



PATIENT

Leeza Barton

SPECIES

Canine

BREED

Australian Shepherd

SEX

Spayed Female

AGE

4 Years 10 Months

WEIGHT

55.8

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Miranda Fritz

HOSPITAL NAME

Richmond Animal
Hospital

REFERRING VET

Dr. Miranda Fritz

INVOICE

72175

DATE

1/13/26

PRESENTING CLINICAL SIGNS

P presented for second opinion Dec30th 2025 for 6-8 week history of pu/pd and urinary incontinence. O reported relatively sudden increase in pu/pd and resulting incontinence. P would urinate large about when sleeping and seemed obsessed with water. P did have bout of diarrhea around the time of initial presentation, but that has since resolved. No recent v/d/c/s. BW and UA done at previous vet and wnl. They did put p on 1 week of clavamox and o thought p clinically improved. No diet change, no other previous medical concerns other than p is generally anxious (not on any medication or supplements). Collected ultrasound guided sterile urine sample for urine culture - no growth. While pending diagnostics did trial of NSAID since o thought p uncomfortable when urinating - o thought p more comfortable on NSAID, still incontinent but less pu/pd.

Abnormal PE/Chem/CBC/UA Results: PE - TPR wnl, hair matted around vulva due to urine leakage but no perivulvar dermatitis, not abnormalities noted on vulva, normal rectal exam. CBC - wnl Chem - mild BUN elevation and chloride elevation, all else wnl TT4 - wnl Baseline cortisol level 7.4 (wnl) UA - USG 1.020, pH 8.0, all else wnl Urine culture - negative Abdominal x-ray - nsf Fecal - NOS

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately 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 is size (6.33 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 is size (5.58 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

The caudal pole of the left adrenal gland is normal in size (0.47 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal. The cranial pole is difficult to fully visualize in these images.

The right adrenal gland is unable to be 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



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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 empty with 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 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 pancreas that is observed appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no visible free peritoneal effusion noted in these images.

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

- Moderate 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 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.
- Mildly reactive medial iliac lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Patient's reported incontinence may be the progression of previously subclinical urethral sphincter incompetence or "spay incontinence" as a result of the reported PU/PD. Therefore, continued workup of the PU/PD is appropriate.

Differentials for PU/PD are vast and include, but are not limited to:



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Primary polyuria caused by chronic kidney disease, pyelonephritis, liver disease, diabetes mellitus, hyperthyroidism, hypercalcemia, hyperadrenocorticism, hypoadrenocorticism, E.coli infections ie) pyometra in females, polycythemia, central diabetes insipidus or primary nephrogenic diabetes insipidus.

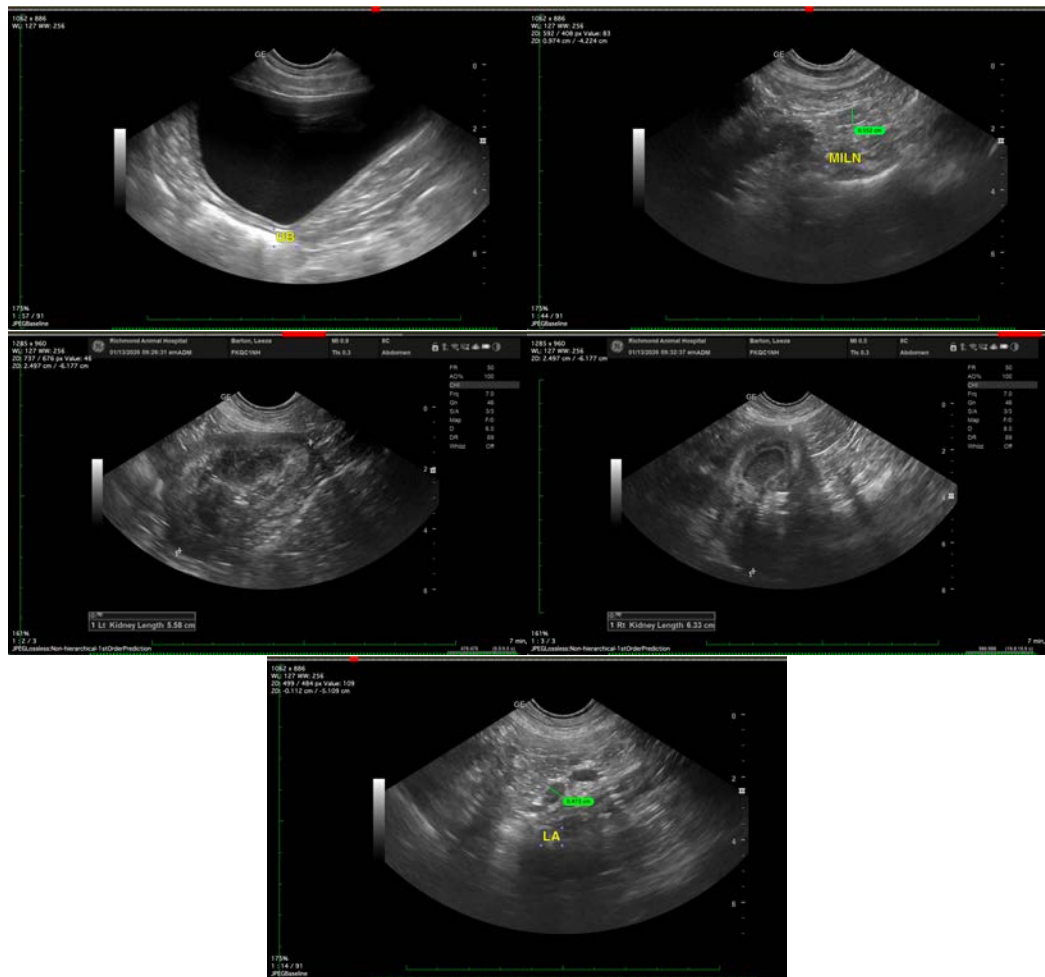
Primary polydipsia caused by psychogenic polydipsia, fever, pain, or central nervous system disease.

Most causes of PU/PD can be diagnosed with a comprehensive history and physical exam, a first AM urine specific gravity to see if urine concentration is possible (as most animals naturally consume less water overnight) followed by a comprehensive CBC, serum chemistry panel, electrolytes, and urinalysis.

If not, next step(s) may include a urine culture, low dose dexamethasone suppression test, T4, bile acids, Leptospirosis testing and/or an empirical course of antibiotics.

If a diagnosis is still not obtained, a more advanced work-up is indicated and consultation with an internist may be warranted.

In the meantime, medical management of “spay incontinence” may be warranted.





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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
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