

**DATE PRESENTING CLINICAL SIGNS**

8.8.2023 Weight loss, history of pancreatitis, elevated liver enzymes.

PATIENT

Tinkerbelle Bardroff

Current Medications: Convenia inj 8/3/23.
 Lab Results: See attached.
 Date of Previous IntraPet Ultrasound: No previous.
 Sedation: Not required to complete full diagnostic ultrasound.
 Stat Report: Not requested.
 Imaging Performed By: Rachel Brillhart, RDMS.

SPECIES

Canine

BREED

Maltese

SEX

Female Spayed

AGE

7/11/2009

WEIGHT

10.8 lbs

INTERPRETED BYBeth Johnson, DVM
DACVIM**HOSPITAL NAME**

Honeygo AH

REFERRING VET

Dr. Wright

INVOICE

13999

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Left kidney is normal in size (4.53 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. An approximately 0.60 cm in diameter cortical cyst is noted in the cranial pole. A second, slightly smaller cyst is noted in the caudal pole. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal in size (4.67 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. A small nonobstructive nephrolith is noted. There is no evidence of pyelectasia or infarcts observed.

Adrenal Glands

Adrenal glands are plump/swollen in size (left: 0.88 cm at cranial pole / 0.81 cm at caudal pole) (right: 0.97 cm at cranial pole / 0.96 cm at caudal pole). Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). A 1.50 x 0.75 cm hypo- to anechoic, slightly heterogenous, non-capsule-disrupting nodule is noted mid-spleen. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is mildly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

Gastrointestinal

Fundic mucosal hypertrophy with hyperechoic mucosa and some mucosal remodeling is noted. There is no loss of mural detail. Layering is normal. No evidence of masses/nodules or foreign material present. Lumen

is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

Pancreas is prominent (enlarged) in size and mildly irregular in shape with a slightly undulating contour. Parenchyma is coarse in echotexture and heterogenous to hypoechoic in echogenicity.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

There is no evidence of heart base or pericardial pathology noted in these images at this time. If cardiac function evaluation is desired a full echocardiogram is recommended.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- Mildly heterogenous Liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- Emerging gallbladder mucocele – Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.
- Gastritis – Consistent with irritation secondary to dietary indiscretion or intolerance, infection (bacterial, viral, other), parasitic or protozoal disease, toxin, other metabolic disease such as pancreatitis, other. Microulceration cannot be ruled out.
- Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the case of the appropriate clinical signs.

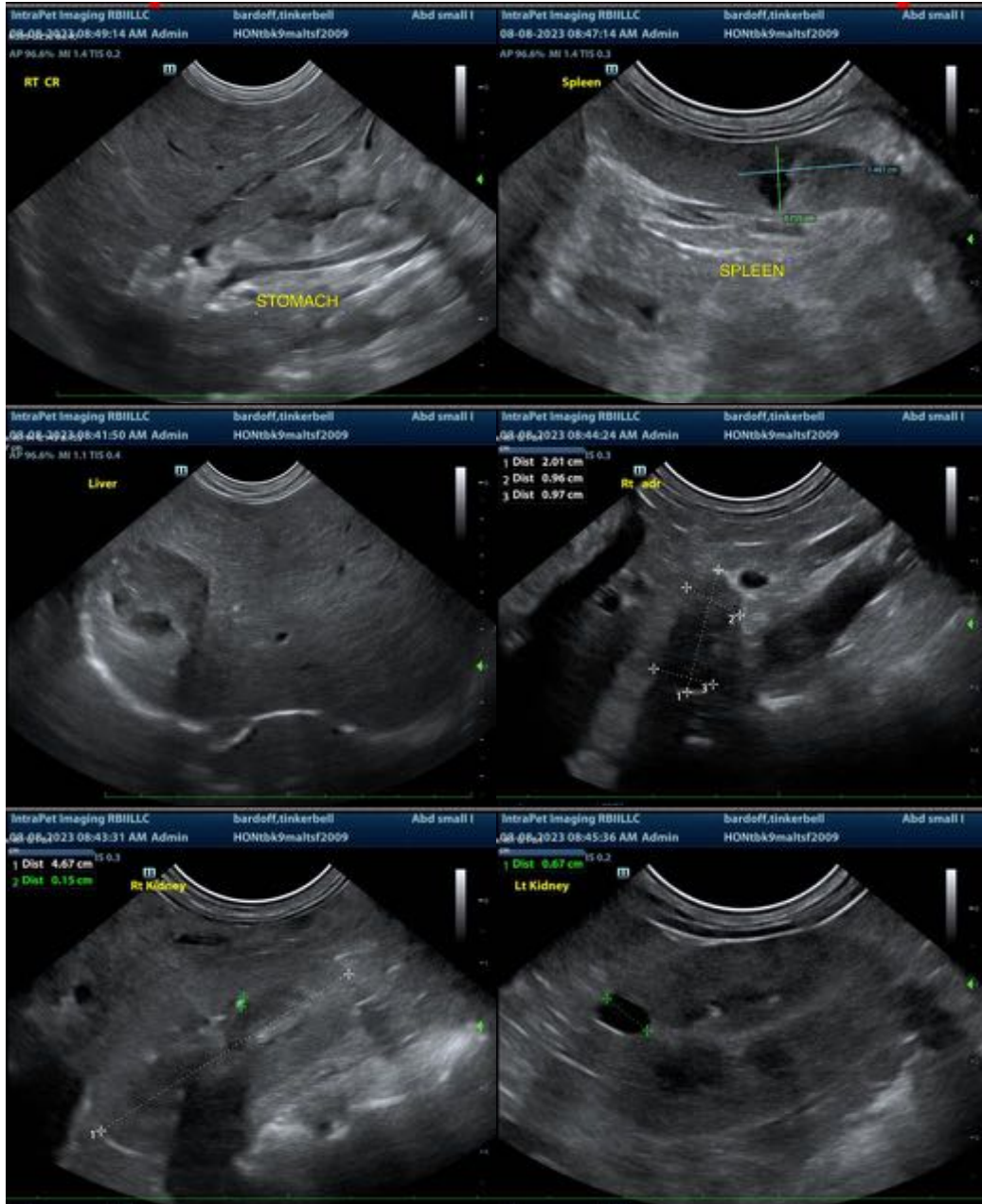
Secondary Findings

- Renal cortical cysts in the left kidney and a nonobstructive nephrolith in the right kidney
- Hypo- to anechoic splenic nodule – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Further recommendations regarding this patient's weight loss are dependent on patient's appetite. If decreased appetite is going to be contributing to weight loss, then the top differential would be potentially the emerging gallbladder mucocele (especially if nausea and/or cranial abdominal pain are reported as well) and/or potentially the suspected chronic pancreatitis. If however, patient's weight loss is in the face of a normal or even increased appetite, then concurrent maldigestion or malabsorptive pancreatic/gastrointestinal disease and/or potentially mild- or emerging protein-losing nephropathy could be contributing to the weight loss. Further diagnostic considerations could include a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory for further evaluation of GI and pancreatic function.
- The increased alkaline phosphatase is likely a combination of an emerging gallbladder mucocele on concurrent hyperadrenocorticism, which could also be contributing to the proteinuria. If not recently evaluated, a blood pressure is recommended. Further testing of hyperadrenocorticism however, is typically not recommended without supporting clinical signs such as polyuria, polydipsia, polyphagia, etc., and certainly not in the face of concurrent illness, which in this patient could be the reported weight loss.
- Therefore, ultimately recommendations for this patient include addressing the weight loss, further evaluating digestion and absorption, further management of the gallbladder mucocele, either medically or even surgically depending on patient's clinical signs, and only when and if clinical signs of hyperadrenocorticism develop (further workup of that, beginning with a low-dose dexamethasone suppression test). In the meantime, pending the results of all the above, and ACE inhibitor or ARB could be considered to begin managing this patient's high UPC. At the same time, empirical deworming with a 5-day course of Panacur is recommended as is supportive medical management of the mild gastritis in the form of antiemetics and gastric protectants, as well as potentially and appetite stimulants if indicated clinically.







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.

Beth Johnson, DVM DACVIM
info@SonoPath.com