



PATIENT

Cloudy Martinez

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered Male

AGE

10 months

WEIGHT

12.6 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Summit Dog and Cat

REFERRING VET

Dr. Levitian

INVOICE

12141

DATE

9/1/21

PRESENTING CLINICAL SIGNS

Ammonium urolithiasis with recent urinary obstruction. ALT elevation. Suspect PSS. Current meds: Amoxi, Purina urinary Rx diet

Abnormal PE/Chem/CBC/UA Results: elevated ALT and ALP UA: hematuria, proteinuria, elevated pH, struvite crystals SG: 1.040

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal tone. Multiple, small, dependent cystic calculi were present. An example of cystic calculus measured 0.7 cm in diameter. Concurrent, dependent mineralized sand was noted within the urinary bladder as well as within the proximal and prostatic urethral lumen. The urethra mineral did not appear to be obstructive. The urethra was normal in structure and tone to a depth of 2.0 cm.

The residual prostate was otherwise sonographically unremarkable, measuring 0.6 cm in diameter.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. 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 with no evidence of pelvic dilation. The left kidney measured 4.0 cm in length. The right kidney measured 4.2 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.9 cm length x 0.32 cm width at the caudal pole. No overt pathology was noted in the area of the right adrenal gland.

Spleen

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.

Liver/ Gallbladder

The liver exhibited subjective subnormal size with subjective decreased vascular volume. Normal hepatic parenchyma contour and parenchyma echogenicity with mild coarse echotexture were noted.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.



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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

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.

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 were evident.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Multiple small cystic calculi with nonobstructive proximal urethral luminal mineral
- Subnormal liver

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although not evidenced in this study, portosystemic shunts is considered a primary differential diagnosis, given the subnormal liver size and previous ammonium urolithiasis. Further assessment may include a recheck sonogram with a sonographer experienced at detecting portosystemic shunts or Gold Standard CT with contrast. Additional correlation with fasting and post prandial bile acids is recommended.

Retrograde urethral flush to push proximal urethral mineral back into the urinary bladder with potential bladder expression and collection of mineral within urine sample for further assessment of mineral or crystal type could be considered. Recheck urine culture and sensitivity 7 days post completion of current antibiotics would be appropriate. Eventual cystotomy following retrograde urohydropropulsion may eventually be indicated, yet further assessment of the liver due to suspicion of a portosystemic shunt is recommended prior to potential anesthesia.





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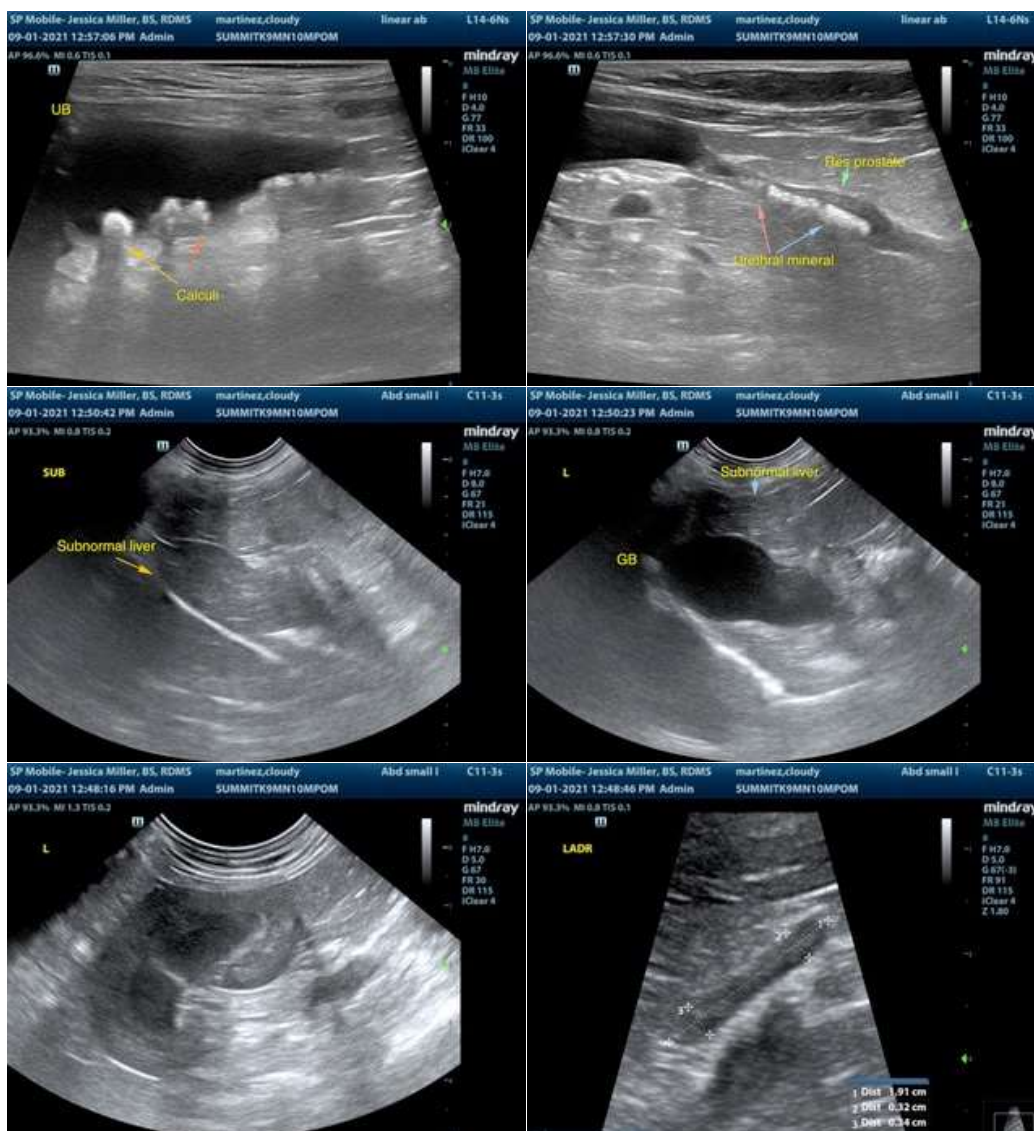
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com