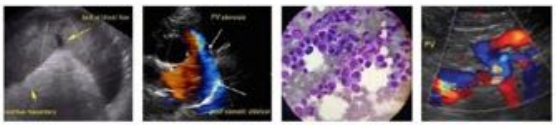
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Oscar Belding

SPECIES

Canine

BREED

Dachshund

SEX

Neutered Male

AGE

12 years

WEIGHT

10.2 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

AH of Stoney Creek

REFERRING VET

Egbers

INVOICE

12242

DATE

2.16.23

PRESENTING CLINICAL SIGNS

History: Ongoing anemia and chronic mild elevation of hepatic enzymes, rule out source of blood loss. NO meds.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and visible portion of the proximal urethra are normal.

The prostate is normal in size (0.79 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (3.64 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. Renal vasculature is normal.

The right kidney is normal in size (3.16 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. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size (0.53 cm at cranial pole) (0.44 cm at caudal pole) (1.52 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.

The right adrenal gland is mildly enlarged (1.07 cm at cranial pole) (0.63 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.

Spleen

The spleen is subjectively normal in size (1.02 cm in width at the level of the hilus) with normal curvilinear peripheral contours. The parenchyma is subjectively hypoechoic and slightly mottled in appearance, with a few ill-defined hypoechoic nodules/areas. Splenic vasculature appears normal with no evidence of thrombosis.

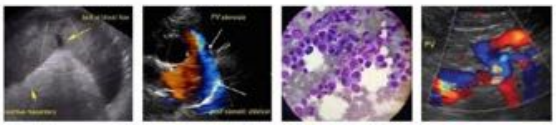
Liver

The liver is subjectively normal to slightly prominent in size with normal curvilinear peripheral contours. The parenchyma is hyperechoic relative to the spleen and subtly heterogenous in appearance. The parenchymal echotexture is coarse in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic 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 hyperechoic gravity dependent 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 mildly fluid-distended. The gastric wall and pylorus are normal in thickness with a normal layering



PATIENT

Oscar Belding

SPECIES

Canine

BREED

Dachshund

SEX

Neutered Male

AGE

12 years

WEIGHT

10.2 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

AH of Stoney Creek

REFERRING VET

Egbers

INVOICE

12242

DATE

2.16.23

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 slightly 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

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

- The hepatic parenchymal changes are nonspecific and could be secondary to a benign age-related process (i.e., regenerative nodular hyperplasia, remodeling). Alternatively, more insidious pathology (i.e., inflammatory disease, hepatotoxicosis, or less likely, infiltrative neoplasia) is possible. Correlation with the patient's liver values is recommended.
- Gall bladder debris - incidental

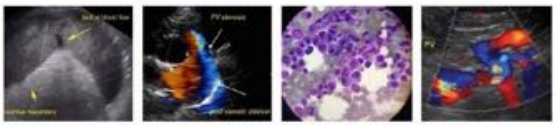
Secondary Findings

- Mild bilateral age-related renal changes with dystrophic mineralization
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Mild right adrenomegaly
- The splenic parenchymal changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis, splenitis or antigenic stimulation with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).

*An obvious cause for the patient's anemia is not definitively identified in this study. Differentials would depend on whether the anemia is regenerative versus non-regenerative. If regenerative, blood loss and homolysis should be considered. If non-regenerative, low-grade GI blood loss, chronic disease, bone marrow pathology would be considerations.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Regarding the liver enzyme elevations, if the ALT is minimally elevated, the liver values should be rechecked in 3 months to assess for progression. If there is substantial elevation in the ALT, consider pre-and postprandial serum bile acids, +/- hepatic tissue sampling (i.e., fine-needle aspirate or biopsy (laparoscopic or surgical)). If biopsies are performed, aerobic and anaerobic bile cultures should also be obtained, and hepatic copper quantitation should be considered.



PATIENT

Oscar Belding

SPECIES

Canine

BREED

Dachshund

SEX

Neutered Male

AGE

12 years

WEIGHT

10.2 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

AH of Stoney Creek

REFERRING VET

Egbers

INVOICE

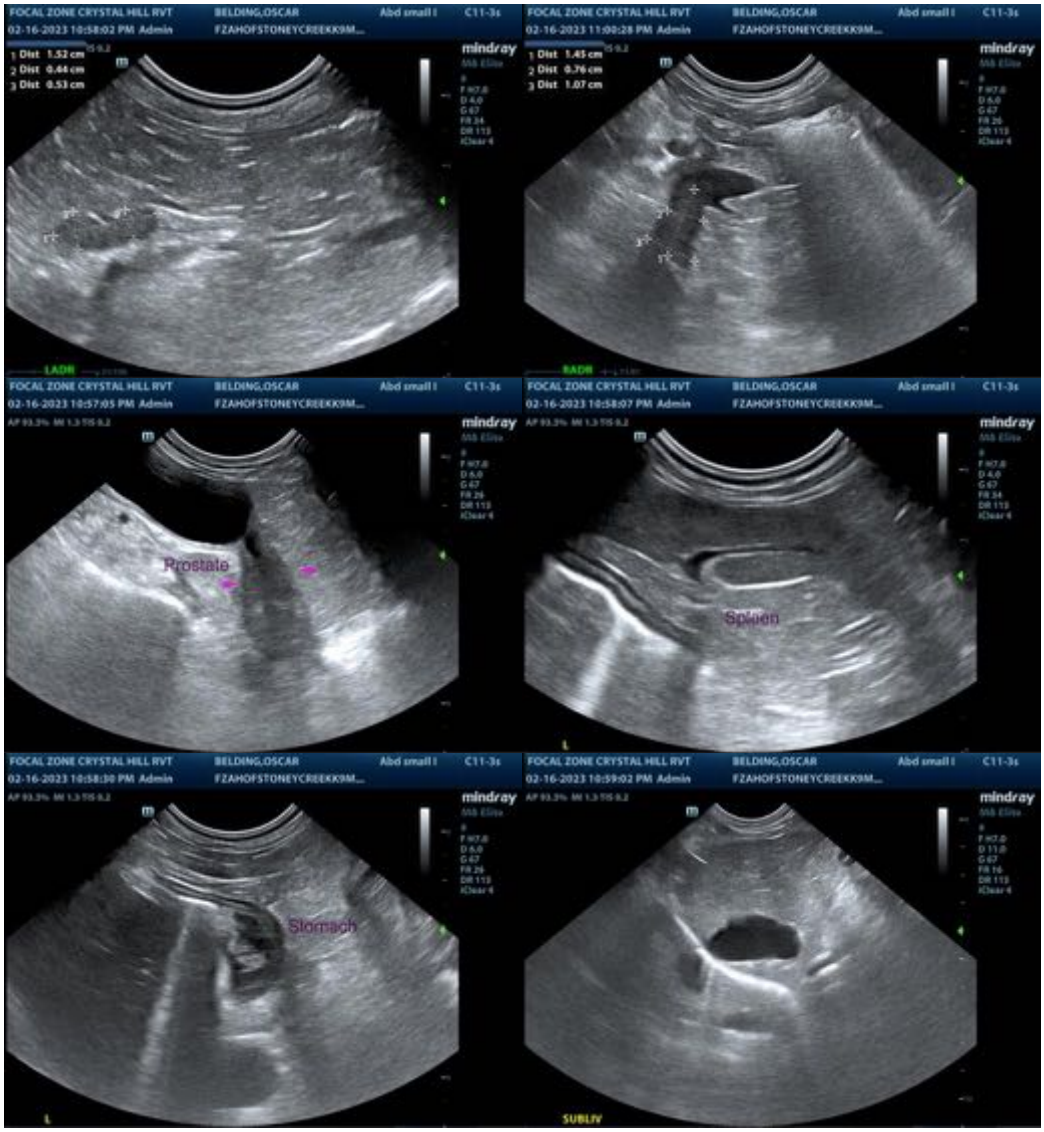
12242

DATE

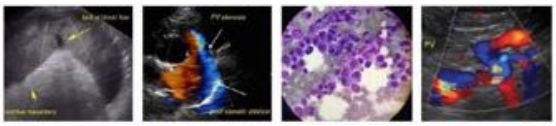
2.16.23

- Regarding the anemia, the following can be considered:

1. Reticulocyte count (if not already performed)
2. Slide agglutination test (if regenerative anemia is present)
3. Consider a fine-needle aspirate of the spleen (if clotting status is normal). A 25-gauge needle should be used.
4. Comprehensive tick panel
5. Three-view thoracic radiographs to assess for occult disease in the chest
6. If the above diagnostics are inconclusive and the anemia is non-regenerative, consider a bone marrow aspirate +/- core biopsy.



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Oscar Belding

SPECIES

Canine

BREED

Dachshund

SEX

Neutered Male

AGE

12 years

WEIGHT

10.2 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

AH of Stoney Creek

REFERRING VET

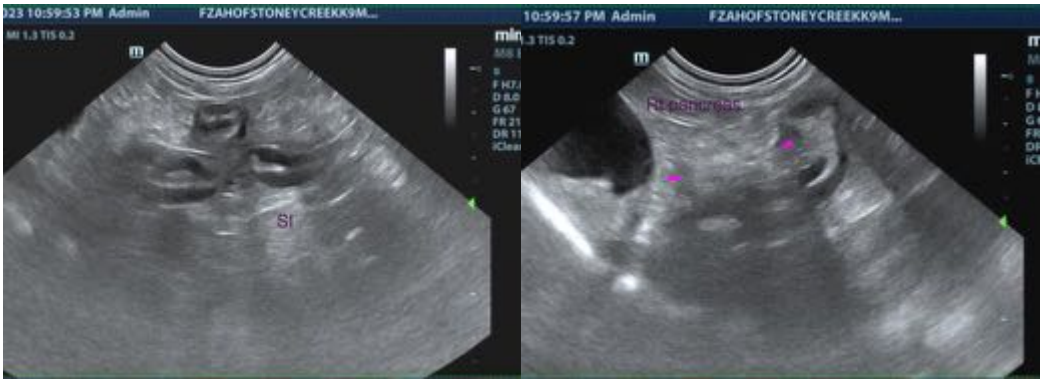
Egbers

INVOICE

12242

DATE

2.16.23



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.
Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com