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ABDOMINAL ULTRASOUND AND CONSULTATION

Date: 8/22/23	Weight: 11.6 lbs
Patient: Princess Rosenthal	Referring Veterinarian: Dr. Boaz Man
Signalment: 17y FS Chihuahua	Hospital: Boca Midtowne Animal Hospital

History: Princess vomited about 10 times since Sunday 8/20 and is now hyporexic. History of pyloric mass (GIST) removed in 2020 and chronic pancreatitis.



Problems list: Gastric nodules, bilateral adrenomegaly, chronic renal disease, chronic hepatopathy, skin disease.

Medications: Previously on Denamarin. Nothing as of right now. On a renal diet.

Lab work (8/22/23):

Hematology (continued)			
TEST	RESULT	REFERENCE VALUE	
Hematocrit	41.6	37.3 - 61.7 %	
Hemoglobin	14.5	13.1 - 20.5 g/dL	
MCV	58.8	61.6 - 73.5 fL	L
MCH	20.5	21.2 - 25.9 pg	L
MCHC	34.8	32.0 - 37.9 g/dL	
RDW	22.6	13.6 - 21.7 %	H
% Reticulocyte	0.3	%	
Reticulocytes	21.0	10.0 - 110.0 K/ μ L	
WBC	10.73	5.05 - 16.76 K/ μ L	
% Neutrophils	78.2	%	
% Lymphocytes	12.8	%	
% Monocytes	6.2	%	
% Eosinophils	2.8	%	
% Basophils	0.0	%	
Neutrophils	8.40	2.95 - 11.64 K/ μ L	
Lymphocytes	1.37	1.05 - 5.10 K/ μ L	
Monocytes	0.66	0.16 - 1.12 K/ μ L	
Eosinophils	0.30	0.06 - 1.23 K/ μ L	
Basophils	0.00	0.00 - 0.10 K/ μ L	
Platelets	725	148 - 484 K/ μ L	H
PDW	10.3	9.1 - 19.4 fL	
MPV	13.0	8.7 - 13.2 fL	
Plateletcrit	0.94	0.14 - 0.46 %	H

Chemistry			
TEST	RESULT	REFERENCE VALUE	
Glucose	99	70 - 143 mg/dL	
IDEXX SDMA	15	0 - 14 μ g/dL	H
Creatinine	1.2	0.5 - 1.8 mg/dL	
BUN	37	7 - 27 mg/dL	H
BUN: Creatinine Ratio	31		
Phosphorus	5.9	2.5 - 6.8 mg/dL	
Calcium	10.0	7.9 - 12.0 mg/dL	
Sodium	155	144 - 160 mmol/L	
Potassium	6.8	3.5 - 5.8 mmol/L	H
Na: K Ratio	23		
Chloride	115	109 - 122 mmol/L	
Total Protein	6.4	5.2 - 8.2 g/dL	
Albumin	3.4	2.2 - 3.9 g/dL	
Globulin	3.0	2.5 - 4.5 g/dL	
Albumin: Globulin Ratio	1.1		
ALT	105	10 - 125 U/L	
ALP	204	23 - 212 U/L	
GGT	0	0 - 11 U/L	
Bilirubin - Total	0.2	0.0 - 0.9 mg/dL	
Cholesterol	177	110 - 320 mg/dL	
Amylase	1,058	500 - 1,500 U/L	
Lipase	2,730	200 - 1,800 U/L	H

Urinalysis  			Urinalysis (continued)	
8/22/23	12:16 PM	12:14 PM	TEST	RESULT
Collection	Cystocentesis		Bacteria, Cocci	None detected
Color	Straw		Bacteria, Rods	None detected
Clarity	Clear		Epithelial Cells	
Specific Gravity	1.013		Squamous Epithelial Cells	None detected
pH	6.5		Non-Squamous Epithelial Cells	<1 /HPF
Urine Protein	neg		Mucus	
Glucose	neg		Casts	
Ketones	neg		Hyaline Casts	None detected
Blood / Hemoglobin	neg		Non-Hyaline Casts	None detected
Bilirubin	neg		Crystals	
Urobilinogen	norm		Calcium Oxalate Dihydrate Crystals	None detected
Leukocyte Esterase	neg		Struvite Crystals	None detected
White Blood Cells	<1 /HPF		Ammonium Biurate Crystals	None detected
Red Blood Cells	<1 /HPF		Bilirubin Crystals	None detected
Bacteria			Unclassified Crystals	None detected

Radiographs (8/22/23):

1. The questionable thickening of the gastric wall has not progressed from the prior study. This likely represents fibrosis from prior tumor removal although local tumor regrowth cannot be excluded. The gastric mineral opacity is likely incidental. There is no evidence of a current gastrointestinal obstruction or foreign material.
2. The similar appearance of the cardiac silhouette is considered to be a normal variant in the absence of a heart murmur given the lack of progressive remodeling.
3. There is no evidence of pulmonary metastatic neoplasia.

Previous ultrasound findings (5/11/22):

Renal disease
 Bilateral adrenal gland mass
 Gastric nodules
 Hepatopathy
 Pancreatitis
 Gallbladder sediment

Previous histopathology from pyloric mass surgery (2/20):

Canine gastrointestinal stromal tumor (GIST).

Ultrasound findings:

Diffuse coarse mottled echogenic appearance of the liver, with rounded margins. Isoechoic and small nodules throughout the hepatic parenchyma. The gallbladder is distended with anechoic bile and has a normal wall thickness. There is a moderate amount of gallbladder sludge without evidence of biliary obstruction. The spleen is normal in size and shape, with a normal capsule and normal vasculature. The kidneys have loss of corticomedullary distinction bilaterally with irregular capsules, small cortical cysts and distended renal pelvis. The left kidney measures 3.2 cm. There is mild pyelactasia (0.3 cm - previously 0.6 cm). The right kidney measures 3.6 cm. There is mild pyelactasia (0.1 cm - previously 0.3 cm). The left and right adrenal glands are enlarged and nodular. The left adrenal measures 1.7 cm in width (previously 2.3 cm). The right adrenal gland measures 1.5 cm in width (previously 1.5 cm). The gastric wall is thickened (0.49 cm) and there is an hypoechoic nodule on the pyloric-duodenal junction that measures 1.3 x 0.65 cm. Small intestine thickness and layer is normal. Pancreas is hypoechoic but there is no evidence of surrounding inflammation or focal peritonitis. The urinary bladder is distended with urine and has a normal wall, without evidence of intraluminal abnormalities. There is no evidence of peritoneal effusion. No particular lymphadenopathy is observed.

Assessment:

1. The gastric wall is thickened (0.49 cm) and there is an hypoechoic nodule on the pyloric-duodenal junction that measures 1.3 x 0.65 cm - **not present on previous ultrasound.**
2. Bilateral loss of corticomedullary distinction, with multiple cortical cysts, irregular capsules and pyelactasia bilaterally - **previously diagnosed.**
3. Bilateral adrenal gland mass [left 1.7 cm - right 1.5 cm] - **previously diagnosed.**
4. Diffuse coarse mottled echogenic appearance of the liver, with rounded margins. Isoechoic and small nodules throughout the hepatic parenchyma. - **previously diagnosed.**
5. Hypoechoic pancreas without evidence of inflammation or focal peritonitis.
6. Gallbladder sediment without evidence of biliary obstruction - **previously diagnosed.**

Conclusions and recommendations:

The changes in the gastric wall are most concerning for the spread of the previously diagnosed GIST. I would suggest an abdominal CT and a FNA of the gastric wall. I also think that consultation with an oncologist is recommended at this point.

I am not sure if the vomiting is caused by a possible pyloric obstruction or a relapse of pancreatitis. I would suggest supportive care and see if there is an improvement in clinical signs.

The renal changes are chronic. I would suggest a urine culture, UPC and blood pressure for IRIS staging.


The adrenal glands are both enlarged and nodular and explain the diffuse mottled appearance of the liver, without an increase of liver enzymes. If there are clinical signs of hyperadrenocorticism I would suggest a LDDS test.

The gallbladder sediment is not concerning and common in 65% of older dogs.

Specialist:

Electronically signed

Dr. David Bruyette, DVM, DACVIM



Clinical Small Animal Internal Medicine
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