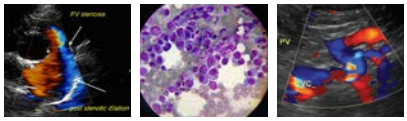
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

4/12/23

PATIENT

Pebbles Jonassen

SPECIES

Canine

BREED

Pomeranian

SEX

Spayed Female

AGE

1/7/22

WEIGHT

9 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Mt. Airy AH

REFERRING VET

Dr. Riley

INVOICE

46611

PRESENTING CLINICAL SIGNS

Patient has been urinating in the house multiple times a day. Tested for UTI with negative result. Struvite crystals found in urine sample and confirmed sediment via in house ultrasound- Patient has been on a prescription diet of Purina Pro Plan Veterinary Diets UR Urinary Ox/St Canine Formula to help eliminate the crystals for 3-4 weeks. Patient does not drink excessive amounts of water and will alternate from small dribbles of urine to large quantities in the house. Patient does go to the bathroom outside when taken out. Owner takes out every 2 hours when home- still urinates in house. Patient recently started Proin on 4/10/23 to help with urinary incontinence. Full Geriatric Bloodwork sent out on 4/11/23.

Current Medications: Trazodone 50mg: 1 tab PO SID AM, Fluoxetine 10 mg: 1 tab PO SID AM, Lorazepam 0.5mg : 1 tab PO SID AM + PM if needed, Proin 25mg: 1/4-1/2 tab PO BID x 2 weeks, then 1/4-1/2 tab PO SID after (started last night), Gabapentin 100mg: 1 capsule PO PRN, Proheart 6 injection due 8/5/23, Nexgard 4-10# q monthly
Lab Results: Struvite crystals found in urinalysis.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Dex/Torb IV.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

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. Both ureteral papillae are suspected to be visualized in their normal anatomic locations. This finding can't be guaranteed, but is suspected.

The right kidney is normal in size (2.7 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 (3.18 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 right adrenal gland is normal in size (1.4 cm long x 0.53 cm at the cranial pole and 0.38 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 (1.6 cm long x 0.27 cm at the cranial pole and 0.34 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). 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.

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 stomach is mildly distended and contains an echogenic interface with distal progressively shadowing material consistent with hairball density (or similar fluid absorbing material) noted. Normal ingesta/gas can't be definitively ruled out.

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.

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.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- **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.

- **Gastric Hairball –** similar density soft foreign material cannot be ruled out. Similar appearing normal ingesta/gas cannot be definitively ruled out and this finding should be interpreted in combination with clinical signs and monitoring, etc.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

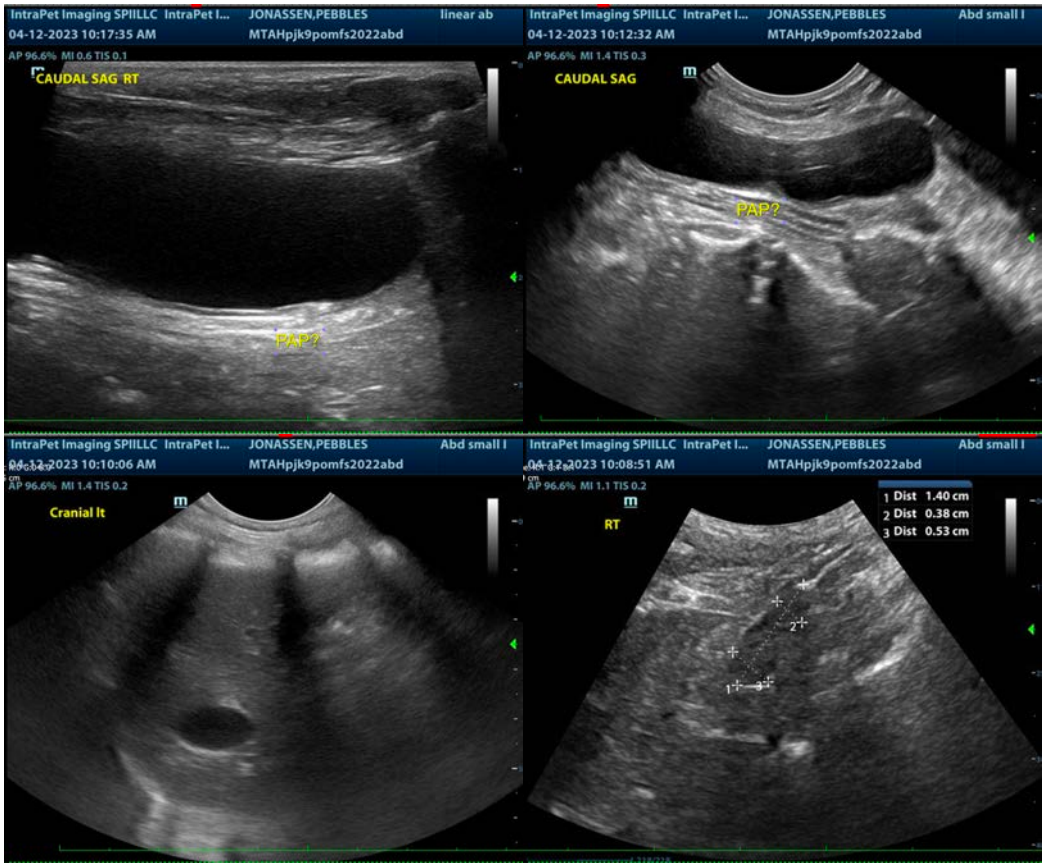
If not very recently evaluated, further evaluation of this patient's overall metabolic health with close attention paid to kidney health as well as blood glucose is recommended, beginning with CBC/Chem panel and electrolytes.

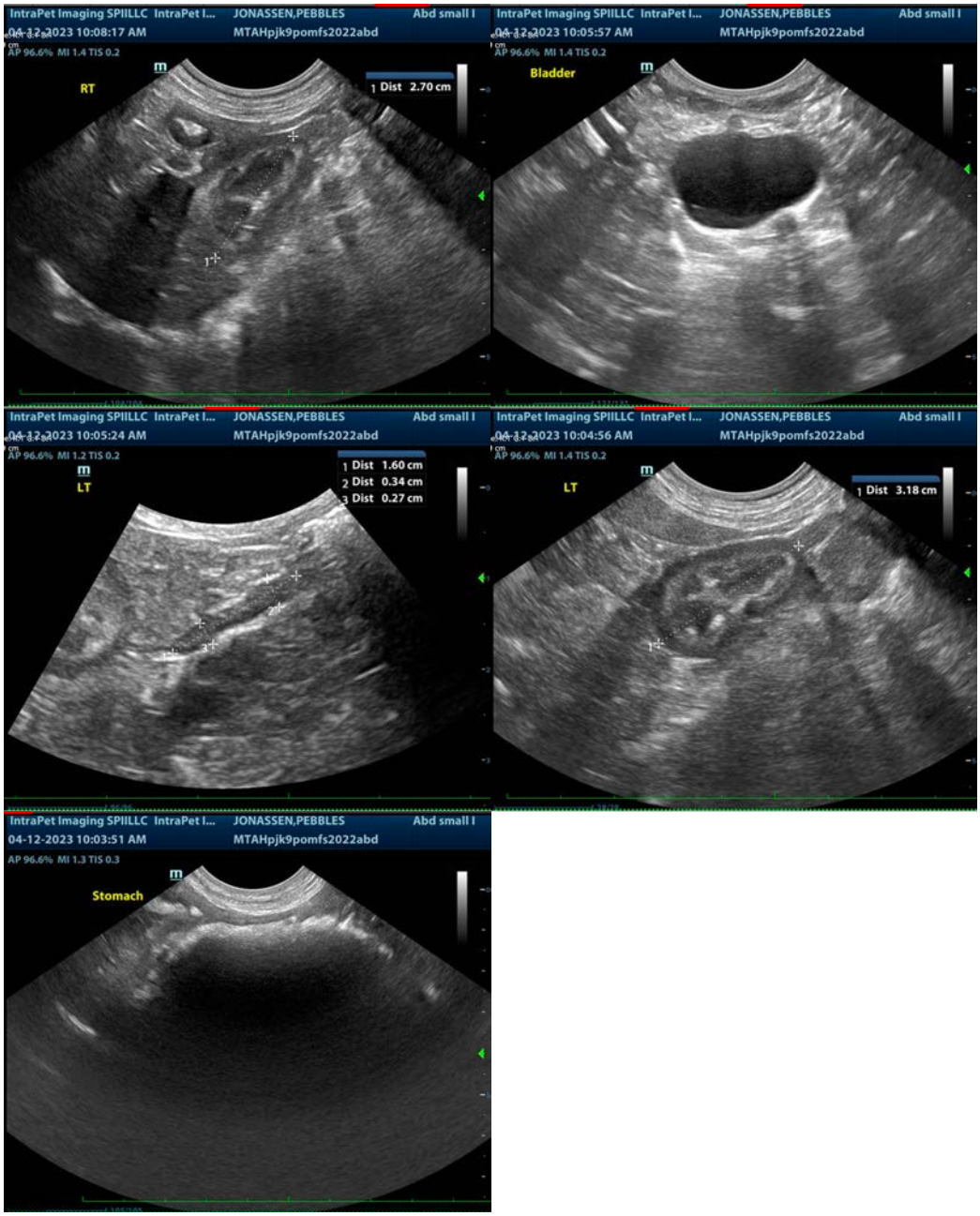
Additionally, if not very recently evaluated, urinalysis (ideally at least a week to 10 days off of any antibiotic therapy) and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

Otherwise, there is not an ultrasonographically evident explanation for this patient's urinary accidents. Ectopic ureters are not suspected based on these images but can't be definitively ruled out. Therefore, if urinary incontinence is truly present, a contrast abdominal CT scan could be considered.

Additionally, bile acids should be considered, given urinary signs in a young small breed dog.

In the meantime, if urinary incontinence is part of this patient's clinical picture, then medical management of "spay incontinence" as well as a urinary health diet (both reportedly already in place) is a reasonable treatment plan.





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