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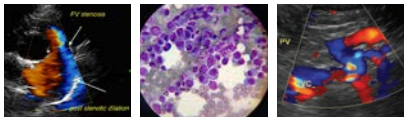

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DATE

9/10/21

PATIENT

Oriole Armendariz

SPECIES

Feline

BREED

Himalayan

SEX

Neutered Male

AGE

2015

WEIGHT

11.8 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Friendly Paws

REFERRING VET

Dr. Price

INVOICE

25328

PRESENTING CLINICAL SIGNS

History: Persistent Hematuria. History of Bladder Stones. PE: BCS 6.5/9. 2+ calculus, stage 2 periodontitis. Lab Results: UA: 8/18/21 SG 1.050, Glu 1+, Prot 2+, pH 6.0, micro: RBC TNTC. UA 8/4/21 SG1.014, protein trace, pH 6.0, micro: RBC TNTC.
Parasitology neg. Chem norm. Sero norm. Hematology: WBC 2.99 (5.5-19.5), lym 0.78 (1.5-7), mono 0.11 (0-1.5), neu 2.05 2.5-14), hct 34.47, plt 160 (300-800).
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not needed.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with some suspended echogenic debris present. The Bladder wall, trigone and ureteral papillae appear normal with no evidence of wall thickening or mucosal irregularities/masses. There is a small pile of shadowing hyperechoic, dependent debris in the urinary bladder, consistent with mineralized sandy debris and small stones. Some individual calculi measuring 1-2 mm are visualized. Additionally, in the distal urethra, approximately 3-4 cm from the trigone, there appears to be a small 0.2 cm shadowing structure consistent with a urethral stone or mineralization embedded in the urethra.

The left kidney is normal in size (4.11 cm) and irregular in shape, consistent with previous infarcts. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Numerous non-obstructive nephrliths are present measuring 0.31, 0.33, 0.36 cm. There is no evidence of pyelectasia or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (3.18 cm) and irregular in shape, consistent with previous infarcts. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Numerous non-obstructive nephrliths are present. A larger stone measures 0.49 cm. Some of the nephroliths appear to be within the renal pelvis. The renal pelvis does not appear significantly dilated, but future obstruction is possible. There is no evidence of pyelectasia or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal/plump in size measuring 0.53 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/plump in size measuring 0.45 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 <0.36cm 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. Jejunum wall measures 0.22 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.

PRIMARY FINDINGS

- Bladder sand/stones and suspected small urethral calculi
- Irregular kidneys with decreased corticomedullary distinction and non-obstructive nephroliths. Both kidneys have significant changes and are at risk for future possible obstruction. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths.

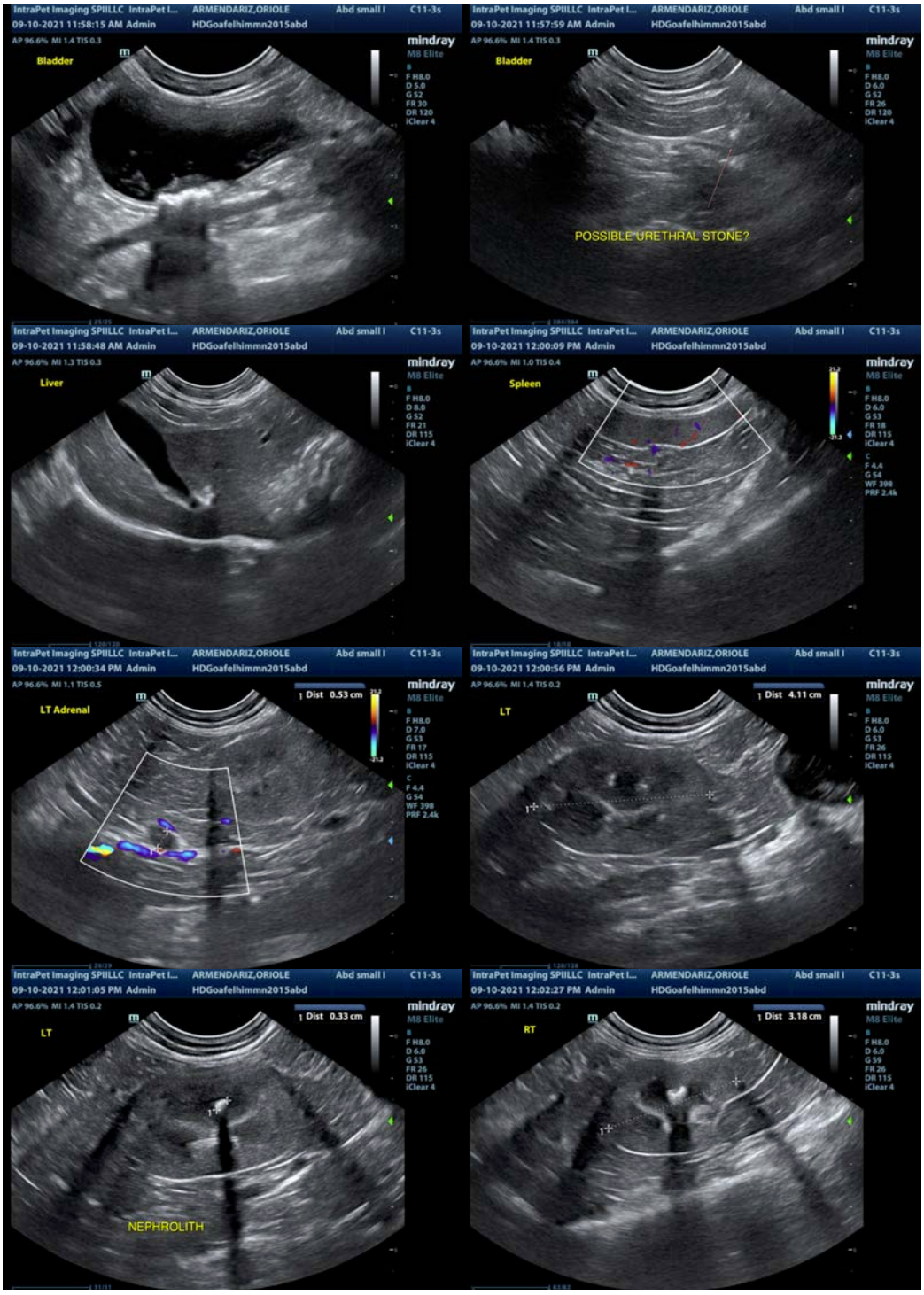
SECONDARY FINDINGS

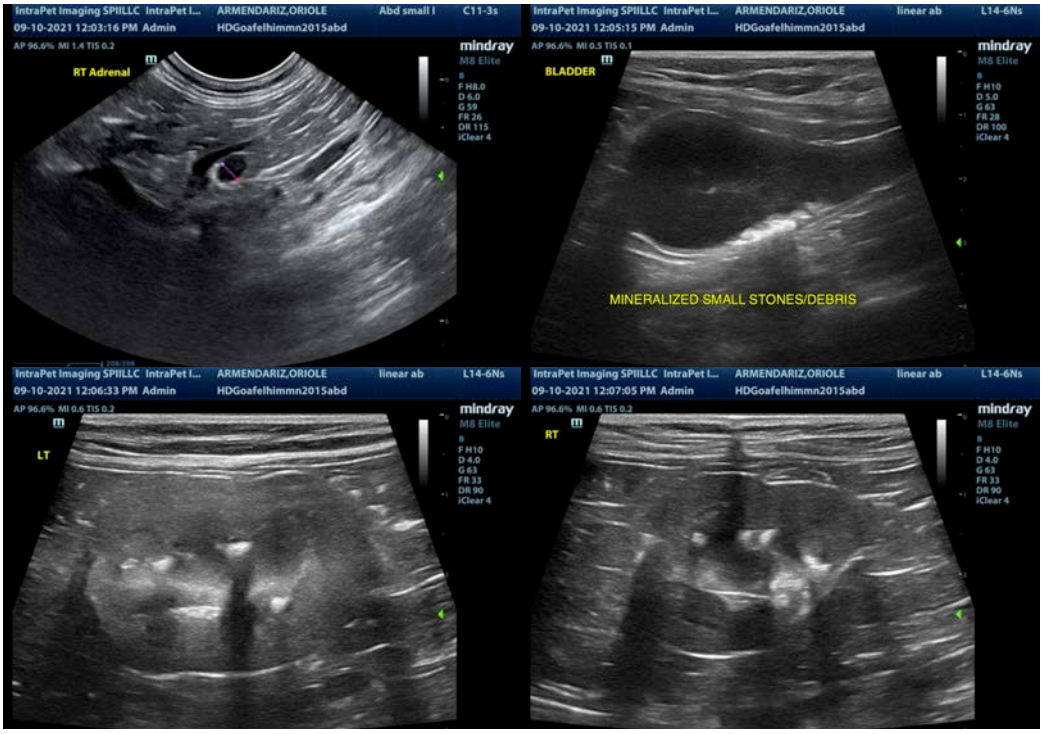
- Borderline enlarged adrenals – This can be a normal finding in stressed cats or in bigger cats. I suspect this is within normal limits.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There are small mineralized stones in the bladder, and I suspect there is a stone in the distal urethra. This may be a mobile stone that has just passed into the urethra, or could be a previous stone that has embedded. Passing a urinary catheter and attempting to flush it back into the urinary bladder would help to determine this. Recommend abdominal radiographs to better correlate the size of these stones. I am concerned that this debris is small enough that it could cause a future obstruction, but at cystotomy you sometimes just find very fine, sandy debris. Additionally, there are stones in the kidneys and evidence of previous infarcts. Recommend blood pressure evaluation and urine culture and sensitivity. I suspect with the isosthenuric urine

that this cat has early renal disease. If you decide to go to surgery to remove this debris, the urethra should be flushed, and radiographs taken to ensure more debris or stones don't enter the urethra. Dietary mangemtn should be instituted if the cat will accept it, as I suspect this will be a longstanding problem.





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)
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