



PATIENT

Maddie Pinnell

PRESENTING CLINICAL SIGNS

Recent history of urine accidents at night and after going outside.
CBC and chemistry unremarkable. USG 1.036. 2+ proteinuria. UPC 0.3. Inactive sediment.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness. The mucosal surface in the region of the apex is slightly irregular. The bladder lumen is mildly to moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2-3 cm, are normal.

BREED

Maltipoo

SEX

Spayed Female

The left kidney is normal in size (4.10 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

AGE

14 years

The right kidney is normal in size (4.15 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

WEIGHT

5.34 kg

Adrenal Glands

The left adrenal gland is normal in size (0.47 cm at cranial pole) (0.48 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

INTERPRETED BY

Andrea Nicastro, DVM,
Diplomate ACVIM (*Small
Animal Internal Medicine*)

The right adrenal gland is in normal size (0.45 cm at cranial pole) (0.42 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

IMAGING PERFORMED BY

Andrea Nicastro, DVM,
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Animal Internal Medicine*)

Spleen

The spleen is normal in size (1.54 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

HOSPITAL NAME

Sun Dog Cat Moon

Liver

The liver is prominent in size with normal curvilinear peripheral contours. The parenchyma is hyperechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

REFERRING VET

Dr. Pruitt

The gall bladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

INVOICE

12158

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The

DATE

2.6.23

colonic wall is normal. The lumen of the descending colon contains shadowing fecal material. There is no evidence of an obstructive pattern.

Pancreas

The right limb of the pancreas is normal to prominent in size with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

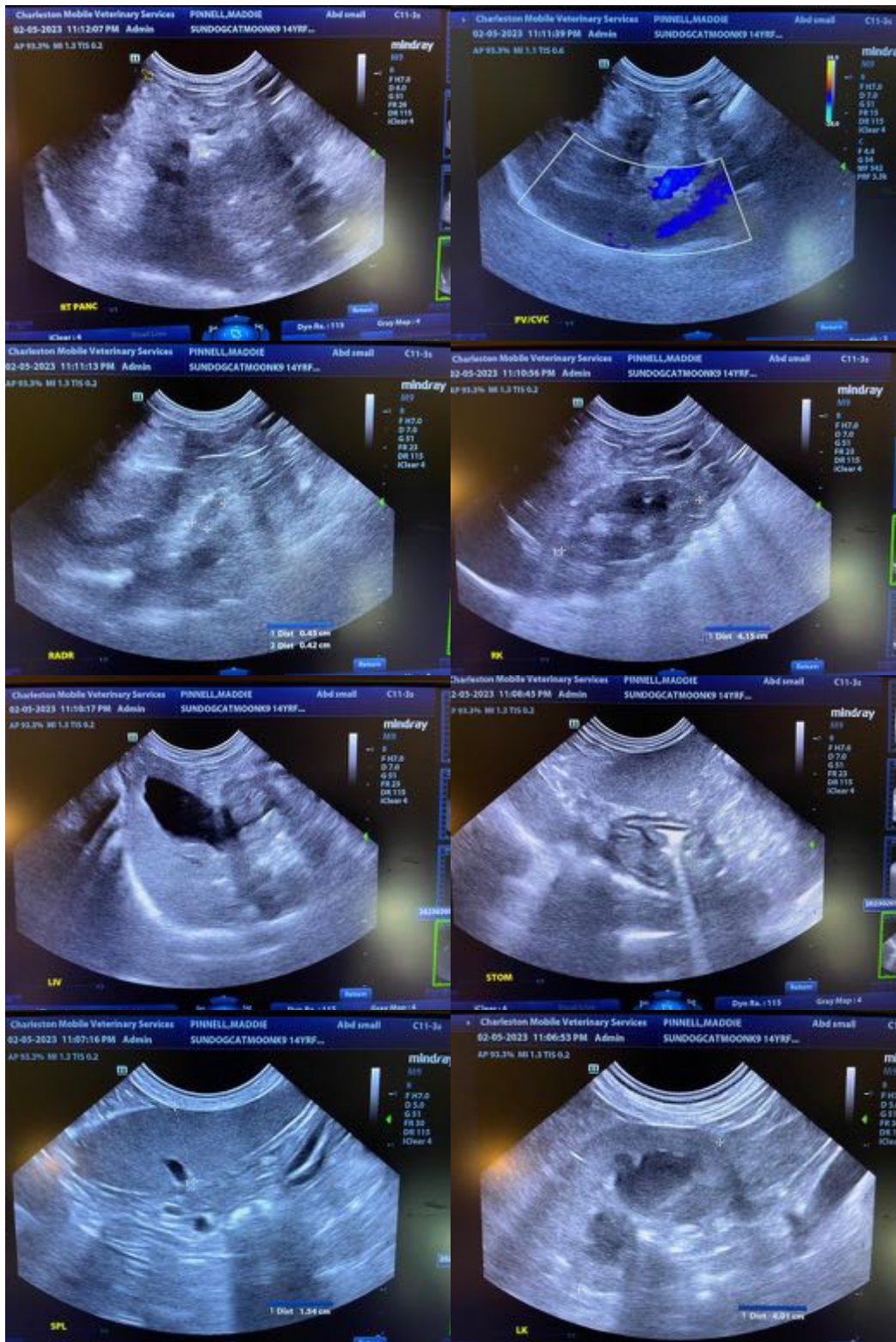
Primary Findings

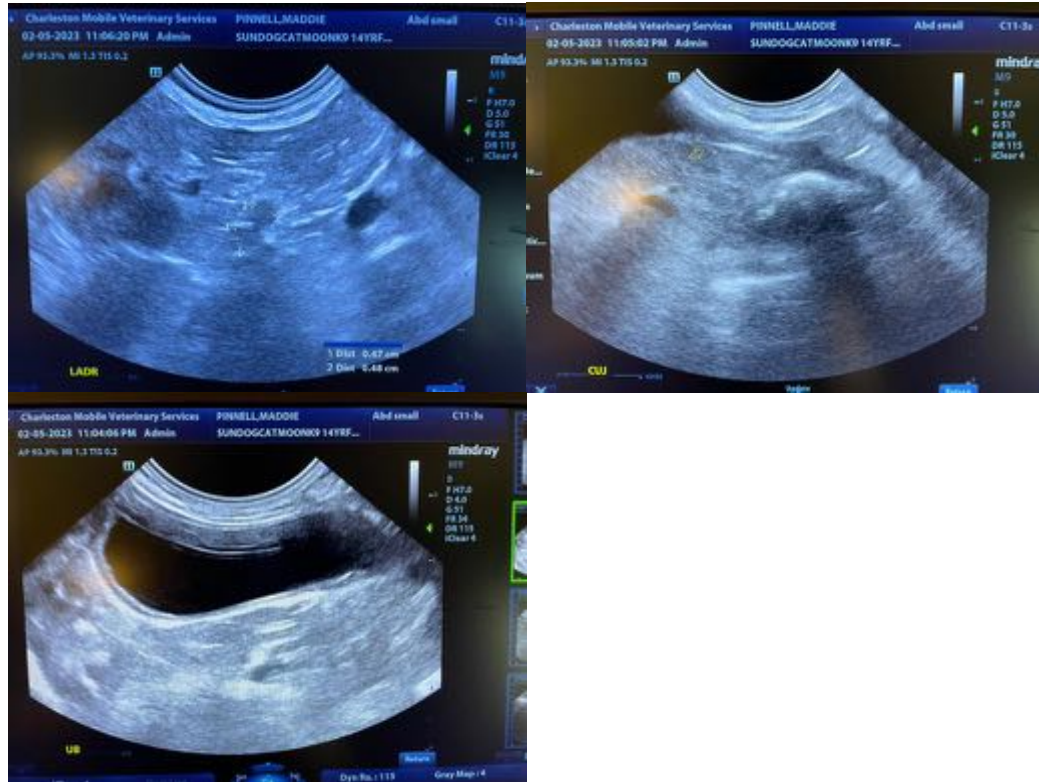
- Mild bilateral age-related renal changes
- The hepatic parenchymal changes are nonspecific and most consistent with a benign hepatopathy, such as vacuolar hepatopathy (i.e., idiopathic/endocrine).
- Minor age-related pancreatic remodeling

*An obvious cause for the patient's urine accidents is not identified in this study. Considerations include occult urinary tract infection, neurological disease, urethral sphincter mechanism incompetence, behavioral issues/cognitive dysfunction, Cushing's disease, (less likely), occult hepatic disease, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Regarding the urinary accidents, consider the following:
 1. Neurologic examination to assess for nonmetabolic causes of incontinence.
 2. Pre-and postprandial serum bile acids to assess for occult hepatic dysfunction
 3. Consider testing for Cushing's disease (i.e., low-dose dexamethasone suppression test), although this disease is considered less likely in light of the patient's clinical history.
 4. Leptospirosis testing, particularly if the clinical suspicion for disease is high
 5. Empirical treatment for urinary tract infection. If no improvement in the patient's clinical signs is seen within 3-5 days of initiating therapy, antibiotics should be discontinued.
 6. If the above diagnostics/therapeutics are inconclusive, consider empirical treatment for urethral sphincter mechanism incontinence (i.e., phenylpropanolamine).





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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