



PATIENT PRESENTING CLINICAL SIGNS

Daisy Hermann

History: Adopted 4/22 from shelter in AZ. Since adoption inappetence and intermittent vomiting noted. BW WNL 5/22. Fecal testing negative. 7/22 presented after being @ boarding facility for worsening of GIT symptoms. Increased ALT noted (168); abnormal CPL. RC GI low fat diet started; Cerenia used PRN for nausea. Omeprazole started. Improved GIT symptoms noted. BW rechecked 9/22 (ALT = 148) - improved but persistent. Denamarin started. BW rechecked - ALT increased a bit more (156), increased TBILI (0.3)

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: NSF on PE - progressive weight gain.

BREED

Sheltie/Collie X

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

SEX

Spayed Female

Urinary System

The **urinary bladder** wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with mostly anechoic urine. No masses, inflammatory changes or calculi are observed. The region of the trigone is normal.

AGE

9 years

The **left kidney** is normal size (5.98 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

51.9 lbs

The **right kidney** is normal size (6.68 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The **left adrenal gland** is normal size (0.57 cm at cranial pole) (0.58 cm at caudal pole) (2.59 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.

One still image of the **right adrenal gland** is available for interpretation. The gland is normal in size (0.73 cm at cranial pole) (0.56 cm at caudal pole) (2.80 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.

INTERPRETED BY

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IMAGING PERFORMED BY

Jessica Bailes

HOSPITAL NAME

All Creatures
Great&Small VC, Corvallis

REFERRING VET

Jessica Bailes

Spleen

The **spleen** is subjectively normal in size (1.57 cm in width at the level of the hilus). A 1.57 cm isoechoic to heterogenous nodule is observed at the medial aspect, near the hilus. In addition, a small, hyperechoic nodule is observed at the lateral aspect. The remaining parenchyma is subtly mottled in appearance. Splenic vasculature appears normal with no evidence of thrombosis.

Liver

The **liver** is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

INVOICE

11863

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.

DATE

10.20.22

Gastrointestinal

The **stomach and intestine** are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly 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 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

- Splenic nodule. Differentials include emerging neoplasia or a benign process (i.e., focus of lymphoid hyperplasia, extramedullary hematopoiesis, or similar). The diffuse splenic parenchymal changes trend toward the benign (i.e., lymphoid hyperplasia, or extramedullary hematopoiesis), with a lower possibility of emerging neoplasia. The hyperechoic splenic nodule is likely due to a benign process (i.e., myelolipoma)
- The hepatic parenchymal changes are nonspecific and may be secondary to a benign process (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy, age-related remodeling). However, a low-grade inflammatory process (i.e., chronic hepatitis or hepatotoxicosis (i.e., copper), or reactive hepatopathy) or other hepatopathy may be present.

Secondary Findings

- Minor bilateral age-related renal changes with left trace pyelectasia.

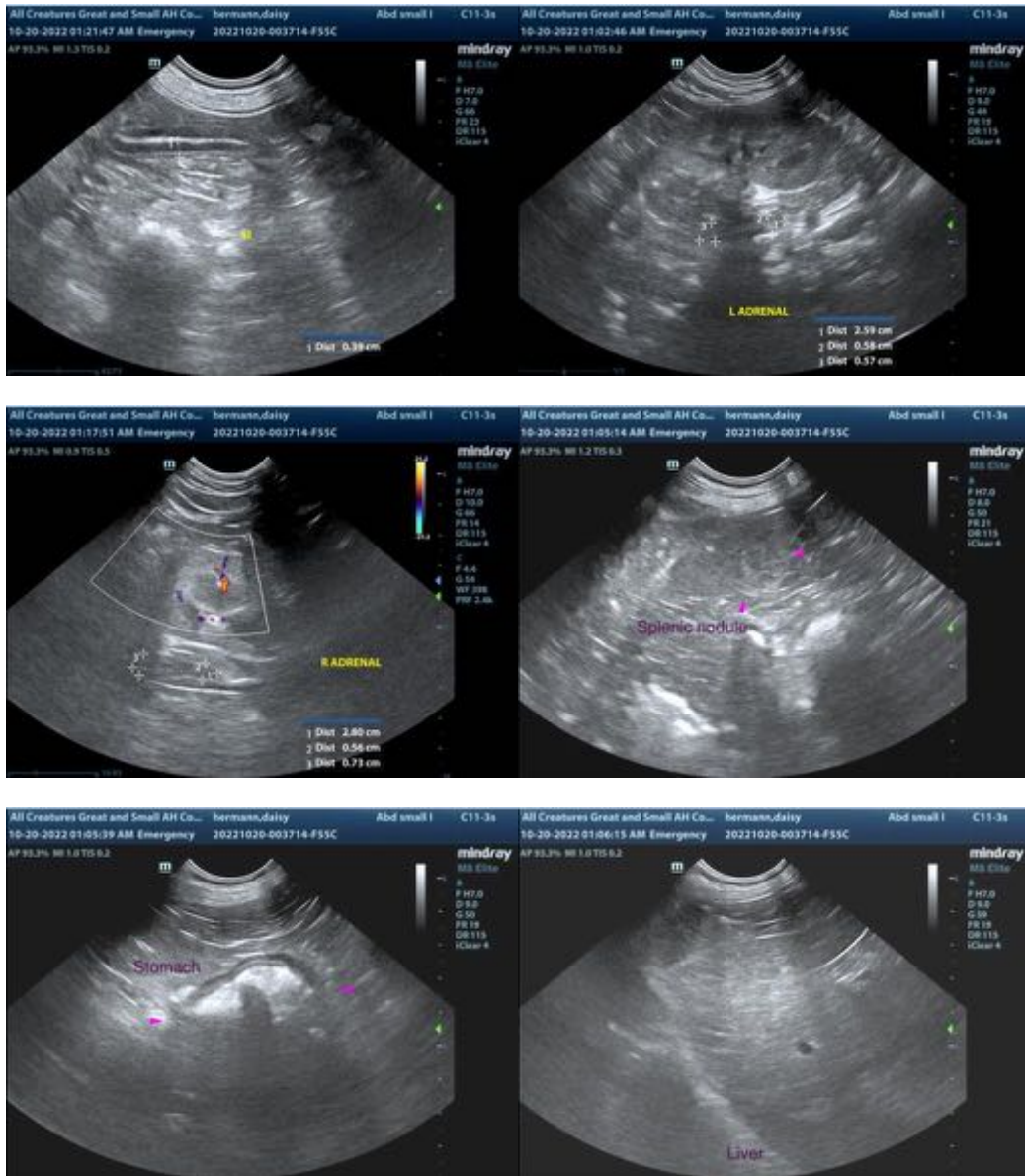
*An obvious cause for the patient's clinical signs is not identified in this study. Considerations include primary gastrointestinal disease, underlying metabolic issue, mild pancreatitis, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Further work-up could include the following:

1. Maldigestion panel including serum cobalamin and folate, TLI and PLI
2. Pre- and postprandial serum bile acids
3. Resting cortisol level to screen for hypoadrenocorticism
4. Consider a repeat fecal evaluation and prophylactic deworming with Fenbendazole.
5. A limited antigen or hydrolyzed protein diet should also be considered if the patient is eating normally.
6. Initiation of a probiotic should also be considered.
7. Ultimately, endoscopic or surgical biopsies may be necessary to get a definitive diagnosis. If pursued, thoracic radiographs are recommended prior to anesthesia to assess cardiopulmonary status.

Regarding the splenic nodule, consider a fine-needle aspirate if accessible and if clotting status is appropriate. A 25-gauge needle should be used. If the lesion is not accessible, consider a repeat ultrasound in 3-4 weeks to assess for growth.





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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