



## PATIENT

Braylene Astuti

## SPECIES

Canine

## BREED

Shih Tzu

## SEX

Spayed Female

## AGE

6 Years 5 Months

## WEIGHT

5.2 kg

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP (Canine  
/ Feline Practice)

## IMAGING PERFORMED BY

Dr. Jill Rankin

## HOSPITAL NAME

Signal Hill Animal Clinic

## REFERRING VET

Dr. Veronica D.

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13874

## DATE

02/19/26

## PRESENTING CLINICAL SIGNS

- Presented with vomiting, lethargy, anorexia, abdominal discomfort, and fever, and was diagnosed with bladder stones and a severe urinary tract infection with a significant systemic inflammatory response.
- The primary issue is centered on the urinary system. Radiographs confirmed the presence of bladder stones, and a shadow noted on the kidneys raised suspicion for possible kidney stones. A urinalysis confirmed a urinary tract infection, with findings including greater than 50 white blood cells per high power field, rods, and suspected cocci. The urine specific gravity was 1.012, which was measured after fluid therapy. The presence of a fever led to a concern for pyelonephritis, though kidney values were reported as normal.
- The patient exhibited significant systemic signs, including a high fever that spiked to 40.5 and was associated with severe abdominal pain and increased respiratory effort. The pain and fever responded positively to an opioid (Torb), resulting in a decrease in temperature and improved comfort. A complete blood count supported a diagnosis of infection, revealing a marked leukocytosis (24.74) with neutrophilia, suspected bands, and a monocytosis (3.75).
- Additional lab findings included elevated liver enzymes (ALT at 266, ALP at 253), low cholesterol (2.30), low amylase (317), low chloride (106), and a low T4 (less than 6). Patient was treated with IV fluids and received ampicillin and Baytril.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder revealed an estimated 2-3 calculi with an example measuring 1.4 cm in diameter in the dependent lumen. Concurrent mild nondependent urine sediment in the urinary bladder with otherwise normal urethra to a depth of 3.0 cm.

The area of the aortic trifurcation was free of pathology.

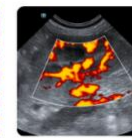
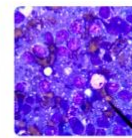
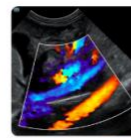
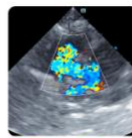
Normal size and margination was present in the left kidney. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex. A nonobstructive renolith was present with no evidence of pyelectasia or hydronephrosis. The left kidney measured 4.8 cm in length. Left ureter was not visualized.

The right kidney was mildly enlarged in size compared to the left with mild asymmetrical contour and increased corticomedullary echogenicity. Mild thickened cortex and indistinct corticomedullary border demarcation was present. Mild hydronephrosis with fluid extending into the lateral diverticuli. The fluid within the dilated pelvis was mildly echogenic in appearance indicating mild cellular component. Dilated right ureter exiting the right kidney extending caudally with a solitary proximal right ureterolith measuring 0.74 cm in diameter. Mildly dilated right ureter distal to the ureterolith yet not definitively visualized to the level of the urinary bladder. Associated right retroperitonitis with mild right retroperitoneal effusion.

### Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.35 cm width at the caudal pole.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.48 cm width at the caudal pole.



## PATIENT

### *Spleen*

Braylene Astuti

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

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### *Liver & Gallbladder*

Shih Tzu

The liver was subjectively borderline subnormal in size. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion.

## SEX

Spayed Female

The gallbladder was non distended in size with mild nonorganized biliary sludge. The cystic duct and common bile ducts were normal without evidence of dilation.

## AGE

6 Years 5 Months

### *Gastrointestinal*

The stomach presented intact mildly prominent wall with empty lumen with mild lumen gas.

## WEIGHT

5.2 kg

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. Mild nonobstructive upper to mid duodenal ileus.

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Normal visible colon wall layers were present with apparent formed feces in lumen.

### *Pancreas*

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

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### *Free Abdomen*

No overt lymphadenopathy or peritoneal effusion was present.

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## ULTRASONOGRAPHIC FINDINGS

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Dr. Veronica D.

- Urinary bladder calculi with mild concurrent urine sediment.
- Right kidney pyelonephritis pattern exhibiting mild hydronephrosis and associated right retroperitonitis.
- Proximal right ureterolith with suspect associated ureteritis- obstructive ureterolithiasis is highly suspected.
- Left kidney nonobstructive renolithiasis.
- Mild gastroduodenitis.
- Hepatopathy exhibiting subjective borderline subnormal liver size.
- Mild gallbladder debris (non-mucocele).

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Urine culture and sensitivity on sterile urine sample is recommended if not done despite current antibiotic protocol. Interventional procedure given high suspicion for obstructive right ureterolithiasis



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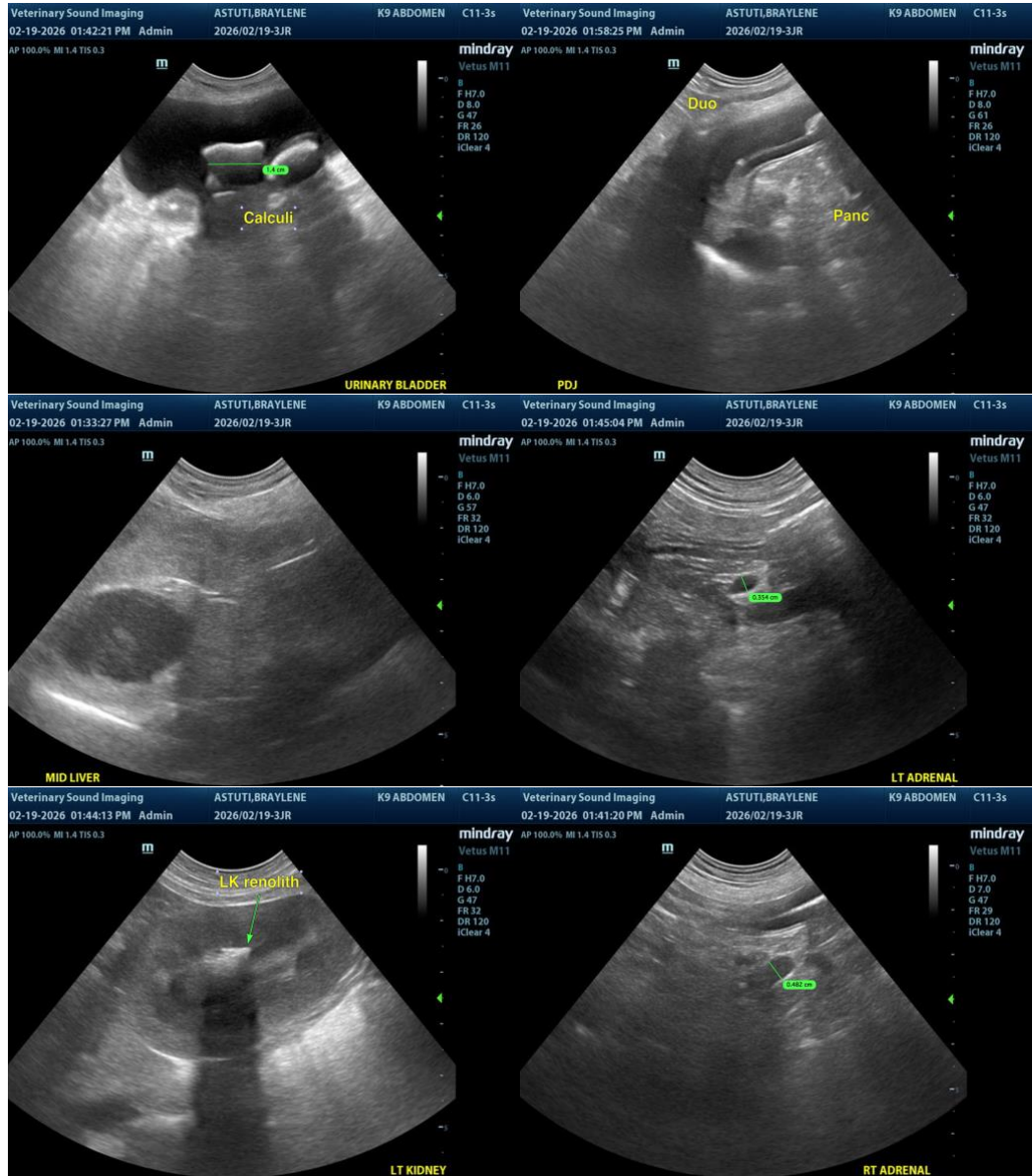
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is likely indicated. Continued empirical therapy for pyelonephritis with serial sonographic monitoring of the right kidney and ureterolith for evidence of persistence or progression would be more conservative. Bile acid profile may be considered if historical hepatopathy and given urinary tract calculi.





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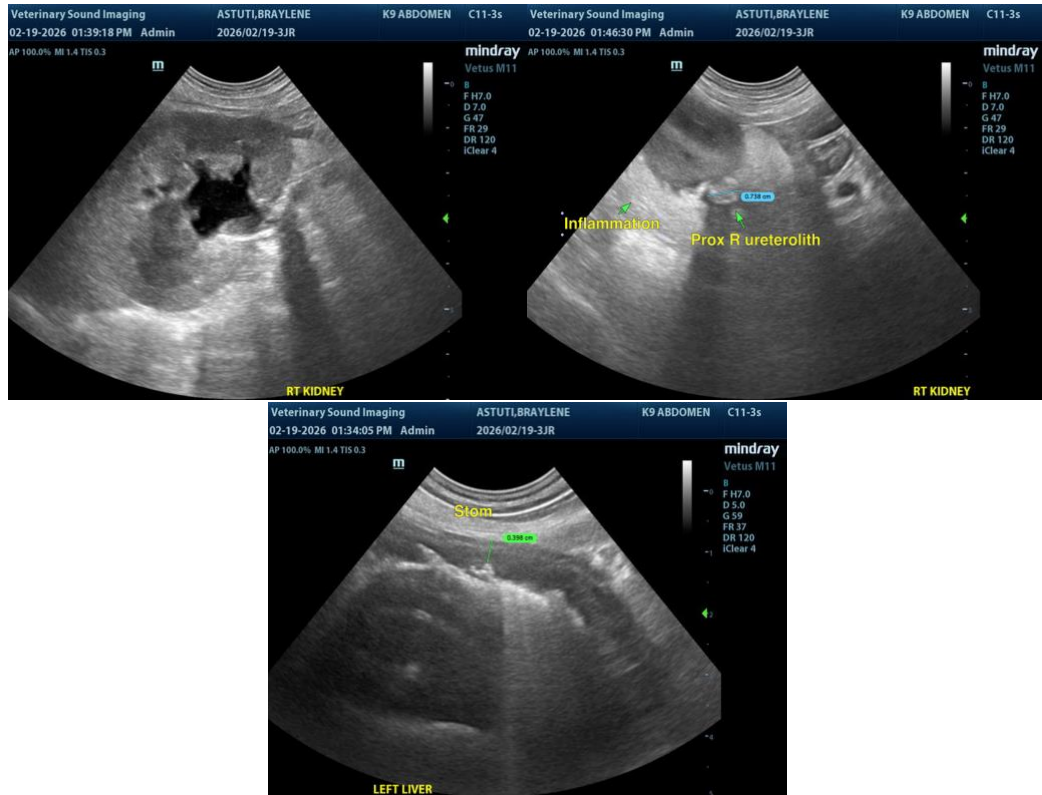
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

[info@SonoPath.com](mailto:info@SonoPath.com)