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Clinical Sonography & Telecytology
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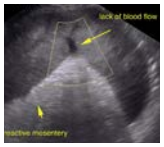
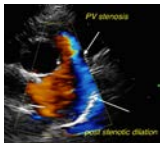
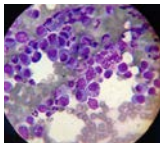
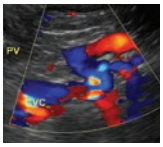

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1-800-838-4268 info@sonopath.com

PATIENT

Emmalyn Valencia

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

1 Year

WEIGHT

4.13 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Van Nieuwal

HOSPITAL NAME

Animal Emergency Hospital Volusia

REFERRING VET

Dr. Van Nieuwal

INVOICE

45449

DATE

2/23/23

PRESENTING CLINICAL SIGNS

Went to rDVM today diagnosed with kidney disease and had x-rays, concerning for gas-filled intestines and stomach, no obvious obstruction. No known toxin, injury/insult to patient.

Abnormal PE/Chem/CBC/UA Results: BUN 112.6, creat 6.2, phos 13.3, TP 8.7, ALB 4.6, glucose 134, TCHO 207, Na 138, k 2.8, Cl 81 EOS 0.02, RBC 10.61, HGB 16.4, MCHC 38.0 UA shows UTI - SG 1.042

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately 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.

The right kidney is normal in size (3.5 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (3.2 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is normal in size (0.32 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.34 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

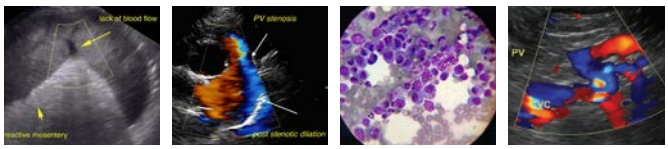
The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is markedly overdistended with anechoic fluid. The distention appears to extend through the pylorus into the proximal duodenum but cannot be traced beyond that or to a taper. There is no visible reason for obstruction or foreign material, infiltrative disease, etc., but an obstruction cannot be ruled out .

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions



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per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

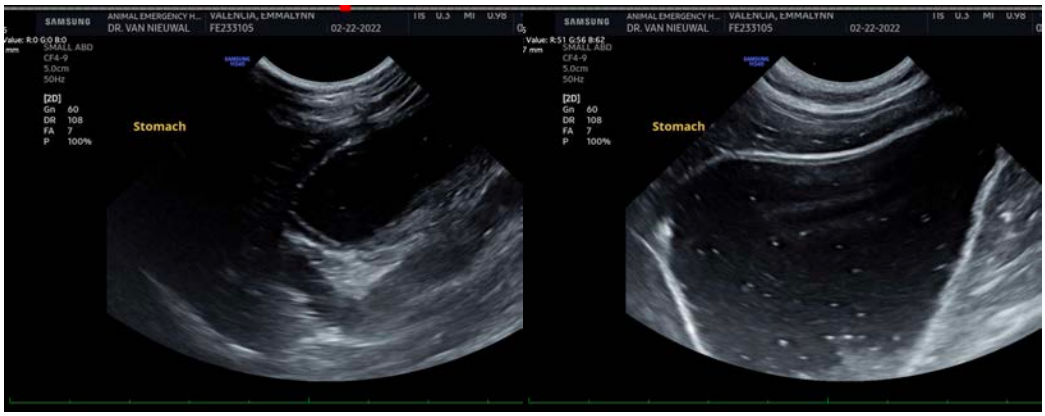
- Marked gastric fluid distention that appears to extend into the proximal duodenum, followed by normal empty bowel elsewhere – concerning for at least partial if not full obstruction. The dilated bowel cannot be traced to an obstructive object or disease, but an obstruction cannot be ruled out without this tracing. Gastric stasis or ileus secondary to other metabolic disease (in this case kidney disease) is also a differential.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's concentrated urine, true kidney disease is believed less likely than prerenal azotemia or at least partial contributing prerenal azotemia, potentially secondary to the underlying cause of the marked gastric distention, whether it be an obstruction or ileus that resulted in vomiting and decreased water intake, etc., which is unknown.

Recommendations include aggressive diuresis (as much as patient can tolerate) combined with broad-spectrum antibiotics (given the concern for urinary tract infection) combined with supportive symptomatic management of the gastrointestinal signs with antiemetics, fluid therapy, etc.

Additionally, placement of a nasogastric tube for suction of the stomach followed by reimaging, trying to trace the distention, if possible, could be considered. Monitoring the azotemia to help determine the true renal component is recommended as patient is rehydrated.



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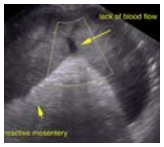
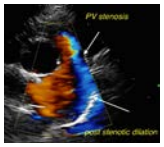
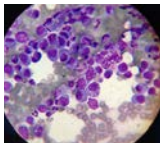
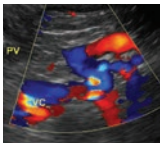

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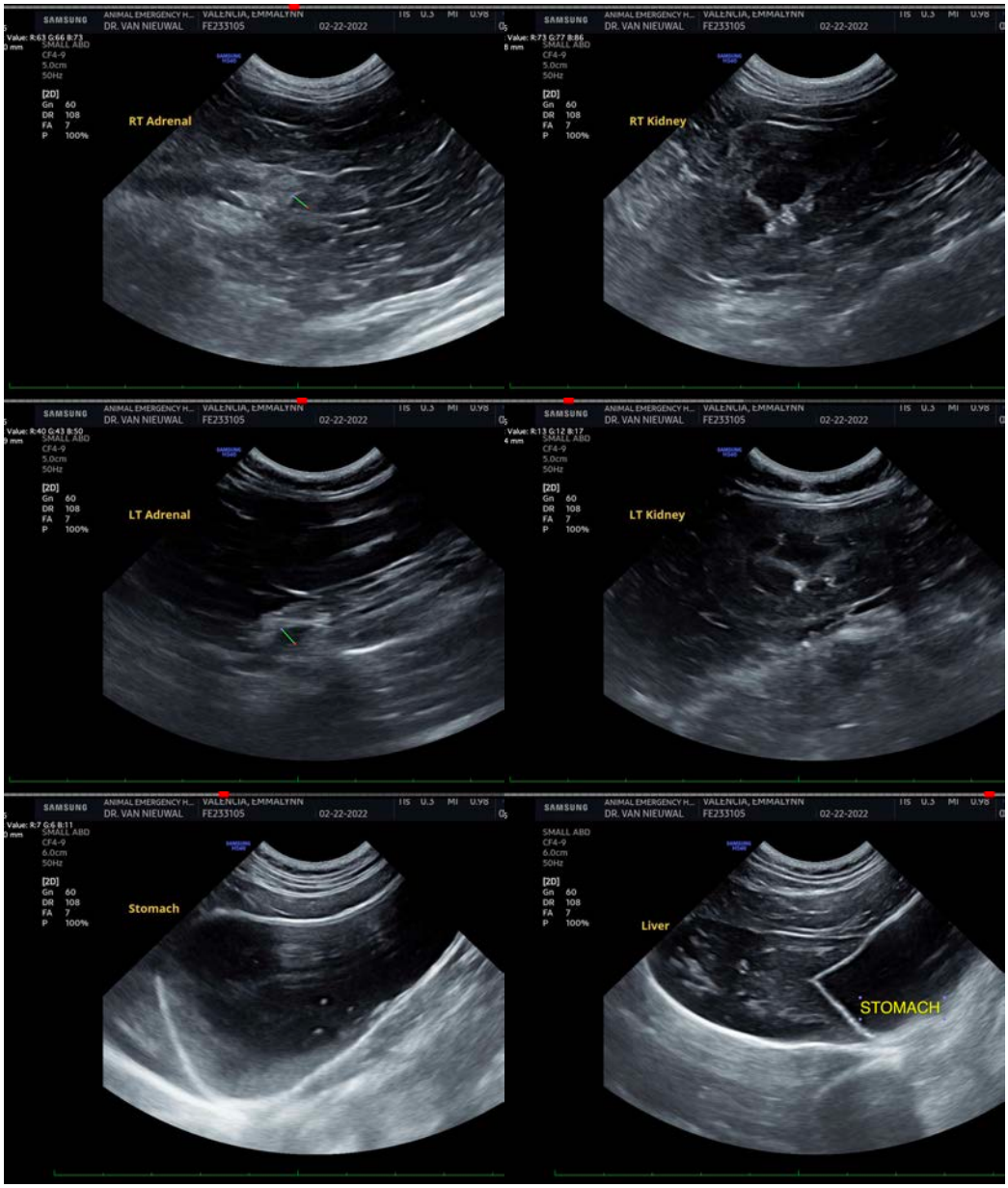

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
Beth.Johnson@sonopath.com