



PATIENT

Emmy Weyers

SPECIES

Canine

BREED

Poodle

SEX

Spayed Female

AGE

9 Years

WEIGHT

7.81 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Katie Buss

HOSPITAL NAME

Kings Vet Hospital

REFERRING VET

Dr. Ellen Puthoff

INVOICE

44151

DATE

1/11/23

PRESENTING CLINICAL SIGNS

Emmy presents today for recent history of incontinence. In terms of her cough, she has been doing much better on just the hydrocodone. However, over the past month or so, Emmy has been having an increase in her thirst and urination to the point of incontinence. Early to mid-December, they noticed that she had urinated on the floor 1-2 times between then and Christmas. On Christmas day, Emmy seemed like she didn't feel good - was just lying and wanting to be held. She then released her bladder on Beth without realizing it. She had been off the steroids for at least 1 week when she started to exhibit these behaviors. For the past week or so, she has started to pee in bed during the day. No change in urine - seemed clearer initially but recently has had some yellow coloration. Her thirst has increased - drinks infrequently but when does, she drinks a lot more. No change in appetite, no change in bowel movements.

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 (3.26 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 adrenal glands are unable to be well visualized in these images. Given this patient's reported history of recent Prednisone, they may potentially be small/flat and that is why they are difficult to visualize.

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). A 5.5 cm x 0.60 cm non-capsule disrupting, hypoechoic nodule 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.

Gallbladder is moderately distended with anechoic bile as well as mild 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

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, 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

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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

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

There is no apparent lymphadenopathy noted in these images.

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PRIMARY FINDINGS

- **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.
- **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.

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SECONDARY FINDINGS

- **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.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is not an ultrasonographically visible explanation for this patient's reported PU/PD or consequent incontinence. The suspicion for the incontinence is that is subclinical "spay incontinence" that has become clinical, brought on by the development of PU/PD. Therefore, the first recommendation is to begin working up the PU/PD. In case this patient developed an occult urinary tract infection while receiving Prednisone, a 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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Additionally, if not recently evaluated, a general metabolic health screen in the form of a CBC/Chem panel and electrolytes is recommended.

In the meantime, medical management of suspected "spay incontinence" with Proin or an estrogen supplement, etc. could be considered while putting more time between the patient's steroid history and being off steroids, as medullary washout from being on steroids could still be resulting in PU/PD that ay self-eliminate with more time.

Additional recommendations pend the results of lab work, urinalysis, etc.



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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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