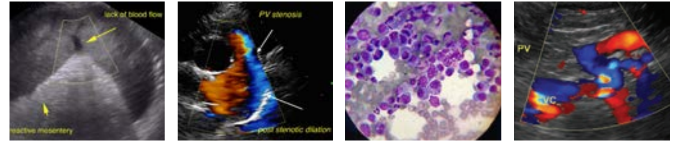

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1-800-838-4268 info@sonopath.com

PATIENT
Casper Leduc

SPECIES
Canine

BREED
Retriever X

SEX
Spayed Female

AGE
15 Years

WEIGHT
25.4 kg

INTERPRETED BY
Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY
Dr. Nigel Gumley

HOSPITAL NAME
Cedarview AH

REFERRING VET
Dr. Nigel Gumley

INVOICE
43499

DATE
12/15/22

PRESENTING CLINICAL SIGNS

Increased drinking and urinating over last two weeks. Increased pacing, chronic LS disease and mobility issues.

Abnormal PE/Chem/CBC/UA Results: Multiple large lipomas; 3 cm mass noted on spleen; large number of large bladder stones; Urine pH = 9, bacteriuria with rods, no crystals seen; 3+ WBCs; CBC normal; Chemistries - ALT = 468, rest normal, T4 normal Urine culture pending. Chest rads normal

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. Multiple, too numerous to count cystoliths are noted, with the largest measuring 1.35 cm in diameter. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (5.9 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 (5.8 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 (0.86 cm at the cranial pole and 0.85 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.41 cm at the cranial pole and 0.69 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

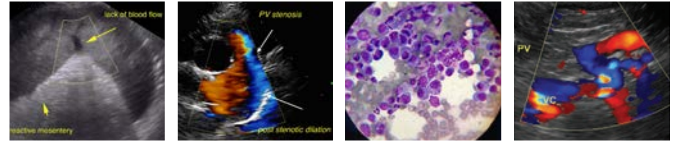
Spleen

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). An approximately 1.0 cm x 3.0 cm, solid, homogeneous, hypoechoic nodule/mass resulting in a mild capsular bulge is noted near the head of the spleen. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. 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.



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Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is 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.

The medial iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

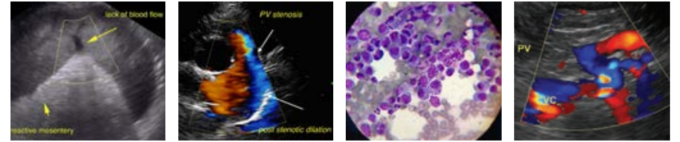
- Large number of large urinary bladder cystoliths
- **Reactive medial iliac lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- **Heterogenous Liver –** These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- **Hypo to anechoic splenic nodule** – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the urinary bladder pathology (i.e., cystoliths) noted in these images, the combination of those stones and the suspected urinary tract infection are the most likely cause of this patient's clinical signs. As is reportedly already pending, a urine culture is recommended.

Given this patient's history of concurrent lumbosacral disease, discospondylitis (given the pacing, pain, etc.) should be a consideration when addressing duration of management of the urinary tract infection. If there is any spinal pain, a longer duration is recommended to potentially treat concurrent discospondylitis if suspected clinically.

Treatment recommendations include antibiotics based on culture and sensitivity results, with plans to recheck a culture as well as cystolith size a couple weeks into the treatment course. If stones are



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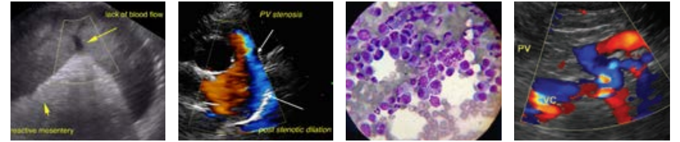
shrinking, recommendations would be to continue antibiotics until they are fully dissolved. A concurrent dissolution diet could be considered. Finally, a follow up culture is recommended a week to 10 days after finishing antibiotics.

Additionally, while likely unrelated, either a fine needle aspirate of the splenic nodule could be considered if patient's coagulation status is appropriate, or, if a more conservative approach is elected, monitoring could be performed ultrasonographically.



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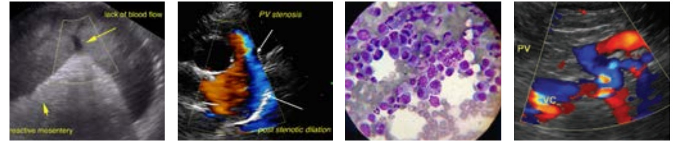

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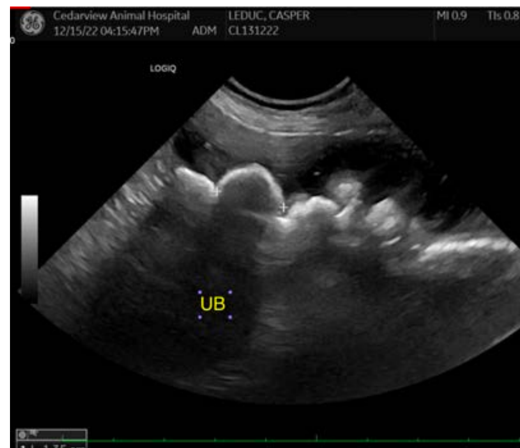

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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