

PATIENT

HarIE Souza

SPECIES

Canine

BREED

Terrier Mix

SEX

Male Neutered

AGE

8 years

WEIGHT

10.4 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh

HOSPITAL NAME

Sutherlin VH

REFERRING VET

Dr. Herrera

DATE

10/8/21

INVOICE
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PRESENTING CLINICAL SIGNS

History: Enlarged live, pendulous abdomen

Current Medications Ursodiol, hepato support

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. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (0.77 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (4.90 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. Pinpoint hyperechoic to mineralized foci are observed within the cortex. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (5.29 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. Pinpoint hyperechoic to mineralized foci are observed within the cortex. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is enlarged (1.46 cm at cranial pole) (0.80 cm at caudal pole) (2.55 cm in length) with an irregular shape. A 1.73 x 1.37 cm hypoechoic to slightly cavitated mass-effect is observed at the cranial aspect. Glandular echogenicity and detail at the caudal aspect are relatively normal. The phrenicoabdominal vein and surrounding vasculature appear normal.

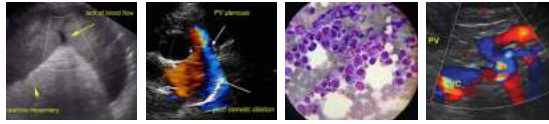
The right adrenal gland is enlarged (1.09 cm at cranial pole) (0.73 cm at caudal pole) (2.58 cm in length) with a slightly irregular shape. The parenchyma is subtly heterogeneous in appearance with some loss of glandular detail. A few pinpoint hyperechoic foci are observed within the gland.

Spleen

The spleen is normal in size (1.05 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. Pinpoint hyperechoic foci are observed throughout the organ. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with rounded peripheral contours. The parenchyma is hyperechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal



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vein to caudal vena cava ratio is approximately 1:1. The gall bladder is distended. The wall is normal in thickness. The lumen is almost entirely filled with aggregated, partially dependent, somewhat reticulated appearing, echogenic sludge. The cystic and common bile ducts are normal/not seen.

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Gastrointestinal

The gastric lumen is moderately distended with ingesta. 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 segmentally dilated with chyme. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

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Pancreas

The left and right limbs of the pancreas are visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic 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.

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Free Abdomen

Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

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Other

A brief visualization of the heart reveals no evidence of pericardial effusion.

A 1.07 cm irregular thrombus is observed in the caudal vena cava at the level of the cranial pole of the right adrenal gland.

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ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Non-specific diffuse hepatopathy. Differentials include inflammatory/immune-mediated disease, infiltrative neoplasia (i.e., lymphoma), hepatotoxicity (i.e., copper), and other hepatopathy. Given the normal portal vein to caudal vena cava ratio, a congenital extrahepatic portosystemic shunt is considered unlikely.
- The gall bladder sludge may be secondary to cholestasis, early mucocele formation, or fasting.
- Caudal vena cava thrombus.
- The trace ascites may be secondary to hepatic pathology or increased hydrostatic pressure secondary to the caudal vena cava thrombus.
- Bilateral adrenomegaly with a mass-effect at the cranial pole of the left adrenal gland. Differentials include bilateral nodular hyperplasia, left adrenal tumor with right hyperplasia, bilateral tumors, and other.

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Secondary Findings:

- Bilateral, age-related renal pathology with dystrophic mineralization.

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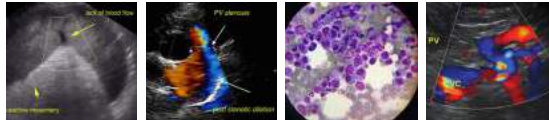
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- Dystrophic mineralization in the spleen – incidental.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
2. If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin Advanced). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.
3. Also consider leptospirosis testing (i.e., blood and urine PCR, serology) if acute liver enzyme elevations are present.
4. Given the presence of the caudal vena caval thrombus, consider initiation of an antithrombotic agent (i.e., Clopidogrel) if other clotting parameters are normal. A recheck ultrasound of the region is recommended in 2-3 weeks to assess for progression.
5. Given the adrenal changes, further testing (i.e., a low-dose dexamethasone suppression test, urine/blood catecholamine levels and a baseline blood pressure measurement) is recommended.

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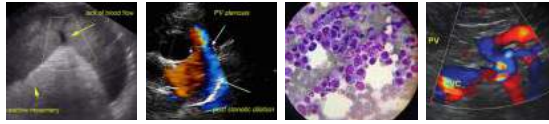
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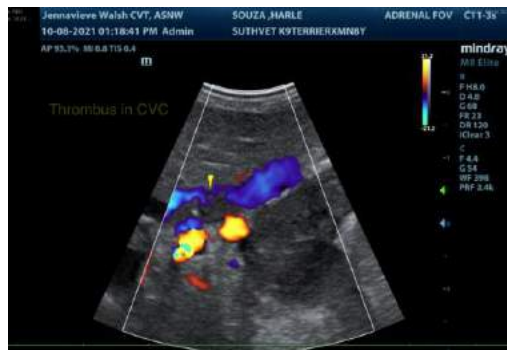
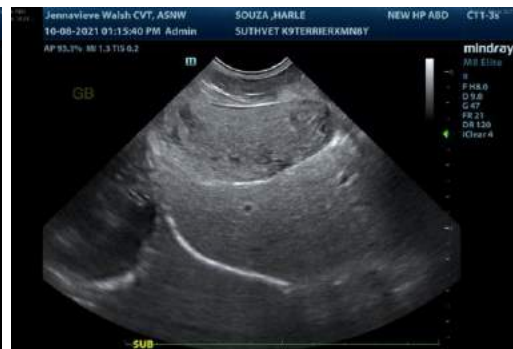
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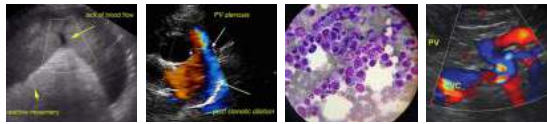
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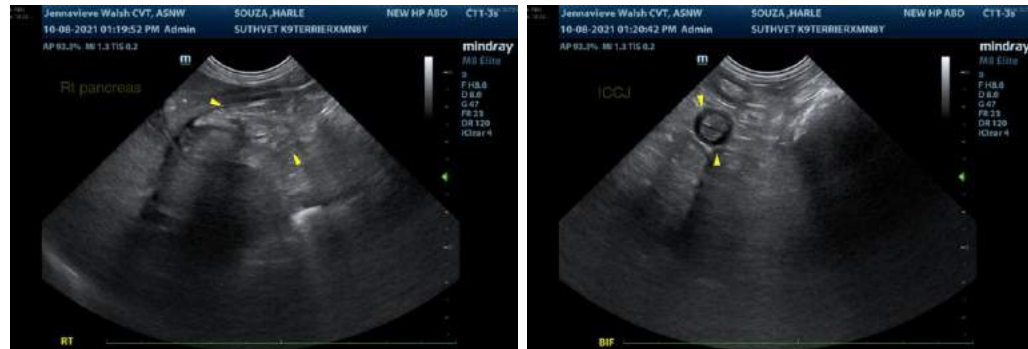
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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 Andrea.nicastro@sonopath.com