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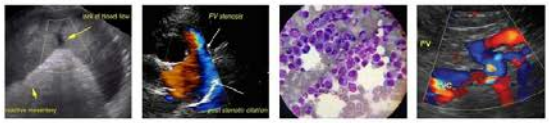

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Blue Animal Rescue

SPECIES

Canine

BREED

Pit Bull

SEX

Neutered Male

AGE

2 Years 4 Months

WEIGHT

N/A

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

HOSPITAL NAME

Grass Valley VH

REFERRING VET

Dr. Kristi Cortright

INVOICE

24842

DATE

8/19/21

PRESENTING CLINICAL SIGNS

'Blue' Martina 2yr 4mos MN Pitbull In foster with Martina Animal Rescue of Benicia (foster is in Roseville). History 4/8/2021: After neuter (4/3) at shelter foster noted frank blood in urine. Surgery site appeared completely calm, no redness or bruising at all. Hyperactive young dog trying to hump everyone in clinic. U/A: TNTC RBC's, all else wnl. Started amoxicillin 500mg PO BID x 5d and carprofen 100mg PO BID x 5d in case of trauma. 5/1/2021: Hematuria persists. CBC/Chem panel: very mildly elevated neutrophil/WBC count. Enrofloxacin 272mg PO SID x 7d. 5/26/2021: Enrofloxacin no effect with 7d course. Hematuria persists. Patient is otherwise clinically normal. Abdominal ultrasound results: ULTRASONOGRAPHIC FINDINGS • The prostate changes are most consistent with benign prostatic hyperplasia. However, bacterial prostatitis cannot be completely excluded. • The echogenic debris in the urinary bladder may represent cells, crystals, and/or exfoliated material. • The abdominal lymphadenopathy is most consistent with reactive lymphadenitis or lymphoid hyperplasia with a low possibility of infiltrative neoplasia. INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS 1. Consider continuation of Enrofloxacin for 4 full weeks as empirical treatment for bacterial prostatitis. 2. Consider assessment of the patient's coagulation status including PT/PTT, platelet count, mucosal bleed time +/- von Willebrand factor analysis, particularly if the hematuria persists despite antibiotic therapy. 3. A thorough evaluation of the external genitalia is also recommended to assess for bleeding lesions that may be contaminating the urine. 6/2/2021: Started 4 week course of enrofloxacin. Approx 8/1/2021: Rescue coordinator reports this helped but never really went away and now bloodier urine than ever. Rec f/u b/w and u/s and possible prostatic wash/cytology. Phone tag. 8/18/2021: Sedated ultrasound. Debris or blood in bladder. Large spleen. Awaiting report. U/S guided cystocentesis--very bloody urine. CBC/Chemistry 25 panel all wnl! (no retic count done by lab b/c HCT 47%. U/A->50 RBC's, Occult blood 3+, Bilirubin 3+, protein 3+ (all related). USG 1.042, pH 6.0. All else wnl. Finances are an issue but will push for a coag panel....

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris. Careful evaluation for a possible ectopic ureter was performed. There is a possible small 0.18 cm tubular structure that does not color flow ventral to the urinary bladder. I am unable to follow it, and it is small and questionable for a possible ectopic ureter.

The prostate was normal to slightly enlarged, measuring 1.39 cm in height and 3.1 cm in length (previous measurements 5/7/21 was 1.83 cm in height).

The left kidney has a normal shape and size (6.8 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.

The right kidney has a normal shape and size (6.0 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.

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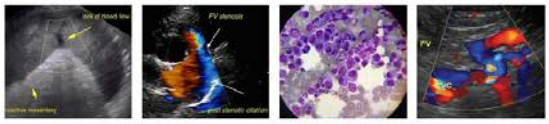

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Adrenal Glands

The left adrenal gland is normal in size measuring 0.69 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.

The right adrenal gland is normal in size measuring 0.41 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 (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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 revealed scant anechoic free fluid and mild lymphadenomegaly. Prominent mesenteric lymph nodes are visualized, and a sublumbar lymph node meaures 1.17 cm in diameter. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

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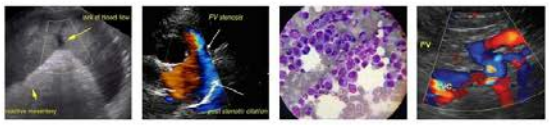

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PRIMARY FINDINGS

- Borderline enlarged prostate – The prostate is smaller than previous measurements, and does not have any apparent cysts or evidence of inflammation. This is likely normal for a postpubertal neutered dog's prostate, but I cannto rule out the possibility of prostatic neoplasia (seems very unlikely).
- Echogenic urine – Suspect this is consistent with the hematuria reported.

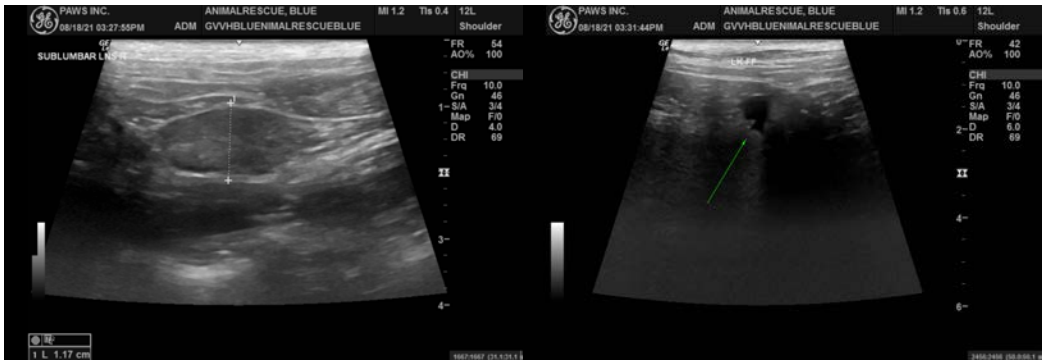
SECONDARY FINDINGS

- Scant free abdominal fluid – this is of unknown significance.
- Questionable small tubular structure ventral to the urinary bladder – Possible small ectopic ureter or normal anatomic structure?

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the reported hematuria is not readily apparent. The prostate does appear smaller, but still prominent. Although it will get smaller once testosterone is removed, it will not completely shrink to normal size. There is a very subtle questionable tubular structure ventral to the urinary bladder, which could be consistent with ectopic ureter, but is very small with no evidence of renal changes (pyelectasia, etc.) and no urinary incontinence (which is not always present with an ectopic ureter), so this seems less likely. It is likely that a contrast CT scan would be necessary to further evaluate this. Additionally, it would not 100% explain the hematuria. I was not able to find any evidence of historical positive cultures. Has this dog been cultured off of antibiotics? Is this a sterile hematuria, and are there lower urinary tract signs associated with it? Possible considerations include:

- Recommend urine culture with urinalysis and sediment performed by an outside lab while off of antibiotics for at least 7 days (if this has not already been done).
- Microscopic urinalysis to evaluate for true red blood cells versus pigmenturia and to see if there are infectious organisms (possibly other than bacteria, etc.).
- Confirm that this was a normal neuter and the patient was not cryptorchid, etc.
- If not already done, pass a urinary catheter to make sure there are no strictures or stones in the distal urethra. You could consider contrast cystography at the same time. Sometimes this will fill the distal portion of an ectopic ureter and help to diagnose it.
- Lastly, other options would be a possible fine needle aspirate of the prostate or endoscopy to evaluate the urethra and urinary bladder to look for a source of bleleding. At this time, the ureters could be evaluated for location and hemorrhage, which could be seen with essential benign hematuria (which should not accompany any lower urinary tract signs). Referral to an institution with a small enough (and long enough) scope to pass up a male dog's urethra would be needed.



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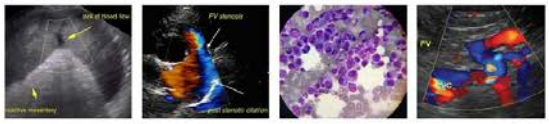

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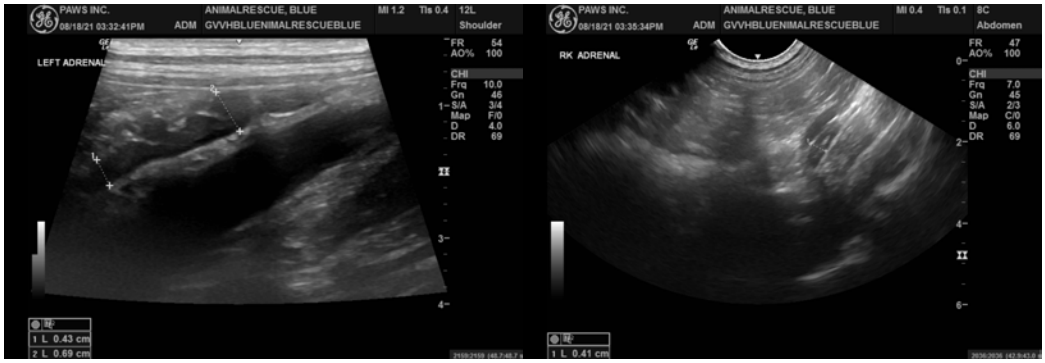

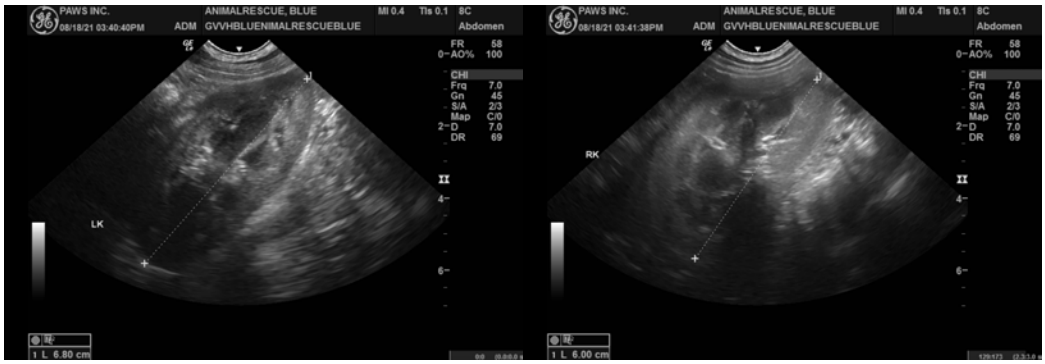

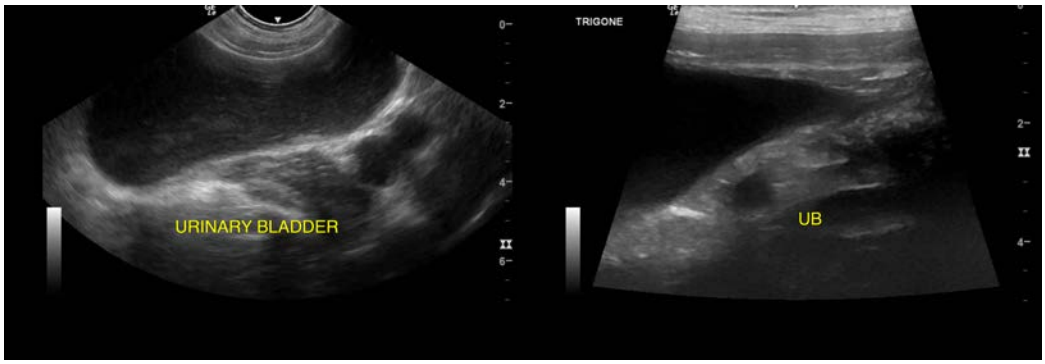

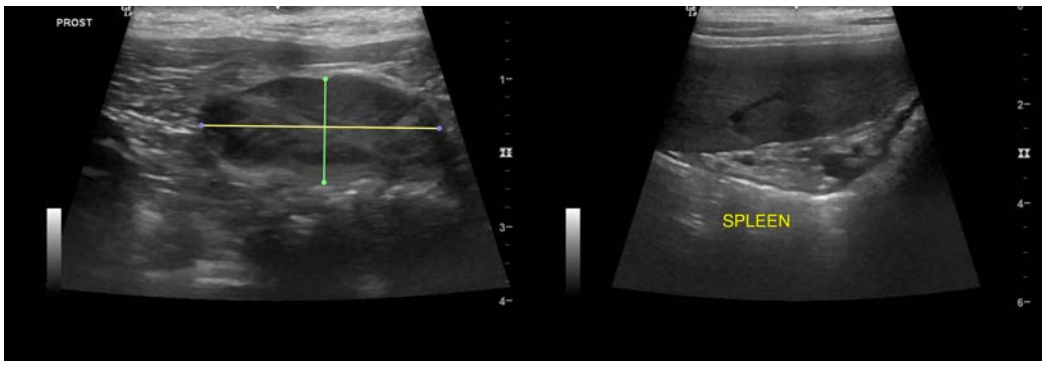

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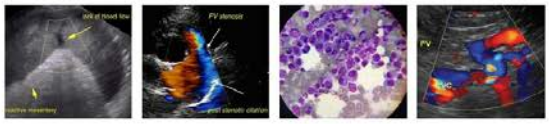

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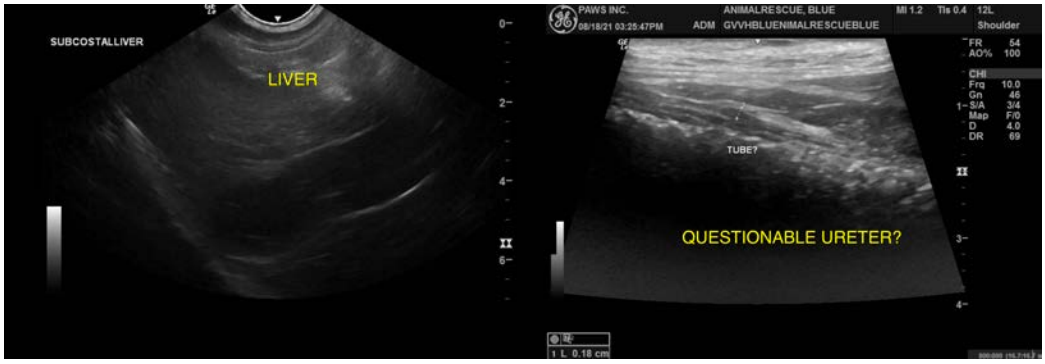

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com