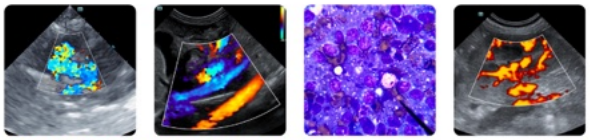


PATIENT

Gracie Prehoda

SPECIES

Canine

BREED

Pug

SEX

Spayed female

AGE

8 years

WEIGHT

14 lbs

INTERPRETED BY

Dr. Alicia Angosto Guerrero

IMAGING PERFORMED BY

Judy Schroeder, DVM

HOSPITAL NAME

Animal Health Associates

REFERRING VET

Dr. Schroeder

INVOICE

69899

DATE

1/6/26

PRESENTING CLINICAL SIGNS

History: Long history of recurrent UTI (since patient was young) which respond well to antibiotics but then recur. Intermittent history of struvite and oxalate crystals. Decreased BUN, creatinine, and albumin. Normal liver enzymes. Mild leukocytosis. Rads showed no obvious uroliths. UPC will be performed at next opportunity. Patient is epileptic, currently on topiramate.
Abnormal PE/Chem/CBC/UA Results: Albumin 2.5g/dl Monocytosis 1538/ul Neutrophils 13200/ul Recent UA showed USG 1.020, pH 9, large number of WBC and rod bacteria. No UPC run at that time due to infection.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder lumen is normally distended, and the urinary bladder wall appears thin and smooth. The urine is predominantly anechoic with scant suspended echoes and a very small amount of dependent mineral sediment. The bladder neck and proximal urethra have a normal appearance.

The left kidney is normal in shape and size (4.25×2.46 cm), and the cortical thickness is 0.38 cm in the sagittal plane. The right kidney is normal in shape and size (4.47×2.41 cm), and the cortical thickness is 0.35 cm in the sagittal plane. In both kidneys, the renal cortex is isoechogenic compared to the liver parenchyma. The corticomedullary ratio is normal and corticomedullary definition is preserved. Several nephroliths are observed within the renal calyces and along the collecting system (up to 3.06 mm in the right kidney and 2.44 mm in the left kidney). There is no evidence of pyelectasia or hydronephrosis. Color Doppler evaluation shows a normal perfusion pattern.

Adrenal Glands

Both adrenal glands show normal shape and echogenicity. The left adrenal gland measures 0.41 cm at the cranial pole and 0.43 cm at the caudal pole. The right adrenal measures 0.45 cm at the cranial pole and 0.53 cm at the caudal pole.

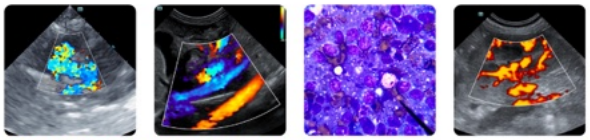
Spleen

Splenic thickness is 0.90 cm. The parenchyma demonstrates normal echogenicity and fine homogeneous echotexture without focal parenchymal abnormalities. The splenic capsule is smooth and regular.

Liver

The liver is subjectively normal in size, with sharp edges and a regular contour. The liver parenchyma looks uniform and isoechoic compared to the falciform fat, with a normal echotexture. No hepatic lymphadenopathy is observed.

The gallbladder lumen is normally distended. The wall is thin and the contents are primarily anechoic No evident dilation of the cystic duct or common bile duct is observed.



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Gastrointestinal

The stomach is distended with abundant ingesta, with mural thickness (2.65 mm) and preserved wall layering. The pylorus measures 4.51 mm. The duodenum measures 4.20 mm. The jejunum measures 2.70–3.11 mm with normal wall layering. No signs of inflammation, ileus, or foreign material are identified. The colon measures 0.99 mm and contains formed feces in the descending segment.

Pancreas

The right pancreatic limb is observed and appears normal; the remaining visualized pancreatic regions are unremarkable.

Peritoneal Cavity

No abdominal effusion or peritonitis is observed. Abdominal lymph nodes are not visualized, but the surrounding regions appeared unremarkable. The iliac trifurcation is normal.

ULTRASONOGRAPHIC FINDINGS

- Bilateral renal nephroliths within calyces/collecting systems (non-obstructive).
- Small amount of dependent mineral sediment and scant suspended echoes within the urinary bladder.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Multiple small nephroliths are identified within the renal calyces and collecting systems bilaterally, without evidence of obstruction, pyelectasia, or hydronephrosis. These renal calculi are clinically significant and are the most likely primary source of ongoing urinary tract pathology. In this context, intermittent migration of small calculi, crystalline debris from the kidneys into the lower urinary tract provides a plausible explanation for the patient's long-standing history of recurrent urinary tract infections that transiently respond to antimicrobial therapy.

The urinary bladder appears structurally normal at the time of this examination, with a thin and smooth wall and only a very small amount of dependent mineral sediment. There are no sonographic signs of cystitis at this time. However, in patients with renal calculi, bladder ultrasonography may appear normal between episodes, particularly when inflammation is intermittent or partially treated.

No hepatobiliary, gastrointestinal, pancreatic, or abdominal lymph node abnormalities are identified to account for hypoalbuminemia; therefore, correlation for renal protein loss, gastrointestinal protein loss, chronic inflammation, and other systemic causes remains warranted based on laboratory trends and clinical course.

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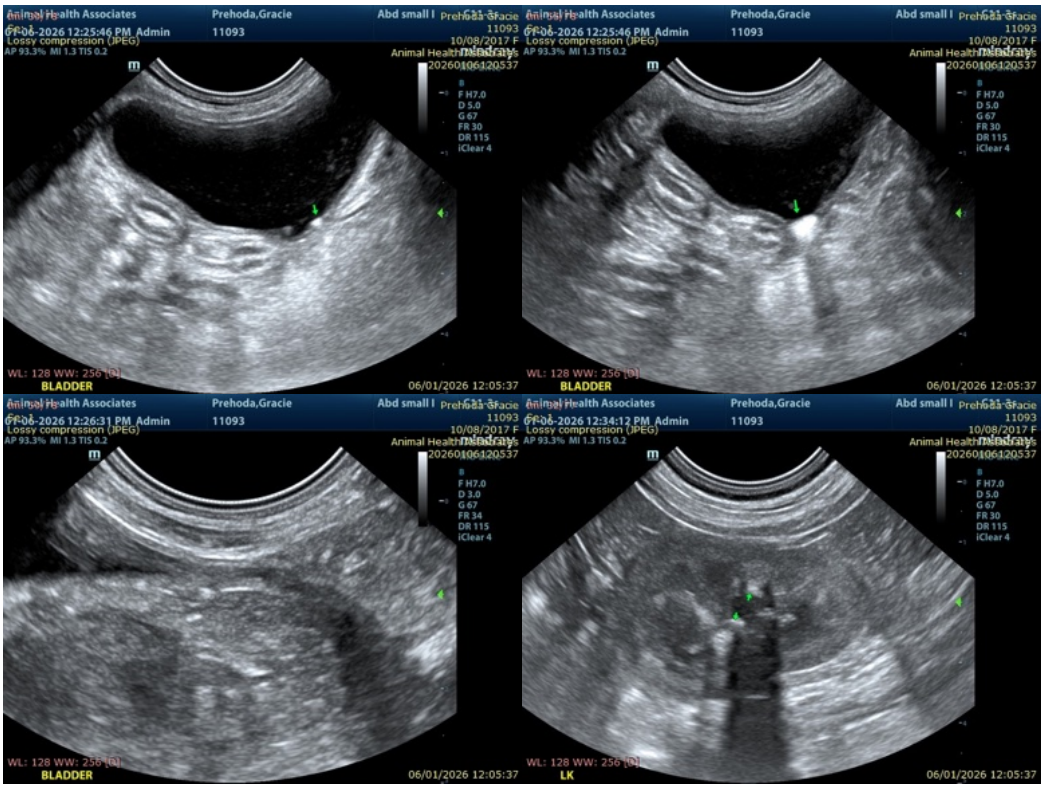
Recommendations

- Urine culture and susceptibility testing is strongly recommended to confirm bacterial clearance and guide targeted antimicrobial therapy. Renal calculi may serve as persistent bacterial reservoirs, contributing to recurrent infection despite transient clinical response to antibiotics.
- Long-term management strategies aimed at reducing stone recurrence and promoting renal clearance should be considered, including dietary modification and metabolic evaluation, at the discretion of the attending clinician.
- Once urinary tract infection is adequately controlled, UPC is recommended, as planned, to further assess for renal protein loss in the context of hypoalbuminemia and suspected chronic renal parenchymal change.
- Periodic urinalysis and follow-up abdominal ultrasonography are recommended for ongoing monitoring.



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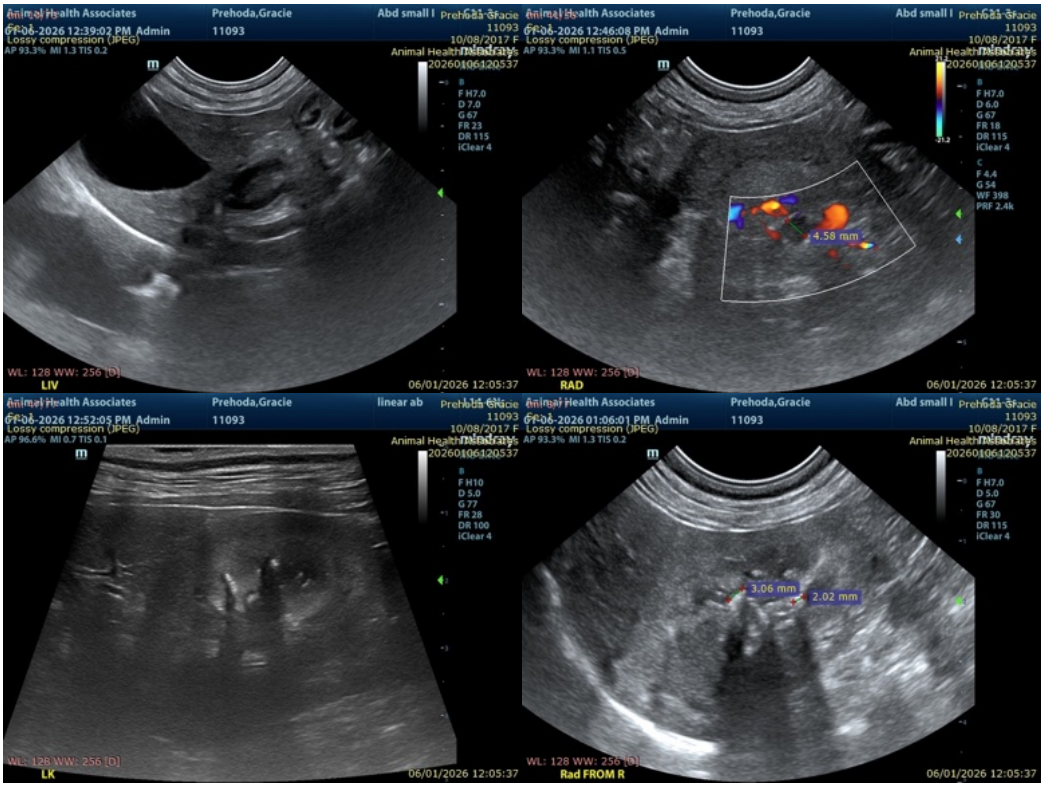

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Alicia Angosto Guerrero, DMV, PgDip, MSc.

MV Esp Ultrasound in Domestic and Wild Animals

info@SonoPath.com