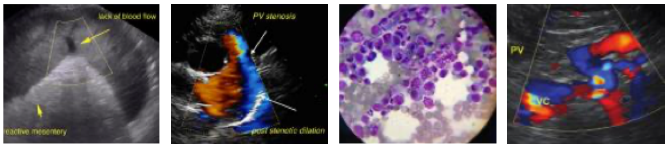
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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PATIENT

Bella Portillo

SPECIES

Canine

BREED

Morkie

SEX

Intact Female

AGE

14 years

WEIGHT

NP

INTERPRETED BY

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

IMAGING PERFORMED BY

Val Shumskaya

HOSPITAL NAME

Westwood Regional VH

REFERRING VET

Dr. Hartwick

INVOICE

12187

DATE

2.9.23

PRESENTING CLINICAL SIGNS

History: Recurrent DKA, tender abdomen, episode of pale + weakness overnight. BG @ 9 AM = 301, Ket (-), appetite great, hx of mammary mass, intact female. New diagnoses hypothyroid.

Current meds: NPH insulin 3 units and humulin R prn, Cerenia, Famotidine, Unasyn, Denamarin

Abnormal PE/Chem/CBC/UA Results: 2/7 Chem= AST= 77, ALpK= 173, amy= 269, cbc= wbc= 18.1, hct = 34, t4 = <0.5, FT4= <2

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is 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 1-2 cm, are normal.

The left kidney is normal in size (4.26 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. The cortex is hyperechoic relative to the spleen. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (4.71 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. A few, small cortical cysts are seen. The cortex is hyperechoic relative to the spleen. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size (0.76 cm at cranial pole) (0.50 cm at caudal pole) (1.80 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 in normal size (0.43 cm at cranial pole) (0.48 cm at caudal pole) (1.33 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 normal in size (0.86 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. Numerous small, linear hyperechoic foci are observed throughout the organ. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is hyperechoic relative to the spleen and diffusely mottled in appearance. A 1.50 cm hypoechoic nodule is observed on the right side, adjacent to the diaphragm. A 1.84 cm hypoechoic nodule is observed deep on the left side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is distended. The wall is normal in thickness. A large amount of suspended, echogenic sludge in a stellate pattern, 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 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 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 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.

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

Other
(One still image of each ovary is available for interpretation).
The ovaries are subjectively normal in size (left: 1.49 x 0.74 cm) (right: 1.23 x 1.04 cm). No obvious pathology is observed.

(One still image of the uterus is available for interpretation).
The uterus appears normal in size (0.68 cm in diameter). No obvious pathology is observed.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The gall bladder changes are consistent with a fully-formed mucocele.
- The hepatic parenchymal changes are nonspecific and are most consistent with regenerative nodular hyperplasia and/or vacuolar hepatopathy (i.e., idiopathic/endocrine). Inflammatory disease is possible but considered less likely in light of the normal ALT. Infiltrative neoplasia is also possible but considered less likely.
- Trace ascites

Secondary Findings

- Dystrophic mineralization of the spleen. This is a benign incidental finding, often associated with endocrinopathies.
- Bilateral chronic age-related renal changes
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

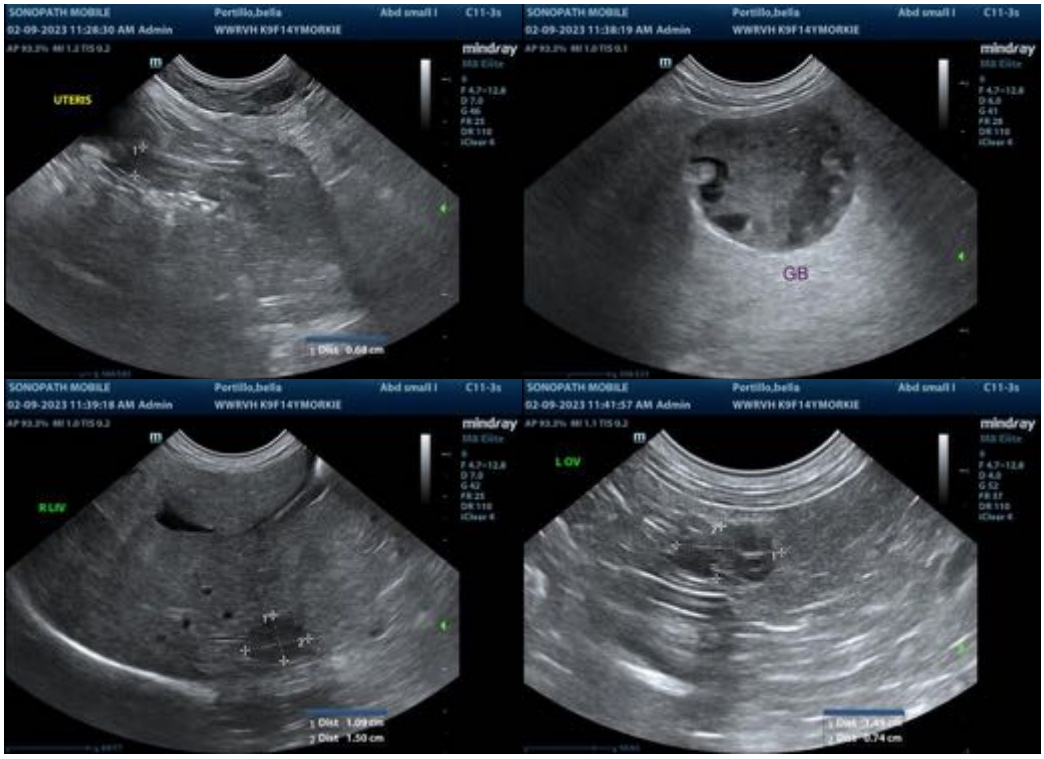
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

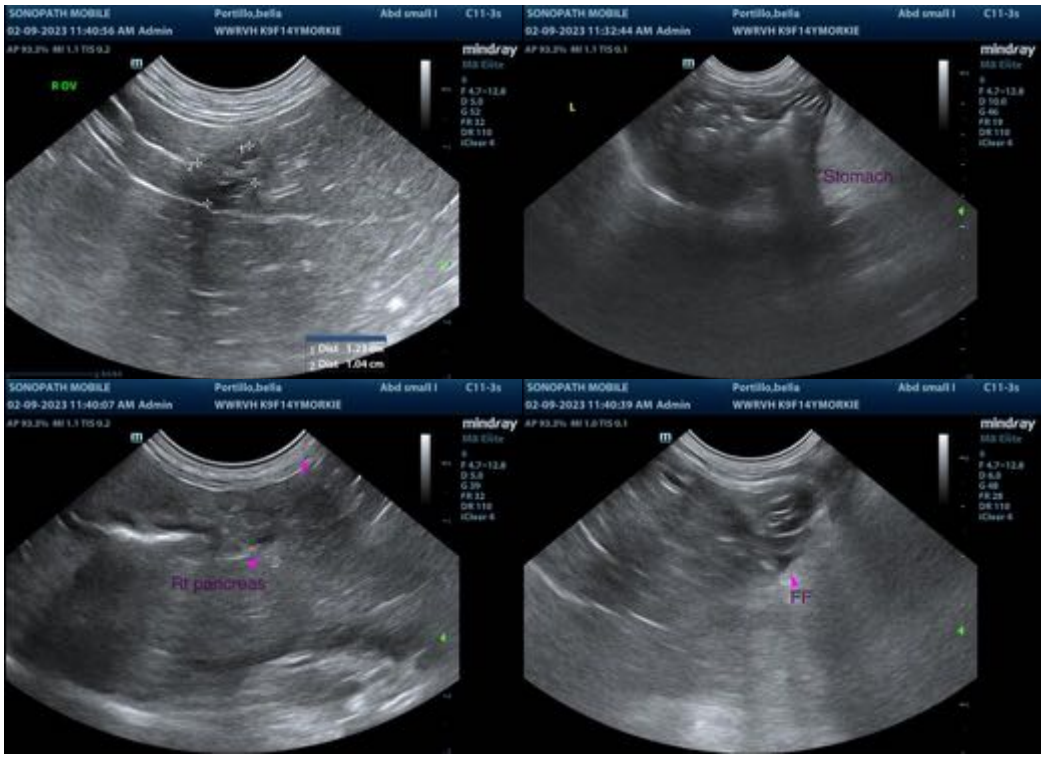
- Consider a prophylactic cholecystectomy with submission of the gall bladder as well as hepatic tissue samples for histopathology. If a cholecystectomy is not pursued at this time, initiation of Ursodiol therapy is recommended with close sonographic monitoring (i.e., every 4-6 weeks) of the gall bladder to assess for progression/rupture.

- Given the patient's clinical history and sonographic changes, consider a cPLI +/- a full GI panel (including serum cobalamin and folate, TLI and PLI) to assess for pancreatitis and maldigestion/malabsorption as possible causes for lack of diabetic control.

- Consider a urine culture and sensitivity to evaluate for evidence of an occult infection, which is relatively common in diabetic patients and can cause insulin resistance.

- Thoracic radiographs are also recommended to assess for pathology in the chest.





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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