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Clinical Sonography & Telecytology
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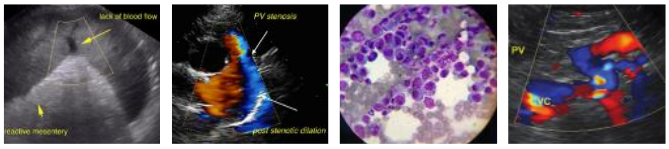

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Fox Gianoulakis

SPECIES

Canine

BREED

Pomeranian

SEX

Spayed Female

AGE

1.5 Years

WEIGHT

6.3 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Runnells, RVT

HOSPITAL NAME

SVS Imaging KC

REFERRING VET

Dr. Taylor

INVOICE

16725

DATE

8/5/22

PRESENTING CLINICAL SIGNS

History: Having urinary issues.

Abnormal PE/Chem/CBC/UA Results: Sedivue UA: Collec Cystocentesis, Color Green, Clar Cloudy SG > 1.050, pH 7.0, LEU 25 Leu/µL, PRO neg, GLU neg, KET 15 mg/dL, UBG 4 mg/dL, BIL 1 mg/dL, BLD 250 Ery/µL Sediment: WBC 2 /HPF, RBC >50 /HPF, nsEPI 1 - 2 /HPF, STR 1 - 5 /HPF. Instrument Note: Significant hematuria: Consider iatrogenic, inflammation, infection, urinary calculi, neoplasia, and hemorrhage. If indicated, consider diagnostic imaging or testing for bleeding disorders.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with echogenic urine. In the dependent portion of the urinary bladder, there is a large amount of mobile partially suspended hyperechoic shadowing debris most consistent with numerous small stones and sandy debris. The debris can be seen extending into the cystourethral junction. No mass lesions are observed. I recommend urinalysis and culture and abdominal radiographs.

The left kidney has a normal shape and size (3.15 cm) with corticomedullary rim sign and dystrophic mineralization. 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, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.32 cm) with corticomedullary rim sign and dystrophic mineralization. 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, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.43 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 gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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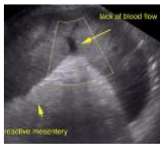
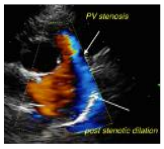
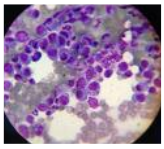
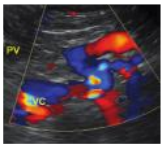

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Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with moderate ingesta and gas. It measures at a normal thickness of <0.7 cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering 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 0.3-0.5 cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47 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

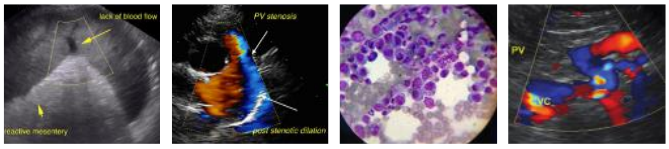
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- A large amount of suspended and dependent shadowing mineralized debris, most consistent with stones and sandy debris. Correlate findings with abdominal radiographs, urinalysis and culture.
- Corticomedullary rim sign observed in both kidneys with dystrophic mineralization. Clinical significance uncertain, can be seen in normal patients and in cases of ethylene glycol toxicity, FIP, chronic interstitial nephritis, and leptospirosis.
- Moderate gallbladder debris. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Moderate ingesta visualized within the gastric lumen. Correlate with feeding history. If the patient was adequately fasted, consider delayed gastric emptying or partial outflow tract obstruction (none observed).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large amount of echogenic debris, including small stones and sandy debris visualized within the urinary bladder. Recommend urinalysis and culture to see if there is a concurrent infection and abdominal radiographs to try and determine the size of the mineralized material and if it is small enough to be urinated out. If so, you could consider a catheterization to try and obtain a sample of the debris/small stones and stone analysis, if possible. Depending on the type of degree present, you



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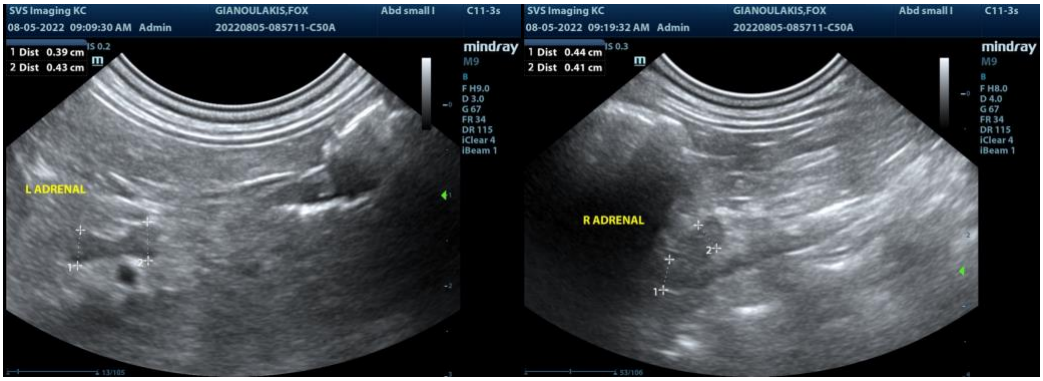
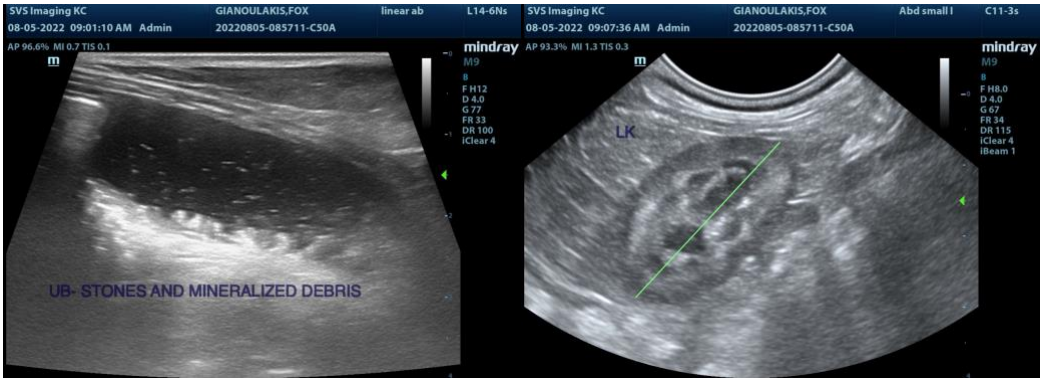
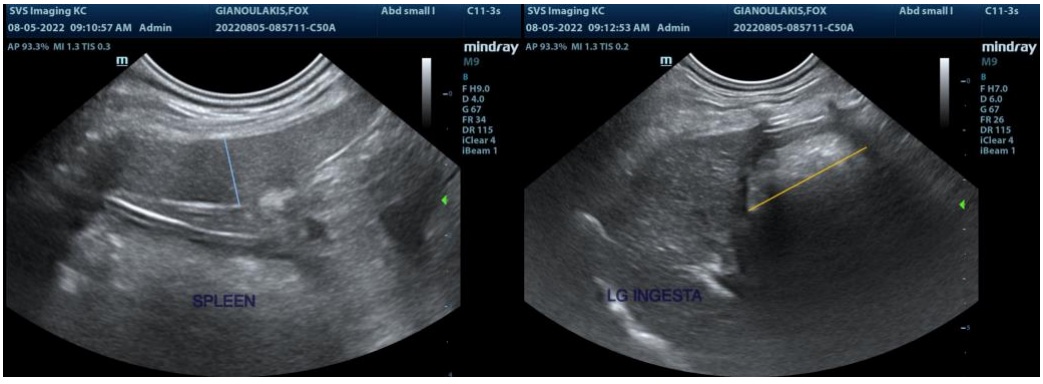
could consider attempting a dissolution diet (if struvite is suspected), a liver function test (if urates are suspected) and a diet change (if oxalate is suspected). I suspect the hematuria reported is secondary to irritation, but a coagulopathy cannot be completely excluded as a possibility.







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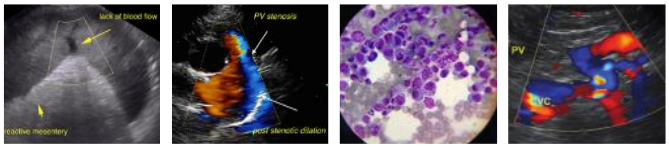

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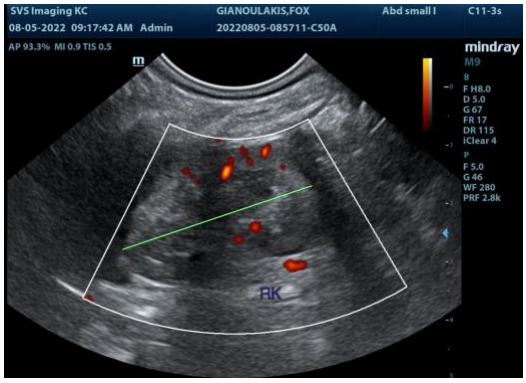

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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