

**DATE PRESENTING CLINICAL SIGNS**

5/24/22

**PATIENT**

Bella Maxfield-Rockel

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Female, spayed

**AGE**

12/12/1008

**WEIGHT**

8.6 lbs.

13yo FS chihuahua mix with a history of medial patella luxation, an intermittent cough (diagnosed with both mainstem bronchial collapse and tracheal collapse), azotemia following NSAID administration (now levels are stable), and recently diagnosed hypertension after evaluation for proteinuria (confirmed significant with UPC). Blood pressure has been erratic with management. Upon initial evaluation on 5/10/22 BP was greater than 280 on the RF with size 2 cuff in seated position. Began 1/4 of 5mg enalapril q12hr. Recheck 5/17/22 BP was 120 consistently using the same protocol (size 2 on RF in seated position). That evening the owner noticed that there was a raised red portion on the cornea of the right eye. Evaluation 5/18/22 of OD was fluorescein negative with IOP OD: 12, 11, 11 and OS 5, 7, 7, no retinal vessel hemorrhage but the raised portion of the cornea OD had the appearance of a ruptured vessel. BP at this time was now over 280 again using the same protocol, confirmed on LF using size 2 cuff in seated position. Increased enalapril to 1/2 5mg tablet q12hr (2.5mg BID). No heart murmur ausculted at any point during history.

Current Medications: Enalapril 5mg: 1/2 q12hr (increased from 1/4 q12hr on 5/18/22).  
 Lab Results: 4/20/22 bloodwork: CBC: hemoconcentration HCT 60/rbc 9.03/hgb 117, elevated retics 117. CHEM: elevated creatinine 1.7 (prev 1.6, 1.4), SDMA?(prev 16 on 11/8/21, 24 on 5/26/21), ALP elevated 335, elevated lipase 266, CK elevated 226. UA: cysto, usg 1.019, pH 7.0, 2+ protein, negative sediment. T4: 2.0 WNL. UPC: 0.8- significant proteinuria. BP: 5/10/22: >280 #2cuff RF seated. 5/17/22: 120 #2cuff RF seated. 5/18/22: >280 #2cuff RF and LF seated  
 Radiographs: 4/20/22 Thoracic rads: Persistent tracheal and left mainstem bronchial collapse in an otherwise unremarkable geriatric thorax. The study does not rule out the possibility concurrent underlying chronic bronchitis as well.  
 Date of Previous IntraPet Ultrasound: No previous.  
 Sedation: Not required to complete full diagnostic ultrasound.  
 Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

**INTERPRETED BY**

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

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder, trigone, and pelvic urethra are 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. The region of the trigone is normal.

**HOSPITAL NAME**

Perry Hall AH

The left kidney is normal in size (2.93 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

**REFERRING VET**

Dr. Breidenbaugh

The right kidney is normal size (3.30 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

**INVOICE**

13428

**Adrenal Glands**

The left adrenal gland is normal size (0.42 cm at cranial pole) (0.48 cm at caudal pole) (1.24 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 size (0.54 cm at cranial pole) (0.51 cm at caudal pole) (1.28 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 normal in size (1.29 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A few myelolipomas are visualized in the region of the hilus. Splenic vasculature is normal.

### *Liver*

The liver is subjectively prominent in size with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly heterogeneous in appearance with several small, ill-defined hypoechoic nodules and a few ill-defined hyperechoic areas. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of partially dependent echogenic debris 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. No obstructive 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*

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

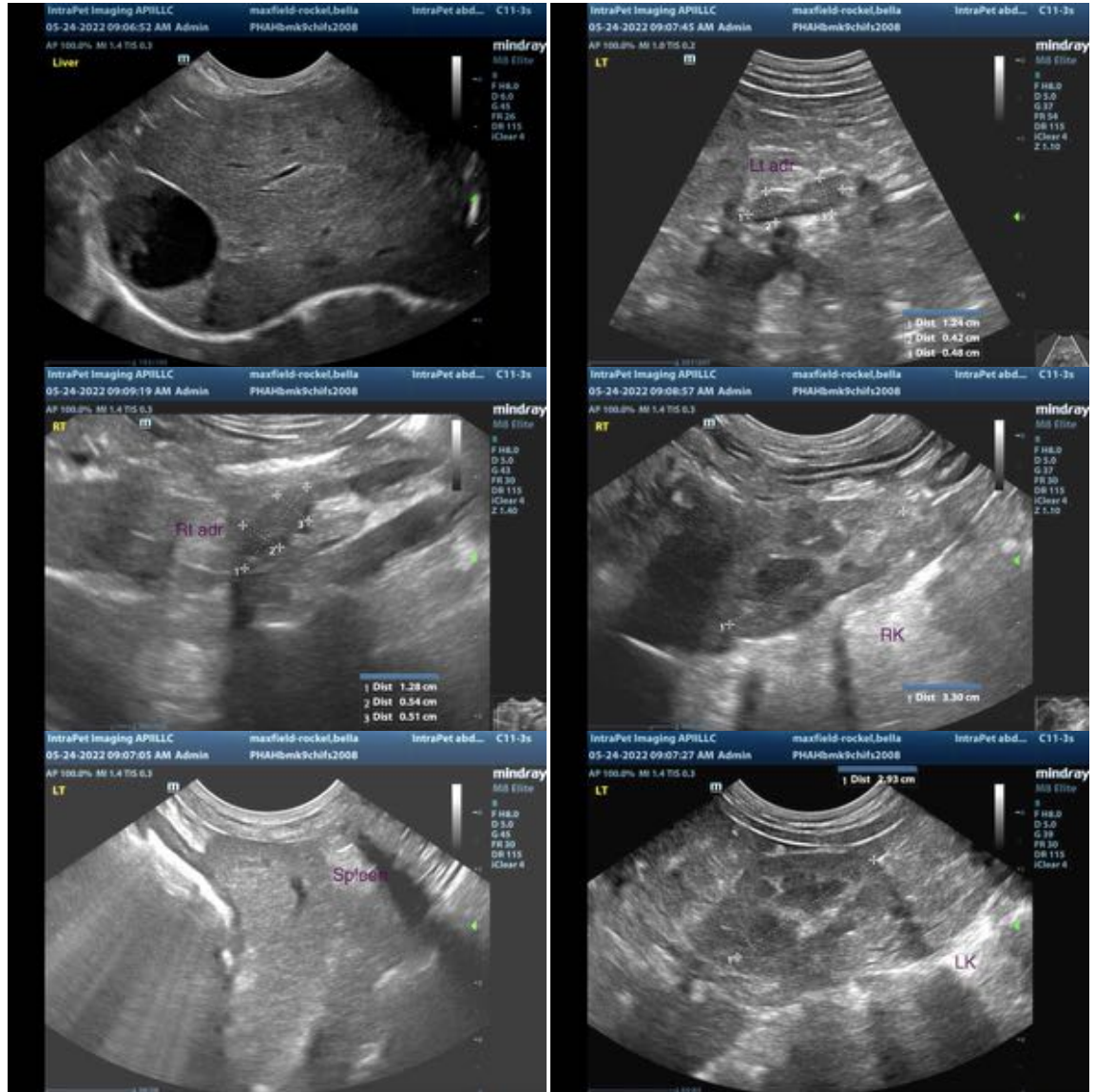
## **ULTRASONOGRAPHIC FINDINGS**

- 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.
- Minor age-related renal changes with dystrophic mineralization.

\*An obvious cause for the patient's hypertension is not identified in this study.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Continued medical management for systemic hypertension is recommended. Further recommendations should be based on the echocardiogram report.
- Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If liver values continue to increase, a repeat abdominal ultrasound +/- hepatic tissue sampling may be warranted.



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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