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Clinical Sonography & Telecytology
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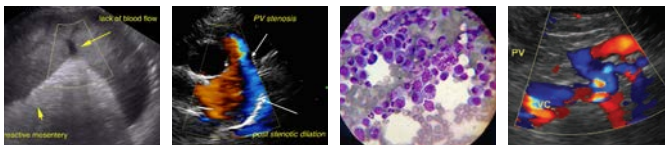

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1-800-838-4268 info@sonopath.com

PATIENT

Twinkie Gonzalez

SPECIES

Canine

BREED

Pomeranian X

SEX

Male

AGE

13 Years

WEIGHT

11.5 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Denville Animal Hospital

REFERRING VET

Dr. Reddy

INVOICE

46532

DATE

4/5/23

PRESENTING CLINICAL SIGNS

Suspect bladder stones, felt during exam for presurgical for neuter

Abnormal PE/Chem/CBC/UA Results: WBC 5.74, Lym 0.91, Mon 0.17, HCT 56.42, MCHC 28.9, Glu 122+

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall is thickened and irregular, particularly in the apical surface, measuring approximately 0.64 cm. Additionally there are pinpoint hyperechoic foci in the dependent portion of the urinary bladder and adhered to the urinary bladder wall in some regions, most consistent with small calculi/mineralizations. The area of the trigone, ureteral papillae and proximal urethra appear relatively free of any irregularities, calculi, etc.

The prostate is large, hyperechoic and heterogeneous, measuring 3.28 cm x 2.55 cm. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.06 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal 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 (4.3 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.52 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 0.54 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 heterogenous in echotexture with subtle, indistinct focal mottling. 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 mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

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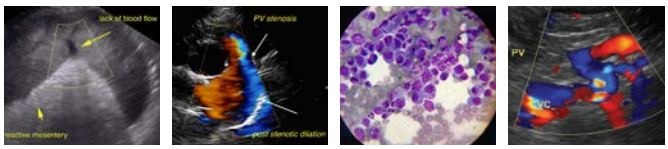

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Gastrointestinal

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. Duodenum wall measures 0.34 cm. Jejunum wall measures 0.30 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 area of 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, or subjective lymphadenomegaly. 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.

Other

Both testicles are visualized and appear within normal limits.

ULTRASONOGRAPHIC FINDINGS

- Thickened irregular urinary bladder wall with small calculi/mineralizations
- Large, hyperechoic, heterogeneous prostate – Findings are most consistent with BPH +/- prostatitis.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. These changes could be consistent with age related remodeling.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes visualized in the urinary tract are most consistent with cystitis and small stones. Correlate these findings with a urinalysis and culture, and consider reevaluation of the urinary bladder with ultrasound post-treatment to ensure that the urinary bladder wall has normalized.

Additionally, the prostate is large, heterogeneous and hyperechoic. These findings are most consistent with benign prostatic hypertrophy, although concurrent prostatitis is possible, particularly if there is an active urinary tract infection.

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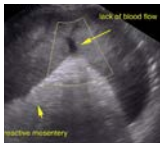
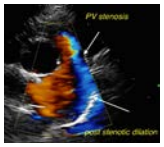
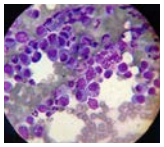
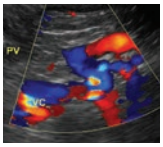

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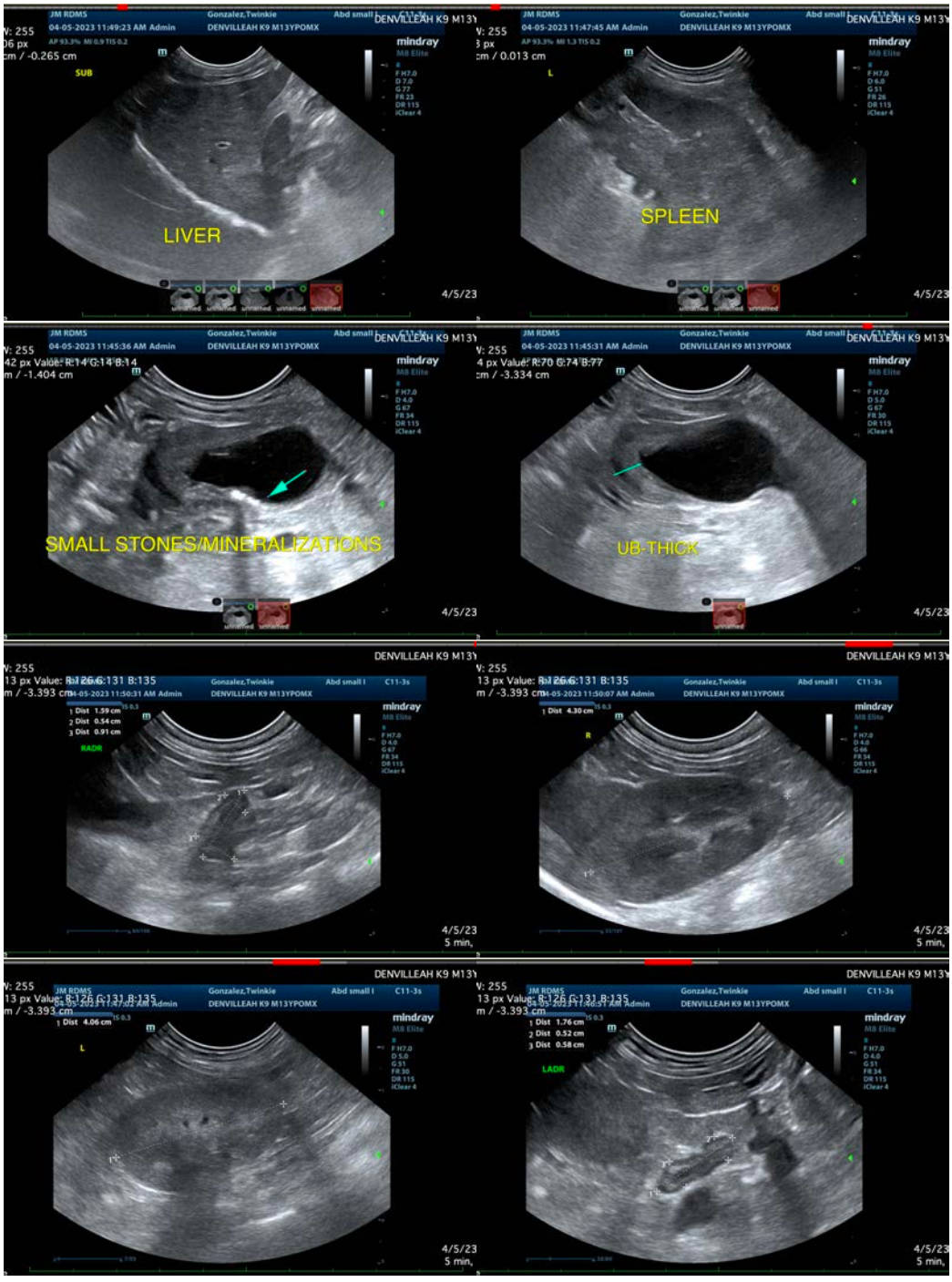
The changes visualized associated with the kidneys are most consistent with chronic progressive age related renal disease. Recommend a blood pressure, urinalysis and culture as a baseline.

It is likely that neutering will help to resolve the benign prostatic hypertrophy and possibly the prostatitis (if present). If the stones persist after treatment of the infection (they could be struvite stones), cystotomy may be necessary, but they are very small at this time. Correlate these findings with abdominal radiographs.



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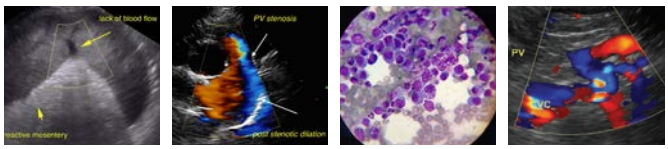

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com