**DATE PRESENTING CLINICAL SIGNS**

1/4/2022

History: Presenting Complaint: Gums Pale/White Trouble Walking. Date: 01-02-2022 Notes: Owner noted bruise on his side today that appeared large and red - before presenting noted one on his shoulder as well. Owner expressed concerns for hypothyroidism based on skin and ear changes This AM: stool started out normal but was dark and runny at the end - owner noted that she gave patient pasta with ricotta cheese last night Owner has tried patient on sensitive skin and stomach diet but patient's appetite decreased - switched grain free and raw diet with freeze dried liver as treats. Known to scratch at his ears at home - was licking excessively at the skin in his inguinal area as well - owner noted that patient has been scratching in the area of the bruising. Earlier was holding LH leg up when walking - appeared to be walking on the side. Belly has seemed gassy. Recently adopted by owner - when first adopted skin appeared raw. Deaf. Assessment: Erythema of the skin with suspected area of bruising. Plan: Reviewed history and physical exam. Discussed ddx for changes of skin: bruising (autoimmune changes vs clotting change) vs inflammation (allergies vs other), Asked about owners goals based on list of issues presented, explained cost to the owner based on checking everything, recommended focusing on the skin changes at this time - owner noted that she would like to test for everything that will affect his comfortable mainly the skin changes and ears. Owner asked about testing for hypothyroid due to skin and ear changes - discussed checking free t4 that is send out test, can be done with rdvm. Recommended full bw + pt/ptt, whole body rads, ear cytology, +/- SQ fluids, +/- injectable meds if needed, TGH meds as needed - noted to owner if dx concerning may recommend hospitalization.

PATIENT

Chewnie Carter

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

Male, neutered

AGE

1/2/2015

WEIGHT

13.4 lbs.

Current Medications: Metronidazole, Amoxicillin, Fenbendazole, Gabapentin, Vitamin K1, Sucralfate, Vitamin B Complez, Pantoprazole, Denamarin.

Lab Results: CBC WNL, ALP 2529, ALT 3357, GGT 174, normal T-Bili .PT and PTT normal.

Radiographs: Gassy changes in intestines and colon Suspected renoliths bilaterally.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brilhart, RDMS.

INTERPRETED BY

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

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 the visible portion of the proximal urethra are normal.

HOSPITAL NAME

Animal Emergency
Hospital

The prostate is normal in size (0.93 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

REFERRING VET

Dr. Nacke-Horney

The left kidney is normal size (4.17 cm in length) with an irregular shape. The cortex is variably thickened and there is moderate loss of corticomedullary distinction. Several non-obstructive nephroliths are visualized. Cortical infarcts are observed at the medial and lateral aspects. Mild pyelectasia is present (0.34 cm in the longitudinal plane). There is no evidence of hydroureter. Renal vasculature is normal.

INVOICE

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The right kidney is normal size (4.65 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 enlarged (0.68 cm at cranial pole) (0.86 cm at caudal pole) (2.07 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 mildly enlarged (0.61 cm at cranial pole) (0.69 cm at caudal pole) (2.01 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 (1.24 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is subtly mottled in appearance. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with slightly swollen peripheral contours. The parenchyma is hypoechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are observed. 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. Luminal contents are mostly 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 segmentally dilated with chyme (mild). 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 right limb of the pancreas is 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 (0.34 cm in diameter). There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

There is no evidence of free fluid. The abdominal lymph nodes are normal/not visible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Non-specific diffuse hepatopathy. Considerations include inflammatory/immune mediated disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis), Leptospirosis, hepatotoxicosis, infiltrative neoplasia (i.e., lymphoma), other hepatopathy +/- concurrent age-related change (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy).

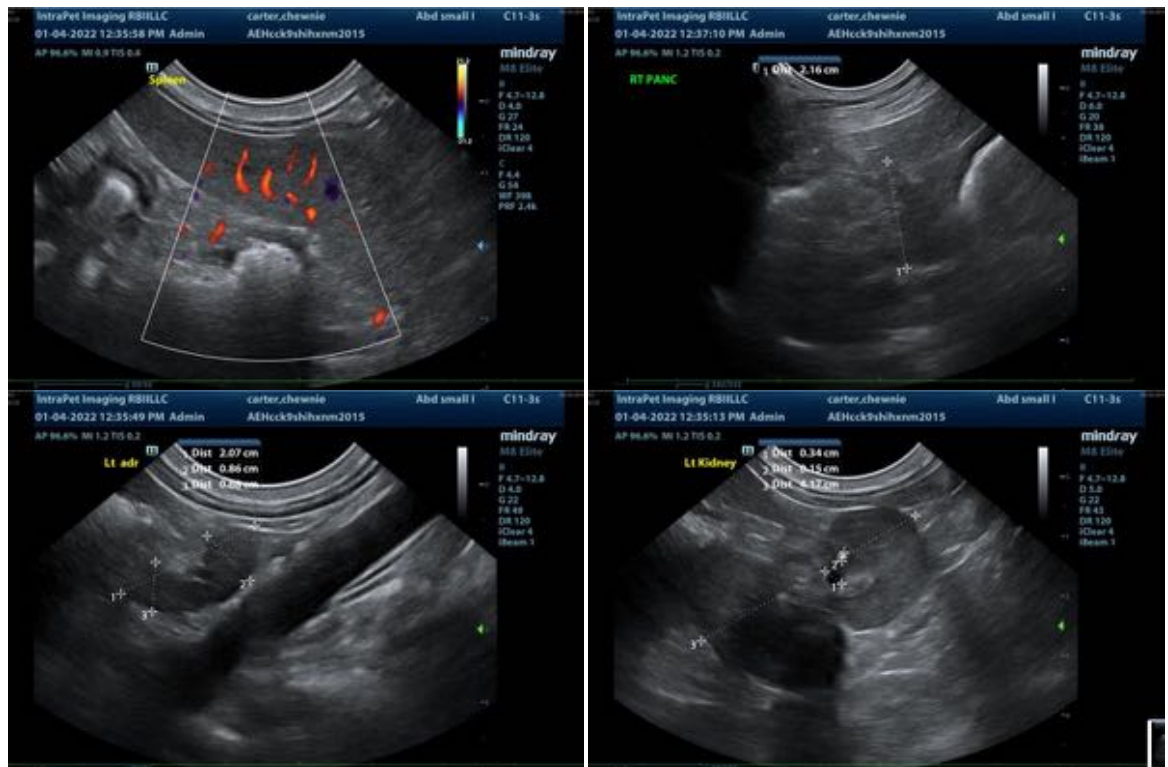
Secondary Findings:

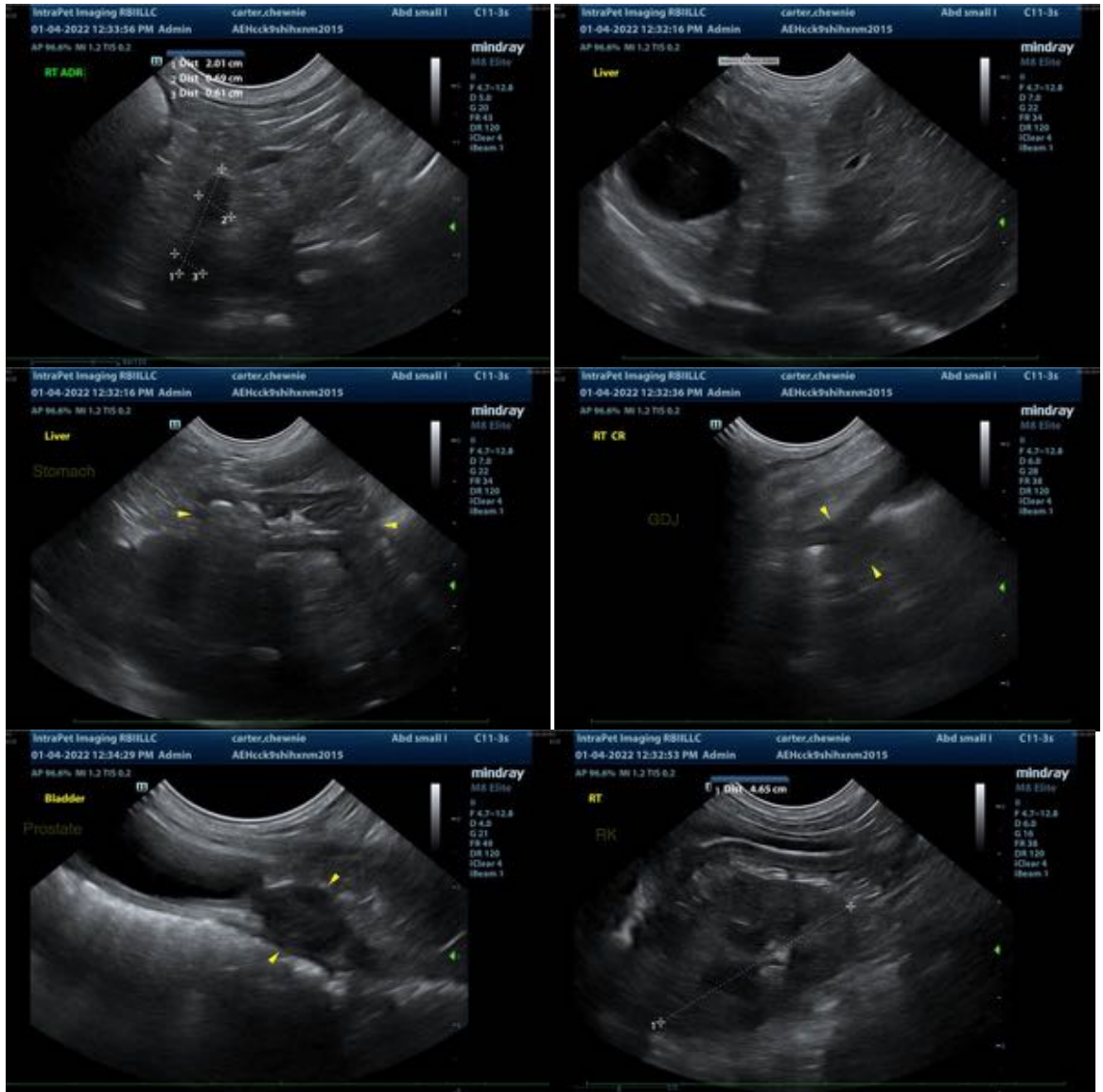
- Bilateral adrenomegaly.
- Bilateral age-related renal changes with left non-obstructive nephrolithiasis, cortical infarcts and pyelectasia.
- The splenic parenchyma changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis or splenitis with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).

- Minor age-related pancreatic remodeling +/- fibrosis. Low-grade inflammation is also possible, particularly if the patient is painful on cranial abdominal palpation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Leptospirosis testing (i.e., blood and urine PCR, serology).
- If an aggressive approach is desired, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation. If a more conservative approach is desired, a fine needle aspirate of the liver can be considered. 25-gauge needles should be used. If cytology results are inconclusive however, a surgical biopsy should be considered. In the meantime, consider empirical treatment for bacterial cholangiohepatitis and Leptospirosis while awaiting test results.
- Given the patient's history of bruising, three-view thoracic radiographs are recommended to assess for evidence of internal trauma.
- A thorough orthopedic evaluation is also recommended given the lameness.





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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