



PATIENT

Ghillie Hewitt

SPECIES

Canine

BREED

Goldendoodle

SEX

Spayed Female

AGE

4 Years

WEIGHT

12.3 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Donna Markland

HOSPITAL NAME

Island Mobile Paws

REFERRING VET

Central Island Vet
Emergency Hospital

INVOICE

41929

DATE

10/9/22

PRESENTING CLINICAL SIGNS

Presented on October 8th for no BM for 8 days with hyporexia. Has been straining to defecate since first seen one week ago at emerg. Treated as an outpatient with metronidazole at that time as radiographs were normal. Is urinating, but squats several times before she actually urinates. New clinical signs of ataxia rear limbs and vertical nystagmus with a rotary component noted. PE yesterday showed pain on abdominal palpation but no mass effect/fluid apparent. Soft formed stool on rectal exam. Mild ataxia with weakness in hind limbs. Ghillie was mildly dehydrated. Ghillie has been on IV fluids at 2x maintenance, cerenia (1 mg/kg IV q 24 hrs), methadone (0.1 mg/kg IV q 4-6 hr) She was sedated with alfaxan for this scan. See below for yesterday's diagnostic results. Radiographs from one week ago and yesterday are attached for your information. The clients are hoping to get into neurologist/referral centre ASAP (holiday weekend).

Abnormal PE/Chem/CBC/UA Results: CBC: leukopenia with neutropenia, mildly low retics ALP=21 (low) 4DX=Negative for all Coag: PT and PTT normal Lepto Witness: negative

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 (5.79 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. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal in size (5.54 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. A hyperechoic band parallel to the corticomedullary border is present.

Adrenal Glands

Adrenal glands are small (flattened contour). Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The right adrenal gland measures 2.1 cm long x 0.47 cm at the cranial pole and 0.51 cm at the caudal pole and the left adrenal gland measures 2.2 cm long x 0.39 cm at the cranial pole and 0.34 cm at the caudal pole.

Spleen

Spleen is subjectively large in size with a mildly swollen but smooth capsule. Parenchyma is normal and homogenous in echogenicity and echotexture. 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.



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Gastrointestinal

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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.

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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, foreign material or infiltrative disease.

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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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The mesenteric 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.

PRIMARY FINDINGS

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- **Flat adrenal glands** – This can be a normal patient variant and/or a sign of exogenous cortisol administration. If exogenous steroids are not being administered, hypoadrenocorticism (either relative or absolute) should be considered.
- **Hypersplenism** – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.
- **Reactive mesenteric lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- **Bilateral medullary rim sign** - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

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SECONDARY FINDINGS

- **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

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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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

A fine needle aspirate of the spleen could be considered if patient's coagulation status is appropriate.

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If not recently evaluated, urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

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However, given this patient's clinical signs of localization of straining to defecate, delayed posturing to urinate, as well pelvic limb weakness, an intrapelvic or lumbosacral spinal location may be the primary pathology, and not visible ultrasonographically.

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Recommendations include consultation with a neurologist, as is reportedly already being scheduled, and potentially advanced imaging of the caudal abdomen/pelvis with either CT scan or potentially MRI. Additionally, especially if referral is delayed, bone marrow cytology could be considered, given the concurrent cytopenias, in case the overall diagnosis is also present in the bone marrow. Additionally, as is reportedly already planned, geographically appropriate infectious disease testing is also recommended.

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In the meantime, supportive/symptomatic care is recommended, including pain management in case the elimination changes are secondary to pain when posturing, given the reported ataxia, etc.

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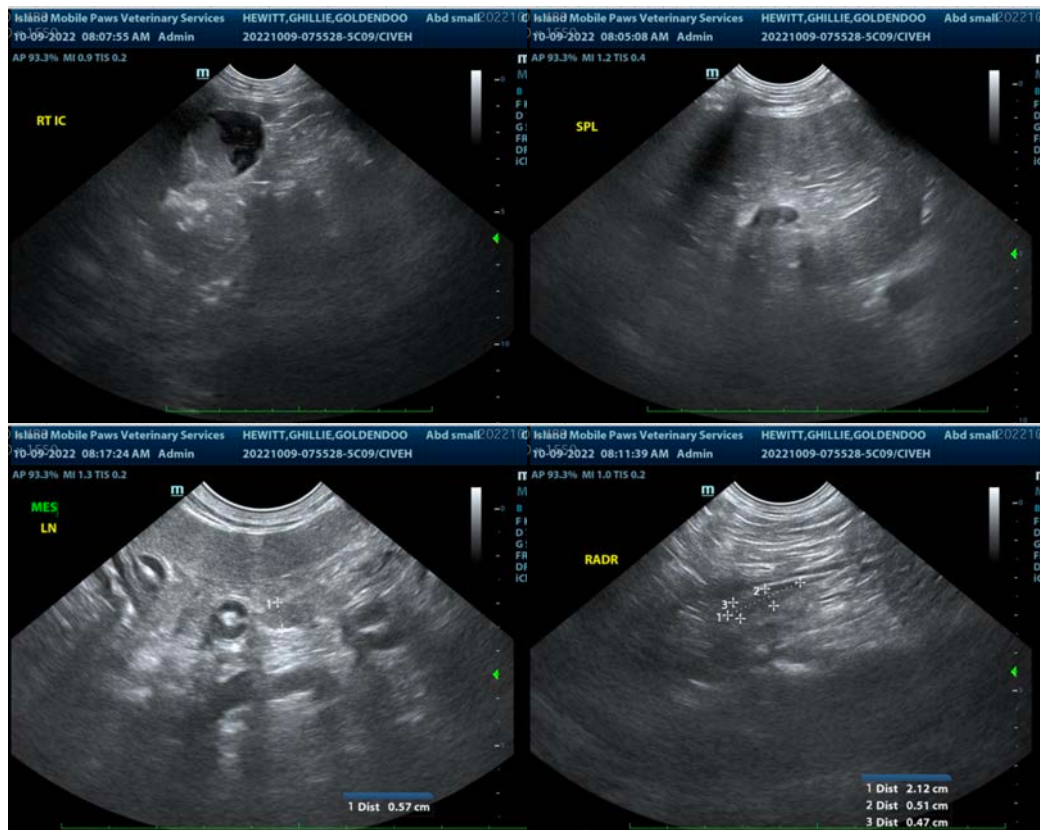
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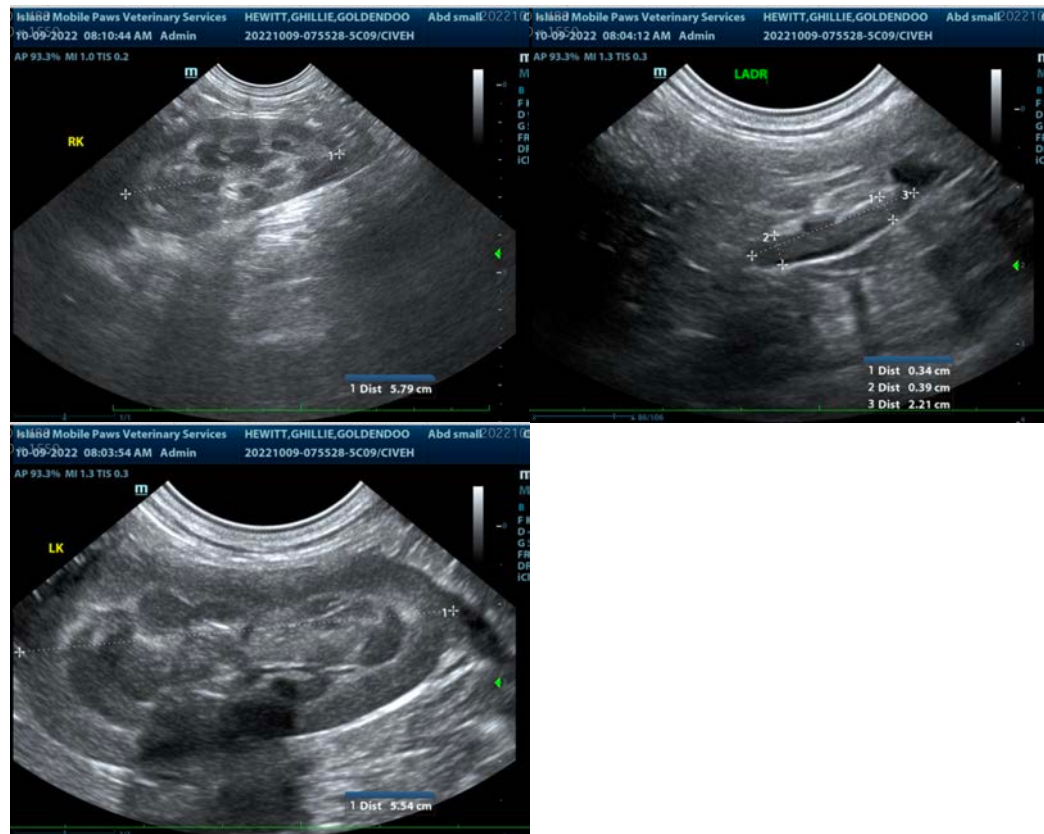
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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