



PATIENT PRESENTING CLINICAL SIGNS

Charlie Smith Recurrent urinary tract infection.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine *Urinary System*

BREED

Chihuahua Mix

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

SEX

Neutered male

The residual prostate measured 1.13 cm.

AGE

9 years

The **right kidney** measured 5.28 cm with corticomedullary mineralization. There was minor loss of corticomedullary definition. There was no evidence of pyelectasia. The changes are largely expected for this age patient. The left kidney revealed pyelectasia that measured 0.65 x 0.4 cm. Blood flow to the left kidney appeared to be adequate on power Doppler assessment. Cortical infarcts were noted as well as cortical collapse at the dorsal and caudal poles. The left kidney was subnormal in size and measured 2.7 cm.

INTERPRETED BY

Eric Lindquist, DMV
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Adrenal Glands

IMAGING PERFORMED BY

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Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 2.14 x 0.91 cm at the cranial pole and 0.6 cm at the caudal pole. The left adrenal gland measured 1.98 x 0.6 cm.

HOSPITAL NAME

Butler VH

Spleen

REFERRING VET

Dr. Garro

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

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Liver

DATE

11/16/21

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.



PATIENT

Gastrointestinal

Charlie Smith

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Minor retention of gas and cyme was noted in the stomach. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

SPECIES

Canine

BREED

Pancreas

Chihuahua Mix

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

SEX

Neutered male

AGE

9 years

ULTRASONOGRAPHIC FINDINGS

Normal urinary tract with age related right renal changes.

Moderate to severe dystrophy of the left kidney with infarcts, mineralization and pyelectasia.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

IMAGING PERFORMED BY

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The left kidney may be harboring infection within the pyelectasia, mineralization and chronic changes. If continual recurrent UTI is an issue or pyuria continues to be an issue then the left kidney is likely the source. If UTI is persistently present then 4-6 week antibiotic therapy may be necessary to potentially clear the left kidney if possible. Otherwise, pulse antibiotics or treat as symptoms and pyuria develop may be the best long term management in this patient.

HOSPITAL NAME

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Canine Chronic UTI Protocol

I recommend **Enrofloxacin** (5-10 mg/kg SID PO) (In patients > 1 year of age) in late pm after urination to maximize urinary concentrations overnight. This assumes that culture supports this use. Repeat **culture** at 3-4 weeks and continue treatment at least 7-10 days post negative urinary sediment and negative culture. *Note: Negative culture does not necessarily mean lack of UTI.* Other favorite antibiotics for chronic UTI include third generation Cefa (Ceftiafur or similar s.i.d. injectable) or Clavamox. If suspicion of occult urinary incontinence is present then **phenylpropanolamine (PPA)** (1-2 mg/kg BID) can be employed long term to enhance urethral tone.

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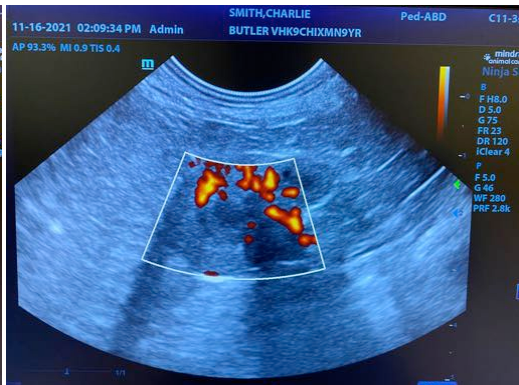
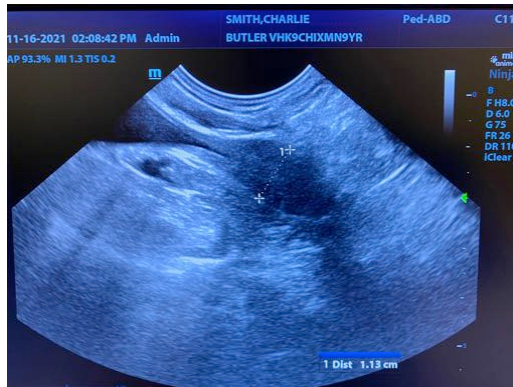
Dr. Garro

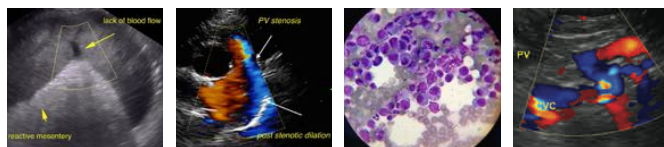
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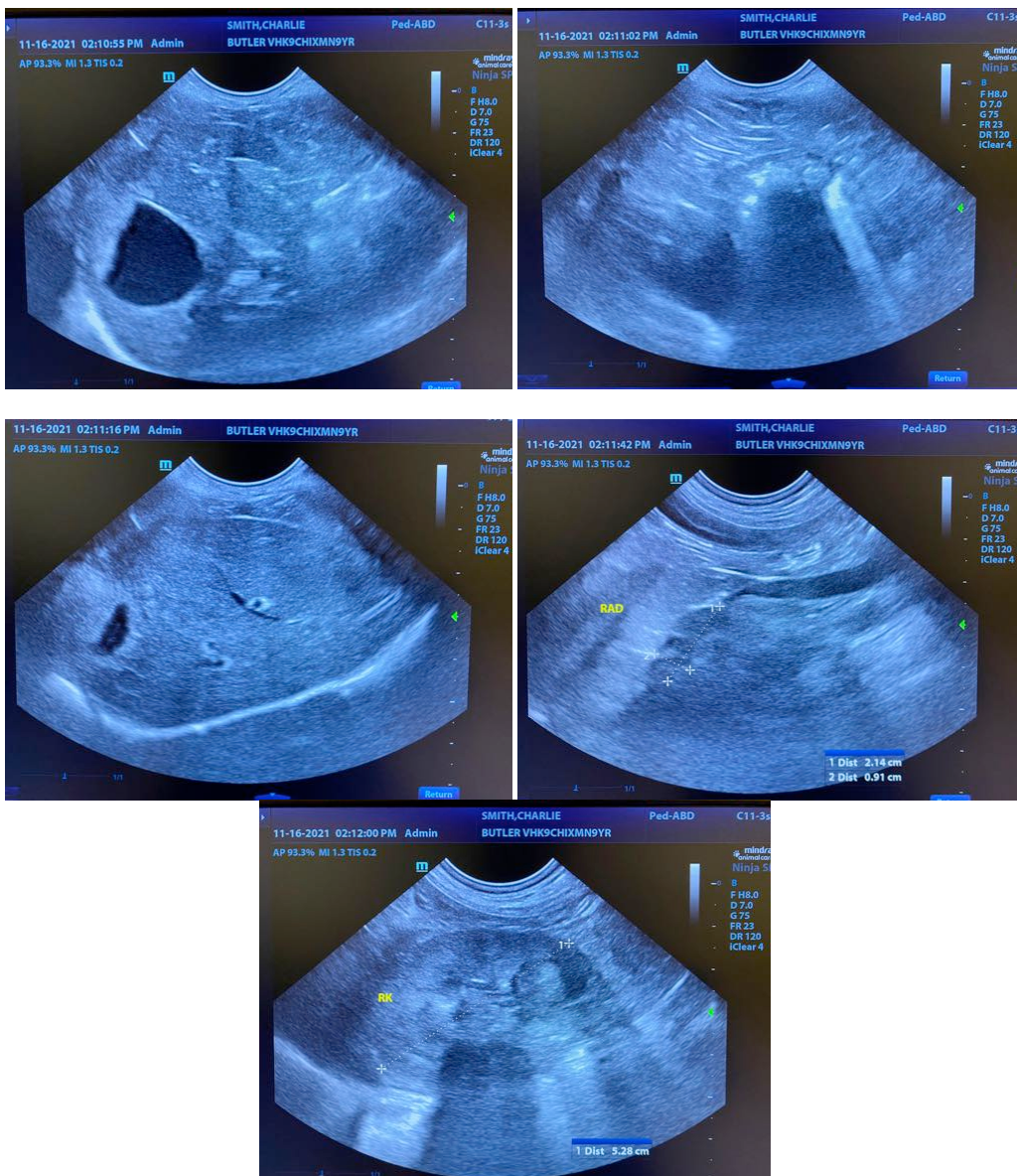
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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