



PATIENT

Floppy Shaskin

PRESENTING CLINICAL SIGNS

History of urinary incontinence with accidents any night AI's PU and has thin skin and hair coat. Urine P/C ratio elevated at 3.9(range <.5) 2+ protein in urine and SG 1022

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

BREED

Dachshund

The **bladder** in this patient was mildly thickened with slight echogenic mural changes. No calculi or masses were noted. Slight micropolypoid changes were noted. This is a frequent finding in older animals and may be linked to a history of chronic urinary tract infection or active urinary tract infection. Urinalysis would be recommended with culture if any evidence of inflammatory sediment is present. The region of the trigone and visible pelvic urethra were normal.

SEX

Neutered male

The residual prostate was mildly heterogenous and mildly enlarged measuring 1.43 cm.

AGE

15 years

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 his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Hyperechoic foci were noted in the kidneys consistent with mineralization or microinfarcts. The left kidney measured 4.36 cm.

WEIGHT

4 kg

Adrenal Glands

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

A right **adrenal** mass was noted in this patient and was hypoechoic with disrupted architecture. The right adrenal gland measured 1.59 cm at the cranial pole and 1.07 cm at the caudal pole with nodular, irregular change. One nodule measured 1.4 x 1.8 cm nodule that was deriving from the cranial pole. The left adrenal gland was at the upper limits of normal at 0.74 cm at the cranial pole and 0.67 cm at the caudal pole. The left adrenal gland was dramatically hypoechoic and swollen.

IMAGING PERFORMED BY

Dr. Belan

Spleen

HOSPITAL NAME

Ramsay AC

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. A hyperechoic lipid plaque was noted and measured 0.27 cm. 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.

REFERRING VET

Dr. Gupta

Liver

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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. Isoechoic to mildly echogenic nodular changes were noted. The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocoele, yet sludge appears to be mildly excessive. No adjunctive inflammation was noted.

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Gastrointestinal

The stomach was mildly thickened, empty with a hypertrophied muscularis and echogenic mucosal changes. The small intestines and colon were unremarkable.

Pancreas

Diffuse hyperechoic changes were present in the area of the **pancreas**. The pancreatic remodeling was evident with multifocal to diffuse hyperechoic changes. These changes are consistent with fibrosis, amyloid, saponification of fat and may contain areas of low-grade chronic active inflammation especially if pain on imaging (+ Murphy sign) was present +/- focal subxiphoid palpation reveals pain response. No overt masses were noted.

ULTRASONOGRAPHIC FINDINGS

Minor, heterogenous prostate, likely residual hyperplasia from prior prostatitis. Emerging carcinoma cannot be ruled out.

Hyperplastic left adrenal gland.

Right adrenal mass. Right adrenal appears partially invasive into the phrenic vein and possibly the vena cava.

Pancreatic remodeling.

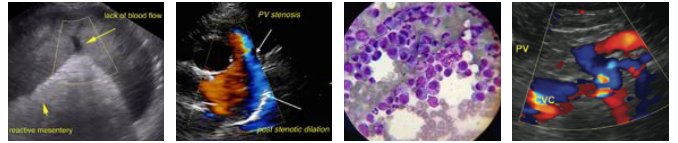
Hepatic remodeling.

Mildly thickened stomach with hypertrophied muscularis.

Hyperechoic foci in the kidneys with mineralization or microinfarcts.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

CT evaluation is warranted. I am most concerned about the right adrenal in this patient. Carcinoma and pheochromocytoma are the primary concerns. This may be driving the proteinuria along with intrinsic renal disease. Left adrenal hyperplasia an argument can be made for both PDH and adrenal dependent Cushing's or PDH and pheochromocytoma. If systemic hypertension is present then urine catecholamine is indicated. CT evaluation for right adrenalectomy is indicated. Urinary work-up is warranted with culture and sensitivity if not already performed. Ursodiol therapy is warranted. Geriatric diet is indicated. The prognosis is guarded.



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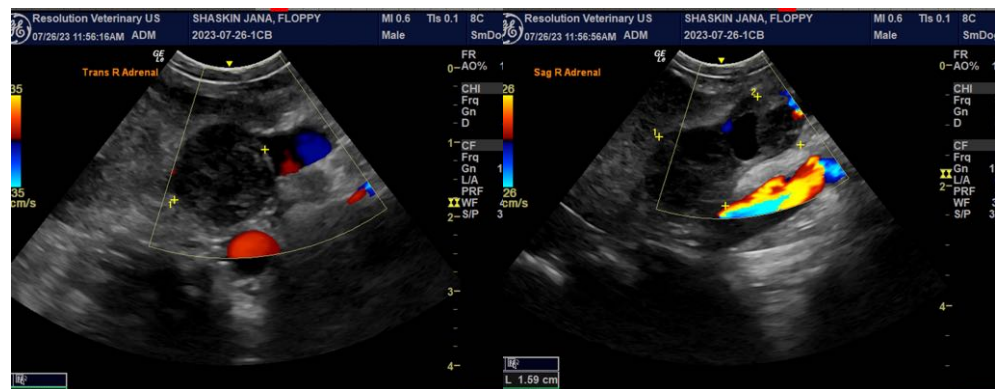
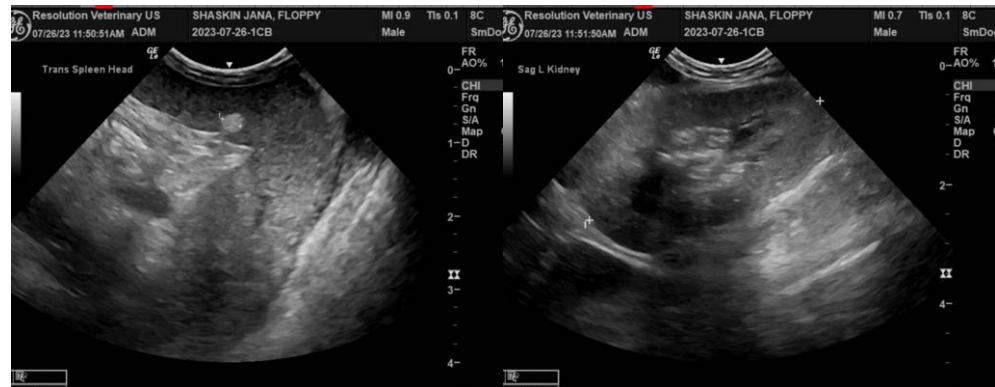
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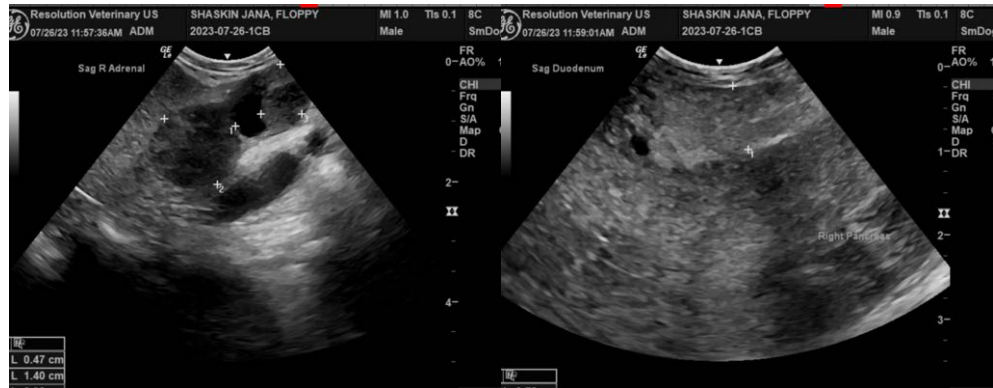
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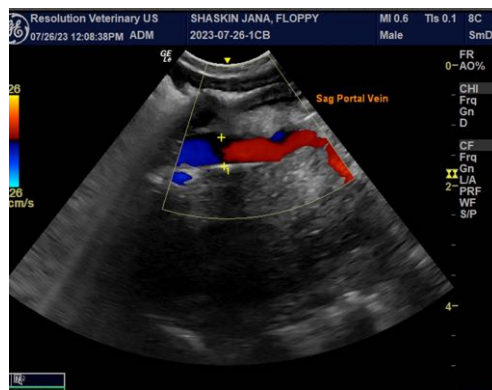
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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