



PATIENT PRESENTING CLINICAL SIGNS

Bella Walker History: Presents for chronic urinary issues - blood noticed each time when presented other than 12/2 recheck. 10/17/22 = UA (blood, protein, 1.002 -- treated with amoxi/clav 11/2/22 = UA blood, protein, 1.006 -- another round of amoxi/clav 12/2/22 = recheck UA post abx, no blood, no protein, 1.004 no abx sent home 1/3/22 = presents for blood in urine again, protein, 1.002 (this is the only one that was a cystocentesis) Other history: Previous rDVM ddx hepatic shunting several years due to abnormal bile acids and was very ill, has been on Denamarin support ever since.

SPECIES

Canine

BREED

Beagle

Abnormal PE/Chem/CBC/UA Results: Urine spun down today - no cap to indicate intravascular - isosthenuria at 1.002, Blood 250 Ery/uL Full CHEM/CBC pending including urine culture

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

SEX

Spayed Female

Urinary System

The urinary bladder is distended. The wall is normal in thickness. The mucosal surface in the region of the trigone is slightly irregular. A moderate amount of echogenic debris is suspended within the lumen. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 4-5 cm, are normal.

AGE

7 years

The left kidney is normal size (6.51 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A 0.71 cm cortical cyst is observed at the caudal pole. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

WEIGHT

42.4 lbs

The right kidney is normal size (7.31 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A 0.79 cm cortical cyst is observed at the caudal pole. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is normal size (0.41 cm at cranial pole) (0.40 cm at caudal pole) (1.45 cm in length) 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.

IMAGING PERFORMED BY

Amanda Crook -
SDEP Cert Clin Sonog

The right adrenal gland is normal size (0.68 cm at cranial pole) (0.32 cm at caudal pole) (1.84 cm in length) 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.

HOSPITAL NAME

Rivers Edge Pet Med Ctr

Spleen

The spleen is normal in size (0.94 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 0.40 cm hypoechoic nodule is observed in the mid- to caudal aspect. Splenic vasculature is normal.

REFERRING VET

Dr. David Gray

Liver

The liver is subjectively small in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and homogenous in appearance. No focal lesions are observed. Intrahepatic biliary tracts are of normal volume. The portal vein is subnormal in size. The caudal vena cava to aortic ratio is 1: 1. However, a dorsally-directed vessel derived from the portal vein, approximately 2 cm from the portal vein bifurcation (the position for a extrahepatic splenic shunt), appears to enter into the

INVOICE

12006

DATE

1.3.23

aortic hiatus, creating a “double aorta” sign (consistent with an azygous connection). This is a suspected splenoazygous shunt.

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. 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 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

Primary Findings

- Suspected extrahepatic splenoazygous shunt,with subsequent microhepatica
- Bilateral chronic age-related renal changes with dystrophic mineralization and cortical cysts
- The urinary bladder debris could be consistent with cells, crystals exfoliated material and/or lipid droplets.

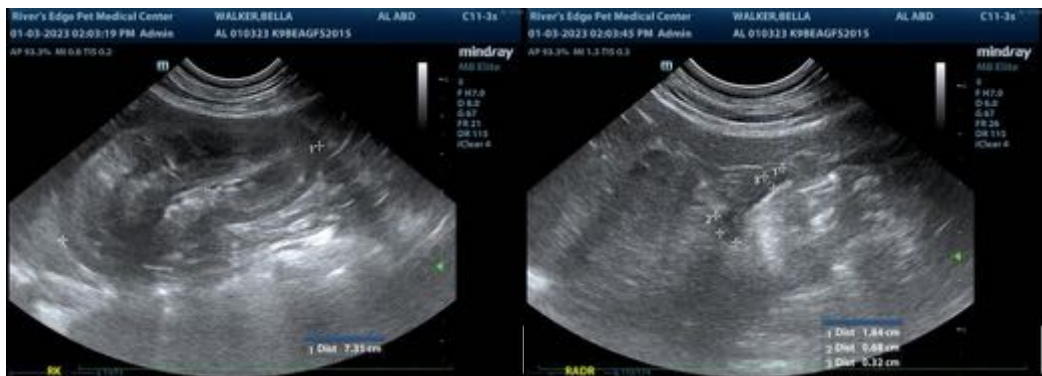
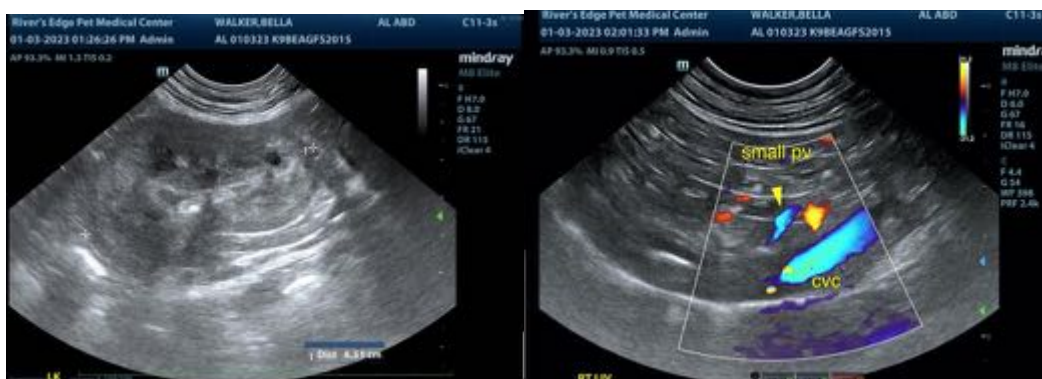
Secondary Findings

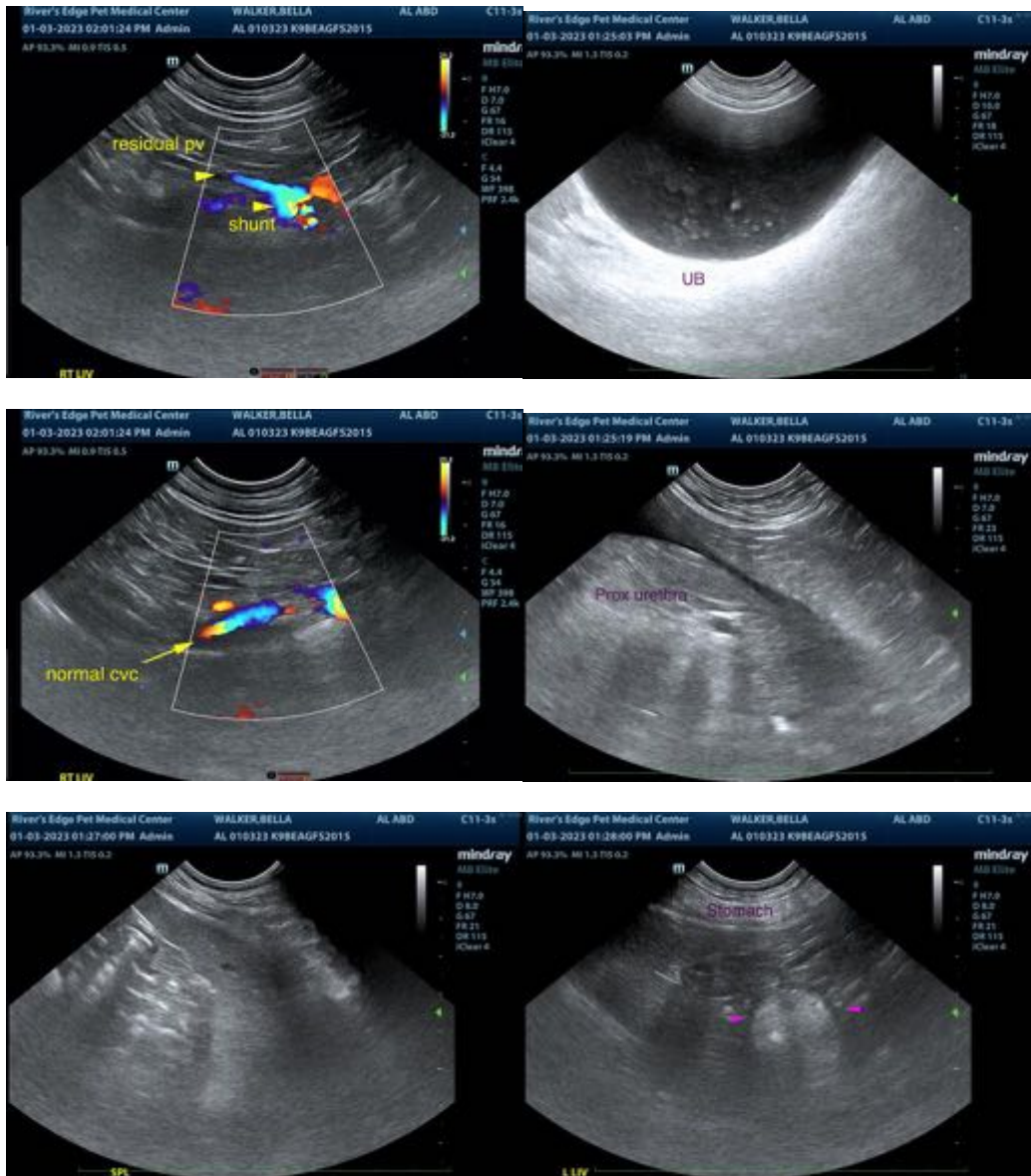
- The hypoechoic splenic nodule trends toward the benign (i.e., focus of lymphoid hyperplasia or similar) with a lower possibility of an emerging tumor.

*An obvious cause for the patient’s hematuria is not definitively identified in this study. Considerations include occult urinary tract infection, hematuria secondary to nephrocalcinosis, benign essential renal hematuria, coagulopathy, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider evaluation of the external genitalia to assess for potential causes of hematuria (i.e., vaginal foreign bodies, masses, etc.)
- If the urine culture is positive for infection, the patient should be treated according to sensitivity results.
- Regarding the extrahepatic splenoazygous shunt, a contrast CT scan is recommended for confirmation and surgical planning (particularly if the owner wishes to surgically address this issue). Otherwise, continued medical management is recommended.





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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