

PATIENT

Jellybean Jacobs

SPECIES

Canine

BREED

Poodle Mix

SEX

Spayed

AGE

11y 2m

WEIGHT

21.4

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Carissa Rhoades

HOSPITAL NAME

Elizabeth AH

REFERRING VET

Leon Anderson, DVM

INVOICE

10426

DATE

8/16/2023

PRESENTING CLINICAL SIGNS

1 week ago, blood noted in the urine. Amoxicillin did not help. X-rays were clear of stones. Labs on Monday revealed a likely thrombocytopenia (platelets clumped on slide) but normal otherwise. Went off food last night and this morning. Still peeing blood, straining now.

Abnormal PE/Chem/CBC/UA Results: PE: Pale pink gums, rounded abdomen, thin hair coat with pigmented ventrum, III/VI left heart base systolic murmur, some eye discharge, dark discharge around vulva, stifle OA, Stage III dental disease. CBC today: moderate anemia, mildly regenerative and leukocytosis (neutrophils and monocytes). Thrombocytopenia (41 K/uL). UA: tons of RBC's, few epithelial cells, debris. Clot in urine.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately distended with anechoic contents as well as a large amount suspended echogenic debris. Along the mid dorsal wall there is a 2.5 cm long x 1.4 cm thick echogenic irregular partially mineralized density without visible blood flow. Most consistent with mineral/sand debris, mucus, blood clots, etc. Additionally, along the ventral wall approaching the trigone there is a 1.45 cm x 1.2 cm irregular echogenic broad-based density that does appear to have blood flow and is more consistent with a polyp/nodule/mass. The visible pelvic urethra is normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (4.28 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 (5.22 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 (cranial 1 cm, caudal 0.52 cm), shape and contour. Corticomedullary structure is unremarkable. A hyperechoic nodule is noted in the cranial pole. Nodule does not disrupt normal shape and/or architecture. Visible surrounding vasculature appears normal.

The left adrenal gland is unable to be well visualized in these images.

Spleen

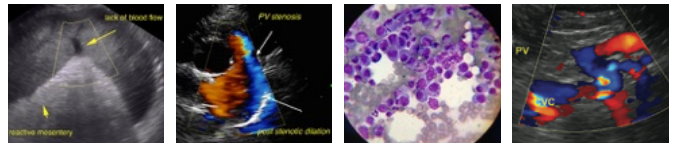
The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

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.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal



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The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction or foreign material. Pyloric outflow tract appears patent.

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

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

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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.

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Free Abdomen

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

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There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

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- A large amount of urinary bladder debris with possible mineral/sand debris or potentially a blood clot. In addition to a second thick area that could also represent mucus, blood clot, etc. but is more likely based on appearance to be tissue with both benign inflammatory diseases i.e., cystitis as well as potentially infiltrative neoplasia such as a transitional cell carcinoma being differentials.

IMAGING PERFORMED BY

Carissa Rhoades

SECONDARY FINDINGS

- **Mild Gallbladder debris** - 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. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- **Hyperechoic adrenal nodule in the cranial pole of the right adrenal gland** - Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored.

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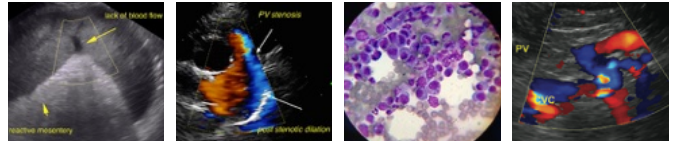
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.



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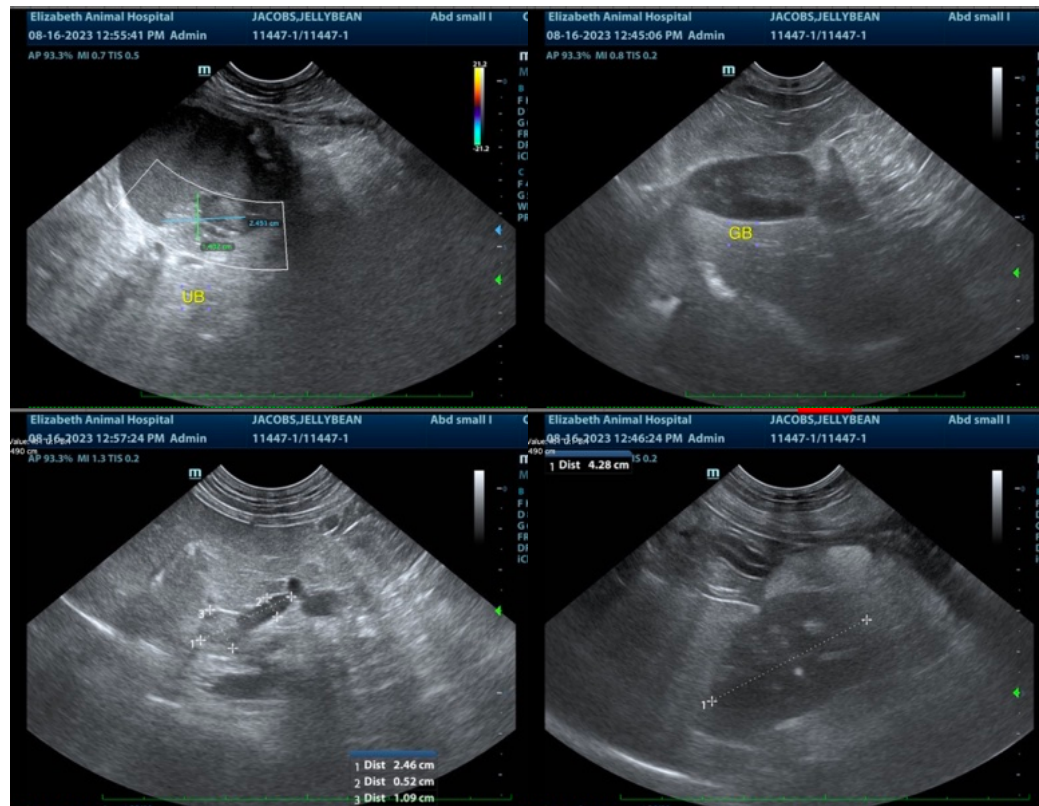
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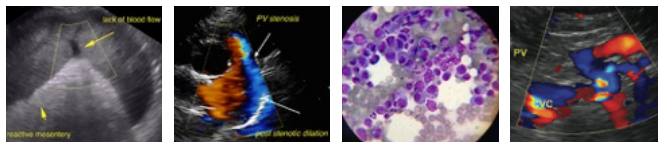
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Urinalysis and urine culture, if indicated based on urinalysis results, are recommended. Submission of urine to look for BRAF gene mutation, which is associated with urinary bladder/prostate cancer, could be considered. Other diagnostic options include traumatic catheterization, fine needle aspirate (with small risk of tumor seeding/trailing) or cystoscopy for further sampling. In the meantime, empirical therapy with a broad-spectrum antibiotic (or ideally an antibiotic based on culture and sensitivity results) as well as an anti-inflammatory (unless otherwise contraindicated based on patient co-morbidities) may begin to help alleviate clinical signs.

This patient's thrombocytopenia is of unknown if any relation to the urinary bladder changes. It could be that the bladder changes are blood clots secondary to hemorrhage from the thrombocytopenia in which case working up and treating the thrombocytopenia is the primary need or it could be that this is an auto immune thrombocytopenia potentially related to an inflammatory or even neoplastic process effecting the bladder, or that the two are unrelated. Regardless, if the thrombocytopenia is persistent further evaluation to help determine underlying cause is recommended. This includes working up the urinary bladder as described above potentially comprehensive infectious disease testing and ultimately even potentially bone marrow cytology.





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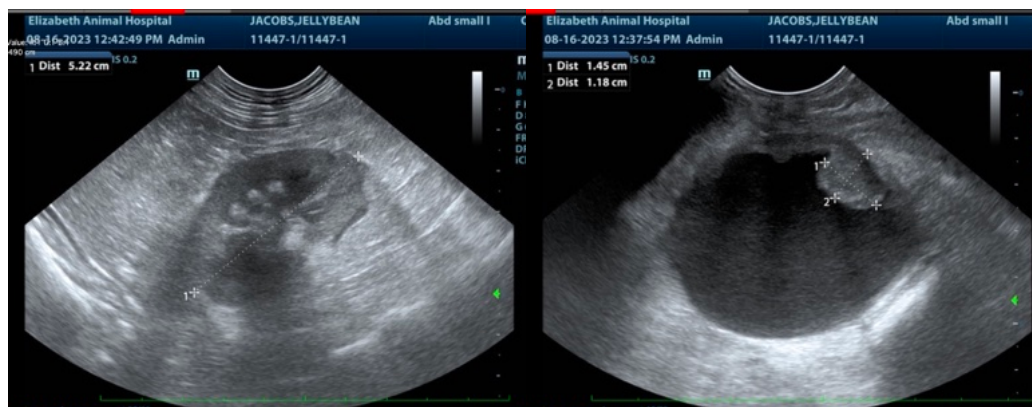
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
info@sonopath.com