

**DATE**

8/18/21

PRESENTING CLINICAL SIGNS

History: The patient was adopted from Pennsylvania and since this time, he has had stranguria, frequent urination, and mild intermittent hematuria. He is otherwise doing well at home. On physical exam, including extrusion of penis, there are no abnormalities. On quick scan of bladder, there appears to be a mass. His clinical signs were not responsive to Simplicef (last dose was 8/9). On the day of the ultrasound, we will be sending off a urine culture.

PATIENT

Tanner Koehler

Current Medications: No current medications.

Lab Results: UA (U. cath sample) ---> USG 1.051, bilirubin 1+, Blood 3+, pH 8, Protein 4+, WBC 15-20/hpf, RBC 30-50/hpf, rafts of epithelial cells (4+ epithelial cells), mucous present, crystals 3+ - ammonium magnesium phosphate/ struvite.

SPECIES

Canine

Urine cytology (idexx) ---> neutrophilic inflammation with multiple ammonium magnesium phosphate crystals; mild transitional epithelial cell atypia.

BREED

Bernadoodle

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Gabapentin PO.

Stat Report: Not requested.

SEX

Intact male

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder is moderately/mildly distended with mildly echogenic urine. There is an irregular, somewhat pedunculated, polypoid, hyperechoic mass effect evident in the apical portion of the urinary bladder. The bladder mucosa in this area appears somewhat irregular. This lesion measures 0.9 x 0.75 cm. There was mild irregularity of the mucosa beyond this mass lesion, but the trigone ureteral papilla and visible urethra up to a depth of 2.0 cm appear relatively normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi. Additionally there is some mild tissue irregularity at the cranial aspect of the urinary bladder. This is of questionable significance but could represent a urachal remnant.

AGE

4/15/21

WEIGHT

15.2 lbs

The prostate is normal in size and shape for this prepubertal, intact male. The prostate measured 0.76 cm.

The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

INTERPRETED BY

Kathleen Sennello
DVM, MS, Diplomate
ACVIM (Small Animal
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The left kidney has a normal shape and size (4.99 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

HOSPITAL NAME

Paradise AH

The right kidney has a normal shape and size (5.2 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

REFERRING VET

Dr. Rieckert

Adrenal Glands

The left adrenal gland is normal in size measuring 0.46 cm at the caudal pole It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

INVOICE

91328

The right adrenal gland is normal in size measuring 0.44 cm at the caudal pole It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed. The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal and the jejunum measured as normal (0.31 cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a mild lymphadenomegaly present (cluster of sublumbar lymph nodes cranial dorsal to the urinary bladder measuring 0.42 cm, 0.86 cm and 0.42 cm). There was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Other

Two normal distended testicles are reported.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- Irregular urinary bladder mucosa and mass effect in the apical portion of the urinary bladder. These findings are most consistent with cystitis and an inflammatory polyp. A neoplastic lesion is thought much less likely. Urinalysis and culture is recommended (and pending). Mild irregularity of tissue cranial to urinary bladder near the apex could also be consistent with a urachal remnant.

- Moderate, sublumbar lymphadenopathy. The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely. Enlarged lymph nodes are common in puppies, but the proximity to the irregular urinary bladder is likely reactive.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

It is unusual to see a bladder mass in a puppy. Most of the time these are inflammatory lesions due to severe, chronic urinary tract infection. I recommend urinalysis and culture with a strict reculturing protocol to make sure that the infection is being treated based on sensitivities so as not to induce resistance. I recommend probiotic therapy as I am reluctant to put puppies on broad-spectrum antibiotics, but I do not think you have an alternative. Antibiotics should be continued until the irregular lesions in the urinary bladder resolve and urine culture is negative (on antibiotics) and urine culture should be repeated a week after discontinuing antibiotics and then again in 2-3 weeks gradually stretching out the interval.

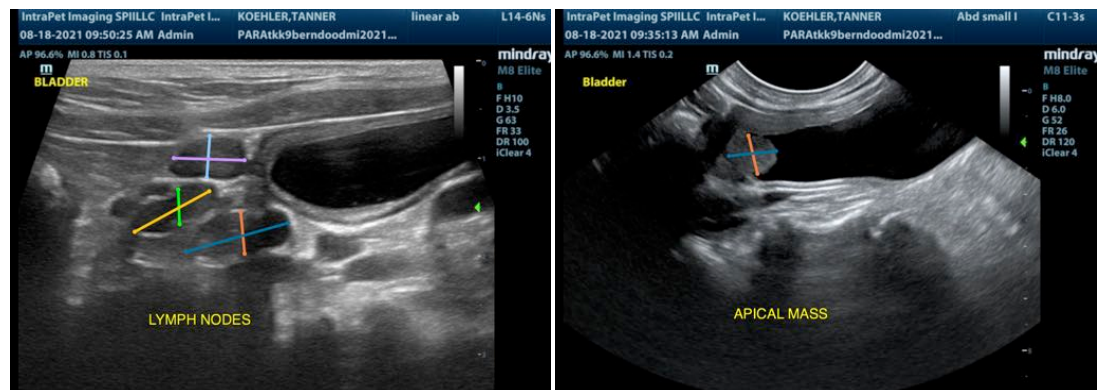
If this lesion does not resolve or there is no infection present then a sampling procedure would be necessary. I believe with ultrasound-guidance you can guide a urinary catheter to this level and suction some cells off of the apical wall of the urinary bladder. I would also culture this sample and perform the procedure while off antibiotics for at least 3-5 days.

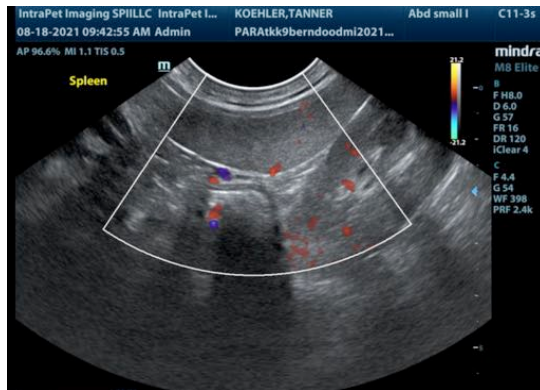
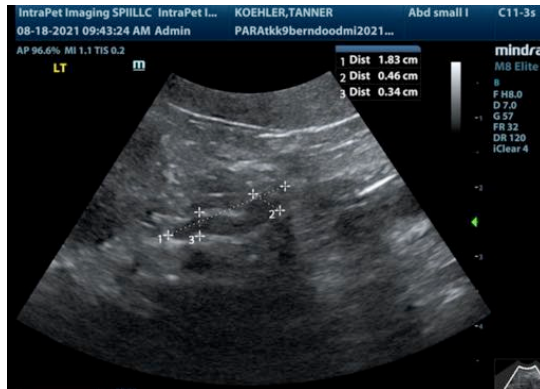
I doubt it will be necessary, but if these procedures are not successful a surgical biopsy may be necessary, alternately you can consider trying to find a referral center (possible University) that could scope and biopsy such as a small male dog.

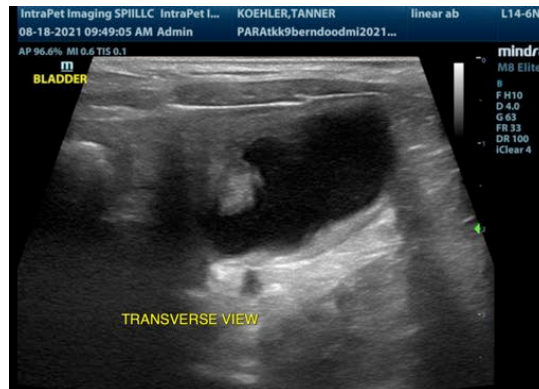
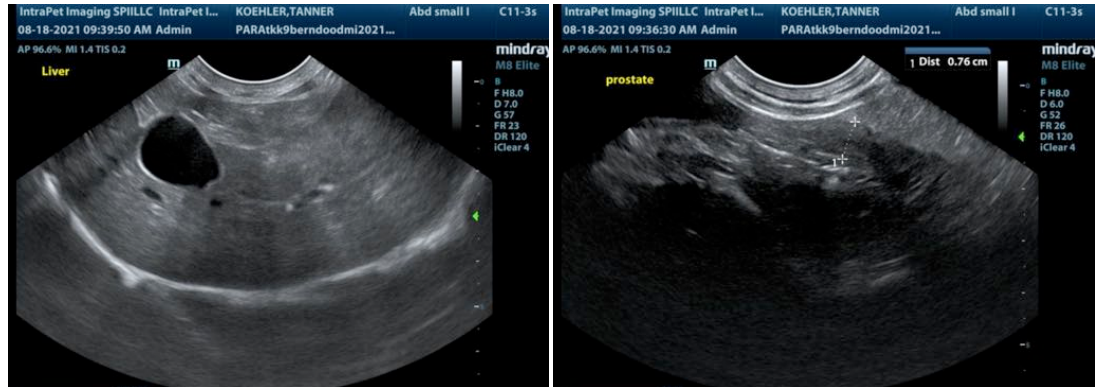
Additionally, some of the irregularity at the apex of the urinary bladder could be consistent with a urachal remnant, while the appearance is not classic, in a dog this young it can be difficult to evaluate. Consider medical management for possible cystitis and reimaging in 3-4 months ideally with a full urinary bladder to reevaluate that area. A contrast cystogram is probably the optimal way to evaluate for a urachal remnant.

I did not see any evidence of an ectopic ureter. Unfortunately contrast CT is needed to see some of these so if it is strongly suspected this should be considered.

The prominent mesenteric lymph nodes are relatively common in young dogs. This in the proximity to the urinary bladder makes this likely due to reactivity.







The information and recommendations provided are based on the images presented by the referring veterinarian. 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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