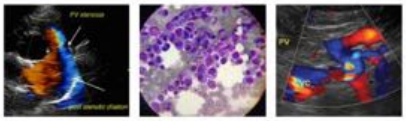


PATIENT

Toby Remmel
WGK_163366

SPECIES

Canine

BREED

Poodle Mix

SEX

Neutered Male

AGE

13 years, 5 mos

WEIGHT

11.4 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

WVRC- Dr. Payne

INVOICE

11943

DATE

12.2.22

PRESENTING CLINICAL SIGNS

History: Toby presented to WVRC Waukesha ER on 12/01/2022 for a chronic history of vomiting. Owner reports that on 11/22, Toby began projectile vomiting large amounts of bile and phlegm. Toby has been on maropitant for the past 2-3 years as he has had multiple flare-ups of pancreatitis which was first diagnosed when he was ~18 months. Over this past weekend, Toby vomited a few additional times. Toby appears very hunched as if he is about to vomit. Toby's appetite is waxing and waning. He was eating well prior to 11/22 but since then, the number of meals he is willing to consume is declining. Toby has progressed to being uninterested in eating this morning (12/01/2022). Toby is reportedly still drinking water normally. Toby normally eats Hill's i/d with occasional chicken. Toby will occasionally have loose stools which is historical for Toby.

Previously diagnosed with pancreatitis Historic elevated liver enzymes (per owner) Historic nephrolithiasis (per owner) Historic intestinal thickening (per owner) Medications: Maropitant 24mg PO SID Ursodiol 150mg PO SID - stopped on 11/24/22 as concern the medication was causing Toby's clinical signs Metronidazole 125mg PO BID Pepcid 10mg PO BID

Abnormal PE/Chem/CBC/UA Results/CBC: WBC 11.3 (N), Neu 9390 (H), Lymp 949 (N), Mono 870 (N),Hct 53% (N), Plt 524k (H) --> mild mature neutrophilia & moderate thrombocytosis - r/o secondary to inflammation, neoplasia, other Chemistry: Glu 131 (H), remainder WNL --> mild hyperglycemia (suspect secondary to stress), no overt cause of vomiting on blood work tT4: 3.3 (N) UA: USG 1.049, pH 6.5, 3+ protein, 6-10/hpf WBC, 1-5/hpf RBC, 1+ bilirubin, no bacteria & no crystals POCUS: Large, fluid distended stomach - concern for outflow obstruction or upper GI obstruction

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended. The wall is normal in thickness with a smooth mucosal surface. A 0.39 cm cystic calculus is observed within the lumen. The remaining luminal contents are anechoic. The region of the trigone and the proximal urethra, visible to a depth of 2-3 cm, are normal.

The prostate is normal in size (0.88 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

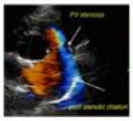
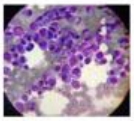
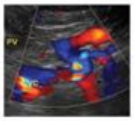
The left kidney is normal size (4.78 cm in length); with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, infarcts or hydronephrosis.

The right kidney is normal size (5.16 cm in length); with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, infarcts or hydronephrosis.

Adrenal Glands

The left adrenal gland is normal in size at the cranial pole and enlarged at the caudal pole (0.53 cm at cranial pole) (0.75 cm at caudal pole) with a slightly irregular shape; homogenous parenchyma. Glandular echogenicity and detail are normal. No focal lesions are observed. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.69 cm at cranial pole) (0.53 cm at caudal pole); 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.

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Spleen
No distinct focal lesions are observed. The parenchyma is diffusely mottled. No focal lesions are observed. Splenic vasculature is normal.

Liver
The liver is subjectively prominent to enlarged with normal curvilinear peripheral contours. The parenchyma is hyperechoic relative to the spleen. A 1.14 cm cystic lesion is observed adjacent to the diaphragm. The remaining parenchyma is subtly mottled in appearance. 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 aggregated, echogenic suspended sludge in a partially stellate pattern is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal
The gastric wall in the region of the fundus is normal in thickness. In the region of the pyloric antrum, a 3.03 x 2.15 cm heterogenous mass is observed. The mass appears to be partially obstructing the pyloric outflow tract. In the remaining gastric lumen, gas and a small amount of fluid are present. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas
The right limb is prominent to enlarged with slightly irregular peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat and subtly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated.

Free Abdomen
There is no obvious evidence of free fluid. A 1.72 cystic lymph node is observed in the right cranial quadrant. In addition, a 1.19 cm echogenic lymph node is observed in the left cranial quadrant.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Mass in the pyloric antrum with suspected partial outflow tract obstruction. Neoplasia (i.e., adenocarcinoma, lymphoma, leiomyosarcoma) is suspected. However, a benign process (i.e., inflammatory polyp) cannot be completely excluded.
- The pancreatic changes are most consistent with age-related remodeling. However, chronic pancreatitis is possible. Emerging neoplasia is also a differential but is considered less likely.
- Cystic calculus
- The gall bladder changes are consistent with an emerging mucocele.
- The prominent cranial abdominal lymph nodes may be reactive or infiltrative neoplasia may be present.

Secondary Findings

- Bilateral age-related renal changes with dystrophic mineralization

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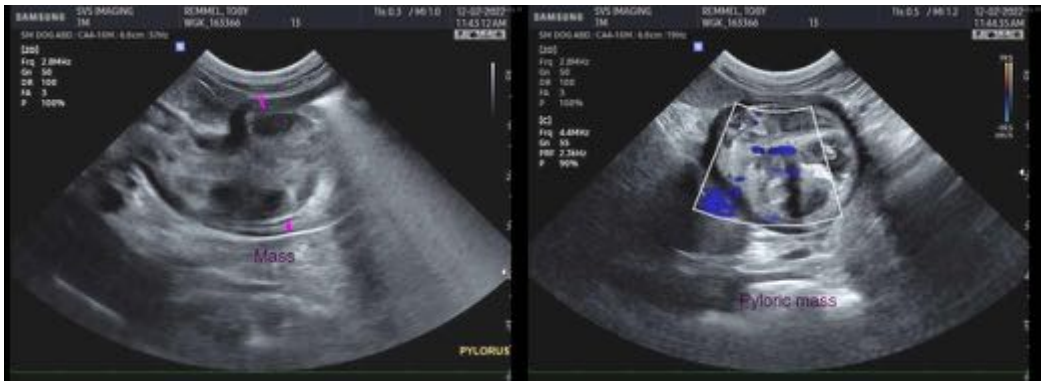
- The mild left adrenomegaly may be a normal variant for this patient or may represent early hyperplastic change.
- The splenic parenchymal changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis, splenitis or antigenic stimulation with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).
- The hepatic parenchymal changes are most consistent with a benign process (i.e., vacuolar hepatopathy and/or regenerative nodular hyperplasia). However, However, correlation with the patient's liver values is recommended. The hepatic cystic structure near the diaphragm trends toward the benign with a lower possibility of an emerging vascular tumor.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- Consider an upper GI endoscopy to obtain biopsies of the pyloric mass. Alternatively, surgical biopsies +/- removal can be considered. If surgery is pursued, biopsies of the prominent abdominal lymph nodes should be obtained. Also consider a cystotomy with stone removal, analysis and culture, +/- a prophylactic cholecystectomy, if the patient is stable under anesthesia.



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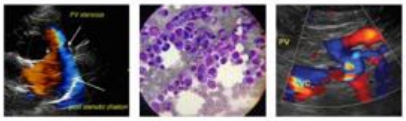

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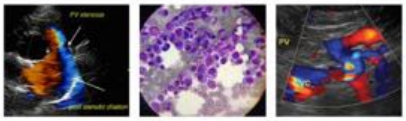
The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not



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