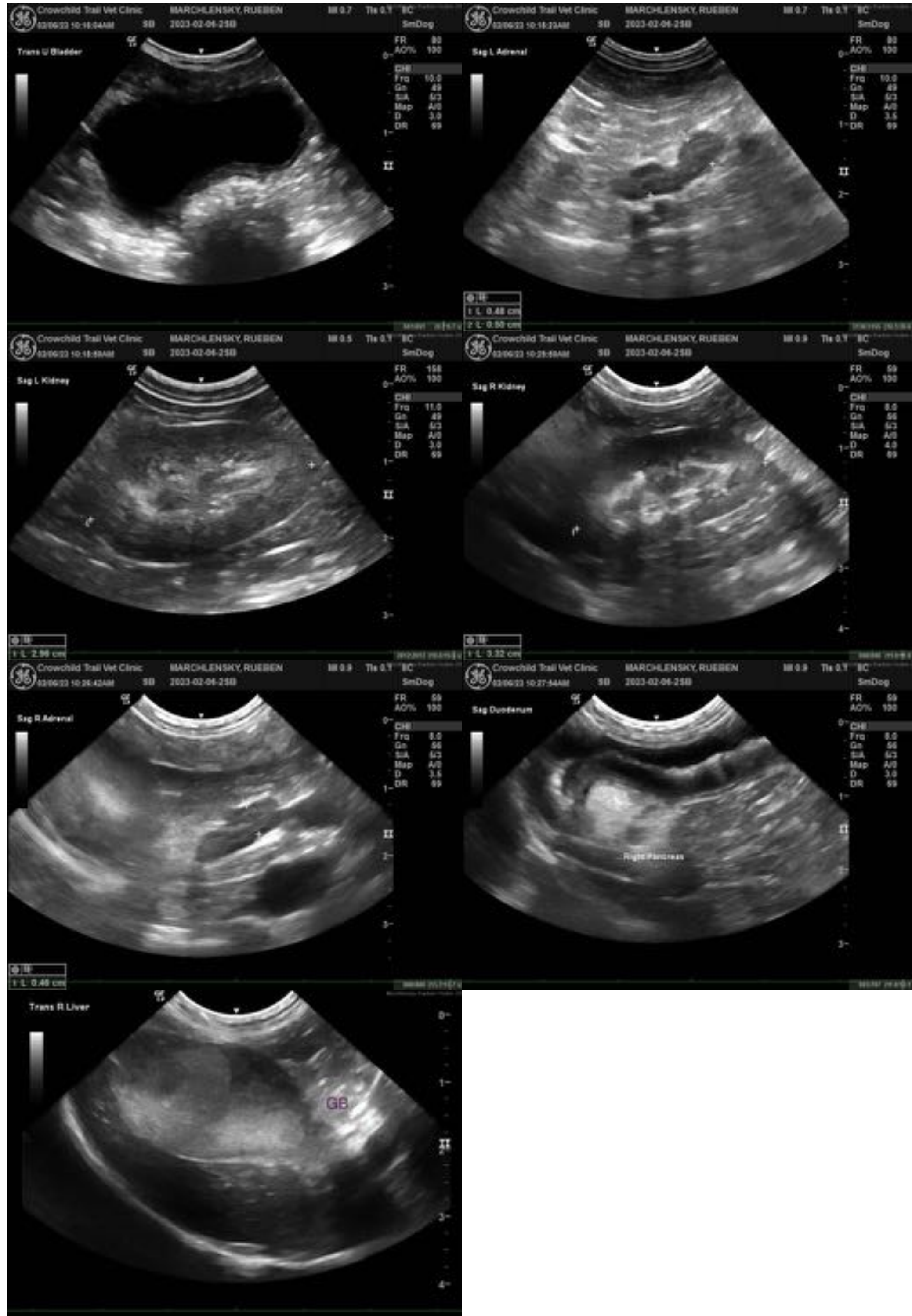
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A urine culture and sensitivity is recommended to assess for occult infection. If results are negative, consider further diagnostics and treatments for a protein-losing nephropathy:

1. Testing for infectious diseases (i.e., tick-borne, heartworm, Leptospirosis)
2. Angiotensin II receptor blocker (e.g., telmisartan)
3. Antithrombotic (e.g., clopidogrel at 2.5 mg/kg PO q 24 hours)
4. Omega-3 fatty acids (65 mg/kg of DHA and EPA combined daily)
5. Prescription renal diet
6. Baseline blood pressure measurement with serial monitoring thereafter
7. Routine monitoring of UPC and bloodwork (CBC, chemistry panel) to assess for progressive disease

Given the gall bladder changes, Ursodeoxycholic acid (Ursodiol) at 10-15 mg/kg once a day is recommended. Serial sonographic monitoring (e.g., every 8-12 weeks) of the gall bladder is recommended to assess for progression to a fully-formed mucocele.




**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.

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