PATIENT

Rosie Keegan

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

9 Years

WEIGHT

10.5 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Pamela Harrigan, RDCS, Certified Vet Sonographer

HOSPITAL NAME

Fall River Animal Hospital

REFERRING VET

Charlene Keegan, DVM

INVOICE

73821

DATE

3/19/26

PRESENTING CLINICAL SIGNS

History of previously documented renoliths. Persistent sterile pyuria. UA: WBCs, no bacteria. Rads: bilateral renal mineralization. Given history of a lower urinary tract infection, concern for possible pyelonephritis. ALP mildly elevated. No clinical signs

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with urine. The Bladder wall appears normal in thickness with a smooth mucosal surface. There are several pinpoint hyperechoic dependent foci most consistent with small stones/sandy debris, and some hyperechoic suspended material. The region of the trigone, ureteral papillae and proximal urethra appear free of any masses or calculi. These small mineralizations appear small enough to pass.

The left kidney has a normal shape and is normal size (4.3 cm) with severe pyelectasia/early hydronephrosis measuring at 1.57 cm, with numerous large, hyperechoic nephroliths within the renal pelvis (examples measure 1.33 cm and 1.69 cm). Overall echogenicity is slightly hyperechoic with decreased 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 infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.6 cm) with severe pyelectasia/early hydronephrosis measuring at 1.14 cm, and numerous large, hyperechoic stones visualized within the renal pelvis (examples measure 0.44, 0.68, and 0.69 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 infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is borderline large and irregular in shape, measuring 0.45 cm at the cranial pole and 0.76 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is abnormal in appearance in that the caudal pole is isoechoic but significantly larger and more rounded than the cranial pole, creating somewhat of a nodule effect measuring 0.65 cm x 1.01 cm. No evidence of vascular invasion is visualized.

The right adrenal gland is normal in size measuring 0.52 cm at the cranial pole and 0.51 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 (1.56 cm), 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.

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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.

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 0.42 cm. Jejunum wall measures 0.30 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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 right limb of the pancreas is mildly prominent and mottled compared to the surrounding isoechoic 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

- Mild suspended echogenic debris and dependent mineralized debris/small stones visualized in the urinary bladder.
- Bilateral severe pyelectasia/early hydronephrosis (left worse than right), and likely partially obstructive nephroliths within the renal pelvis. Concurrent pyelonephritis cannot be ruled out.
- Isoechoic enlarged caudal pole of the left adrenal gland – At this time this has the appearance most consistent with a benign lesion (anatomic variation, adenoma, etc.). An early neoplastic lesion cannot be ruled out. Recommend continued monitoring.

SECONDARY FINDINGS

- Pancreatic changes most consistent with pancreatic remodeling.

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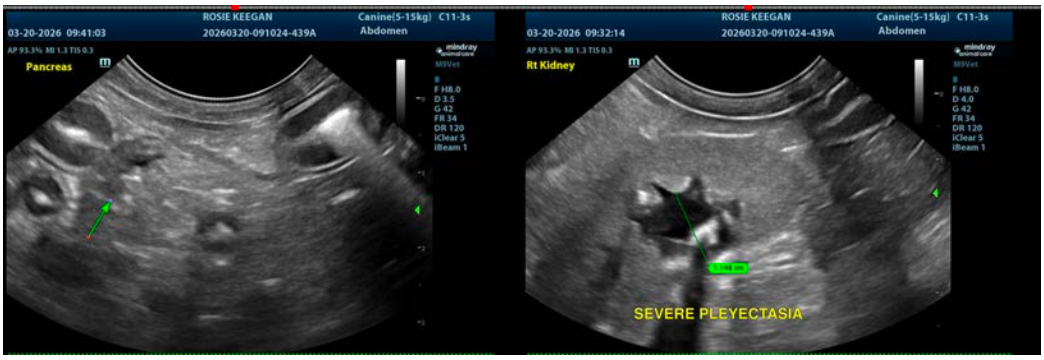
- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There are numerous large nephroliths visualized in both kidneys. The renal pelvis of both kidneys is severely dilated, bordering on hydronephrosis, significantly increasing the concern for a partially obstructive process. Pyelonephritis cannot be ruled out. Additionally, there are some small mineralizations/dependent sandy debris in the urinary bladder, which at this time appear small enough to likely pass.

The appearance of the kidneys is concerning, as over time, if this progresses, renal function could become an issue. It is uncertain if there is concurrent pyelonephritis. You could consider a pyelocentesis. This is a long-lived breed. If the owners are highly motivated, you could consider referral to a tertiary referral center to try to determine if there are other interventional options to consider (contrast study looking for ureteral strictures, pyelocentesis to look for pyelonephritis, etc.). If infection is playing a role, these stones could represent struvite stones, and dissolution could be possible. If any of the sandy debris/small stones can be collected in the urine, these could be analyzed to help assist with treatment. Ideally this individual should be on a diet to try to discourage rapid progression of the stones. If this patient has lost urine concentrating ability, then likely a renal diet with restricted protein could be helpful.

The caudal pole of the left adrenal gland is prominent but isoechoic. This could represent anatomic variation, an isoechoic adenoma, less likely an aggressive neoplastic lesion, but this cannot be definitively ruled out. Recommend continued monitoring (recheck in 3-4 months), and if signs of Cushing's are present or similar, you could consider adrenal function testing, screening for a pheochromocytoma, etc. Consider a blood pressure evaluation as a baseline and to assess for hypertension secondary to renal disease.



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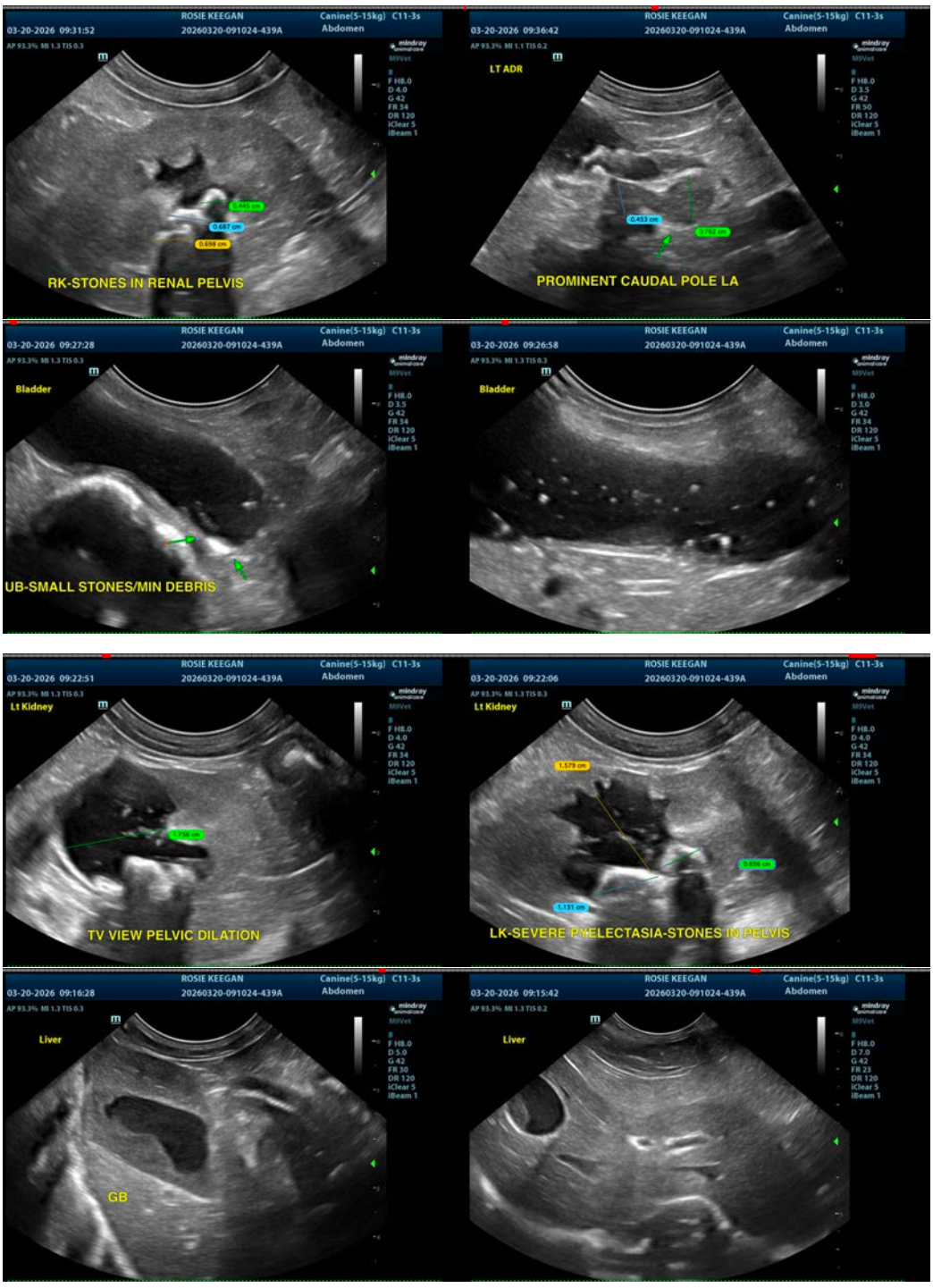

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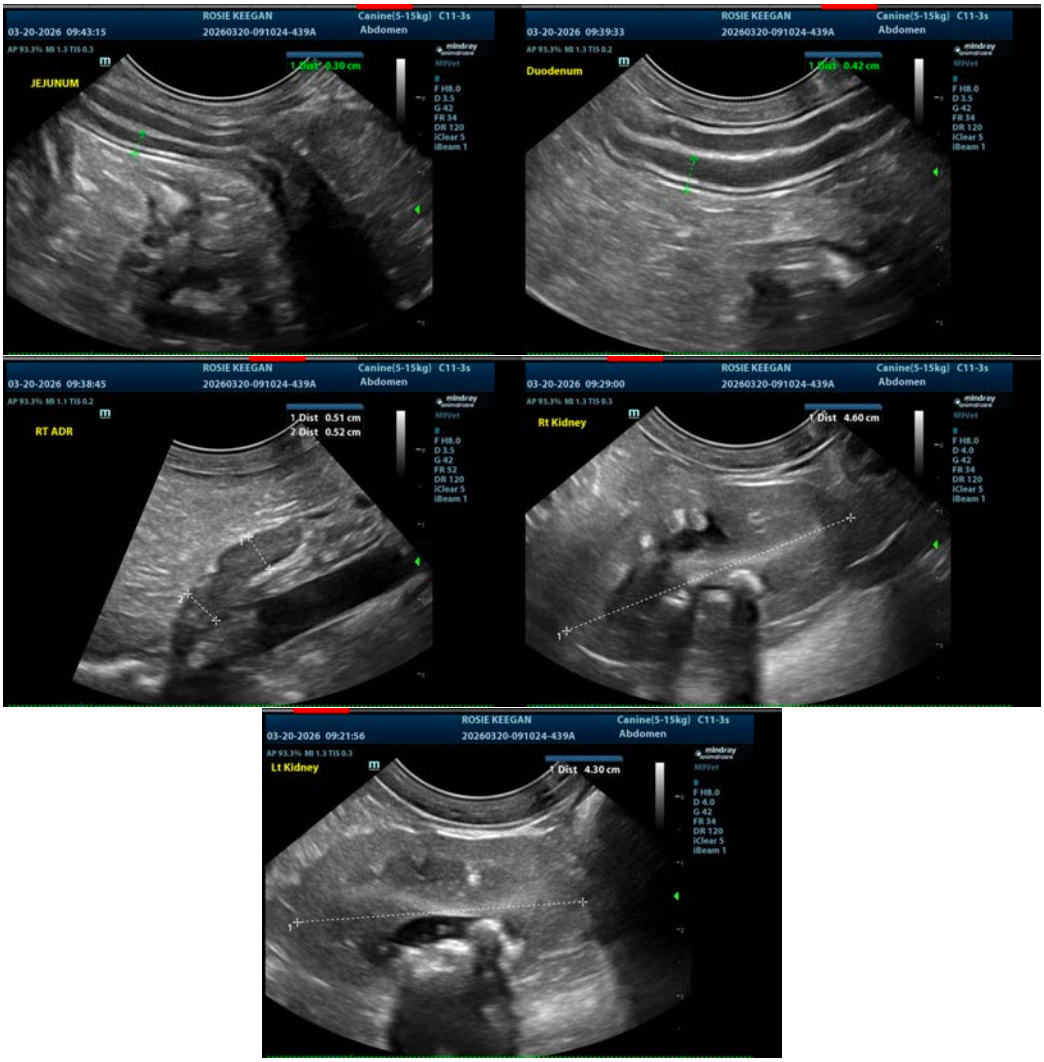

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

info@sonopath.com