



PATIENT PRESENTING CLINICAL SIGNS

Piper Candy

SPECIES

Canine

BREED

Pomeranian

SEX

Spayed Female

History: Piper presented initially for lethargy, an increased thirst/urination and increased appetite late December. She was being treated for presumed hypothyroidism (TT4 = 1.2) since July 2021 by previous veterinarian and supplemented with levothyroxine. Routine bloodwork performed in December revealed TT4 = 4.3, hypoalbuminemia and significant proteinuria (UPC = 6.7). Glucose level was rechecked and was normal (suspect artifact). Blood pressure was significantly elevated - started on enalapril and amlodipine and was switched to Hill's k/d at that time. Recommended stopping levothyroxine and assessing full thyroid panel to see if truly was hypothyroid - MSU panel performed two weeks later not consistent with hypothyroidism. After numerous dose adjustments, finally able to control blood pressure by early March. Performed low dose dexamethasone suppression test to rule out Cushing's - not consistent with Cushing's disease. UPC performed at that time still 4.9, renal panel has been stable since starting blood pressure medications. Owner reported that lethargy almost resolved completely once started on blood pressure medications, although she is still PU/PD. At this point, recommended referral to assess for additional management of proteinuria. Owner declined for now but elected to move forward with abdominal ultrasound to ensure no other obvious cause for her proteinuria.

AGE

10 years

WEIGHT

20 lbs

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. 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.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex. The left kidney measured 4.0 cm with trace pyelectasia. The pyelectasia is likely owing to scarring +/- infection/UTI. The right kidney measured 4.0 cm with trace pyelectasia.

IMAGING PERFORMED BY

Dr. Puthoff

Adrenal Glands

HOSPITAL NAME

Kings VH

The **adrenal glands** were not visualized. However, the global region of the adrenal glands were imaged with no evidence of pathology.

REFERRING VET

Dr. Puthoff

Spleen

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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.

DATE

4/11/22



PATIENT

Liver

Piper Candy

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.

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Gastrointestinal

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Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. 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.

AGE

10 years

Pancreas

WEIGHT

20 lbs

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

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ULTRASONOGRAPHIC FINDINGS

Mild, non-specific degenerative renal changes with slight pyelectasia.
Vacuolar hepatopathy liver pattern with age related remodeling.

IMAGING PERFORMED BY

Dr. Puthoff

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

HOSPITAL NAME

Kings VH

If adrenal disease is suspected then sedation and further imaging of the adrenal glands is recommended. If any inflammatory sediment is present in the urine then urine culture sensitivity is indicated. The cause of the lethargy is unclear in this patient as viscerally the abdomen appears largely unremarkable.

REFERRING VET

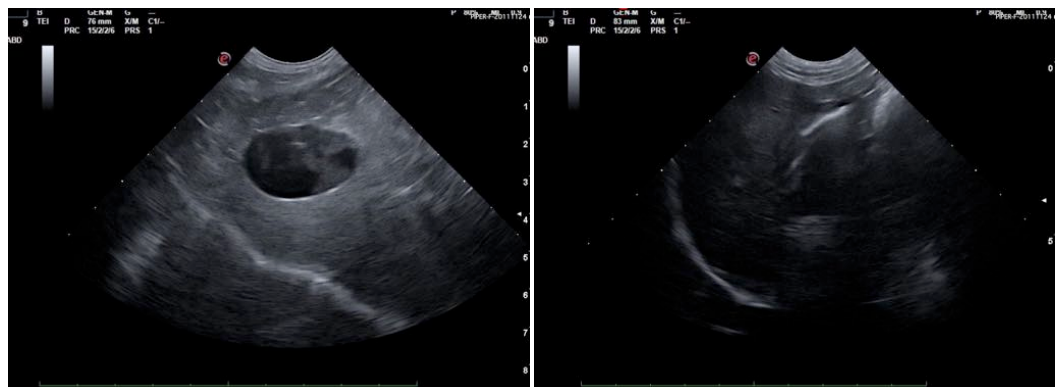
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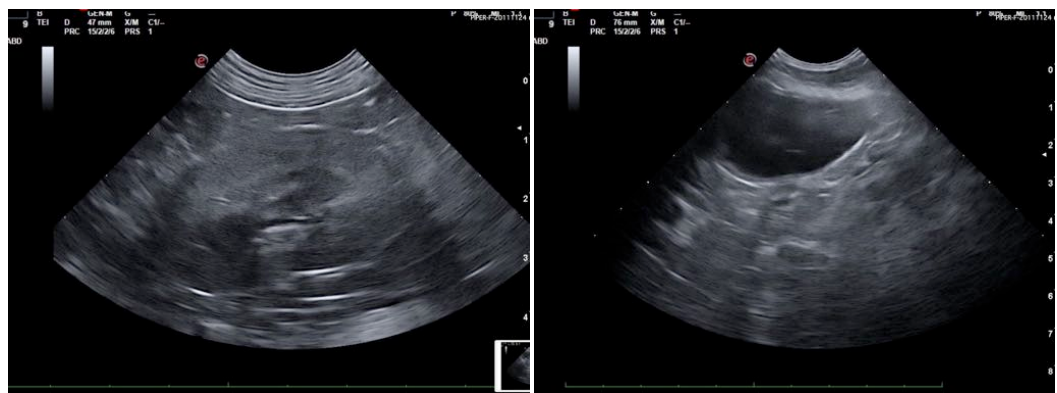
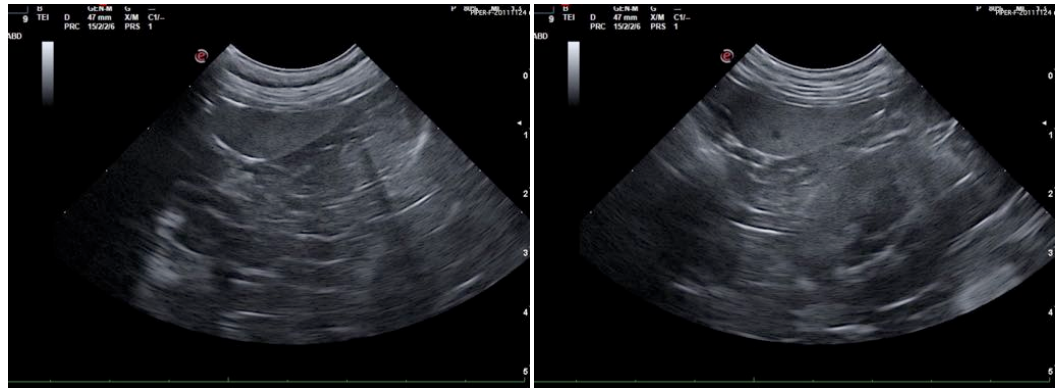
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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