



PATIENT PRESENTING CLINICAL SIGNS

Bella Portillo
History: Recurrent DKA, tender abdomen, episode of pale + weakness overnight. BG @ 9 AM = 301, Ket (-), appetite great, hx of mammary mass, intact female. New diagnoses hyperthyroid. Current meds: NPH insulin 3 units and humulin R prn, cerenia, famotidine, unasyn, denamarin

SPECIES
Canine

Abnormal PE/Chem/CBC/UA Results: 2/7 Chem= AST= 77, ALpK= 173, amy= 269, cbc= wbc= 18.1, hct = 34, t4 = <0.5, FT4= <2

BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Morkie Urinary System

SEX
Female

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.

AGE
14 years

The uterus was uniform and measured 0.7 cm. The left ovary measured 1.5 x 0.74 cm. The right ovary measured 1.23 x 1.04 cm.

WEIGHT

The **kidneys** were normal in size and contour; however, a minor hyperechoic ring was noted at the corticomedullary junction. This is consistent with diabetic nephropathy. This is likely from glucosuria. However, assessment for proteinuria is also warranted. This is an idiopathic finding, but an expected finding in diabetic patients. The right kidney measured 4.7 cm. The left kidney measured 4.4 cm.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Valeryia Shumskaya

HOSPITAL NAME

Westwood Regional
VH

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Dr. Hartwick

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Adrenal Glands

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 1.33 x 0.48 cm at the caudal pole and 0.43 cm at the cranial pole. The left adrenal gland measured 1.88 x 0.76 cm at the cranial pole and 0.5 cm at the caudal pole.

Spleen

The **spleen** was normal size and relatively normal contour with multifocal hyperechoic areas of mineralization. This is a benign change; however, can be related to Cushing's disease or other endocrinopathies.

Liver

The right dorsal **liver** revealed a hypoechoic, 1.5 x 1.09 cm nodule. The gallbladder revealed multiple polyps and suspended debris with some striation and over distension. This is consistent with immature gallbladder mucocele. Uniform vacuolar hepatopathy liver pattern was otherwise noted with occasional, hypoechoic nodular changes. There was no active inflammation noted around the gallbladder. This is not a surgical gallbladder and not likely the primary cause of the clinical signs.



PATIENT

Gastrointestinal

Bella Portillo

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.

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Pancreas

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.

ULTRASONOGRAPHIC FINDINGS

Diabetic hepatopathy with emerging mucocele.

Diabetic nephropathy.

Splenic mineralization.

Age related pancreatic changes.

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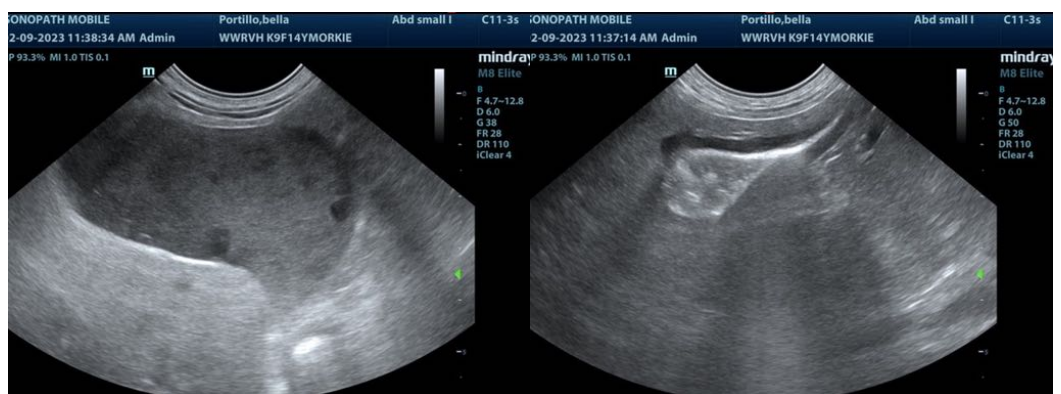
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes are expected given the patient's history. Gallbladder motility study would be ideal and/or Ursodiol therapy over a 6-8 week period with a recheck of the gallbladder. However, I do not feel that this is the primary issue. The intact patient status may be playing a role in diabetic dysregulation in this patient. The cause of tender abdomen is unclear. Referred back pain should be considered as a potential. There is no evidence of visceral disease that would be responsible for the clinical signs.





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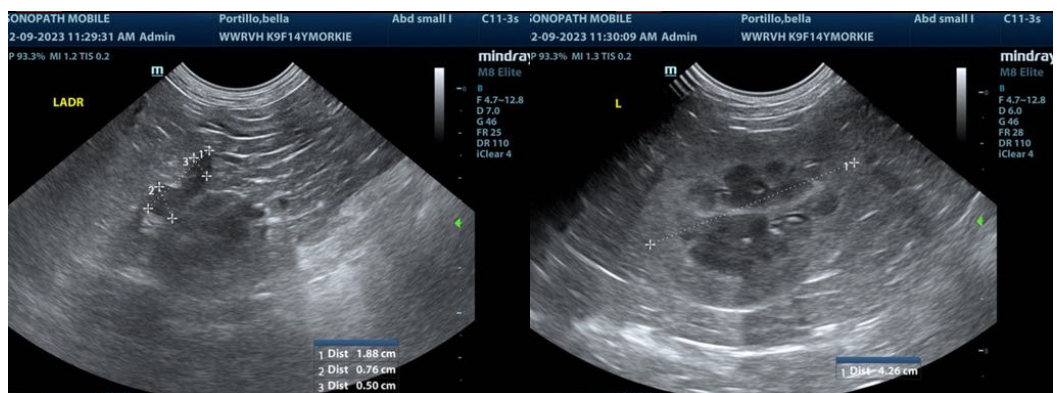
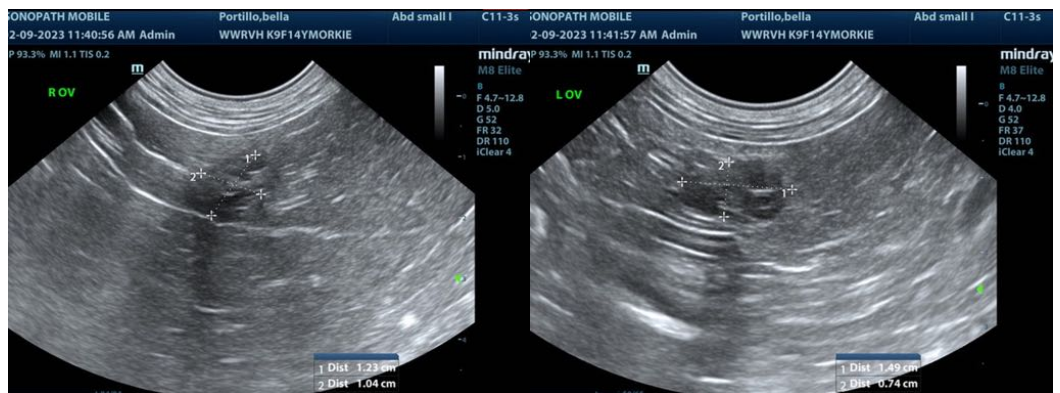
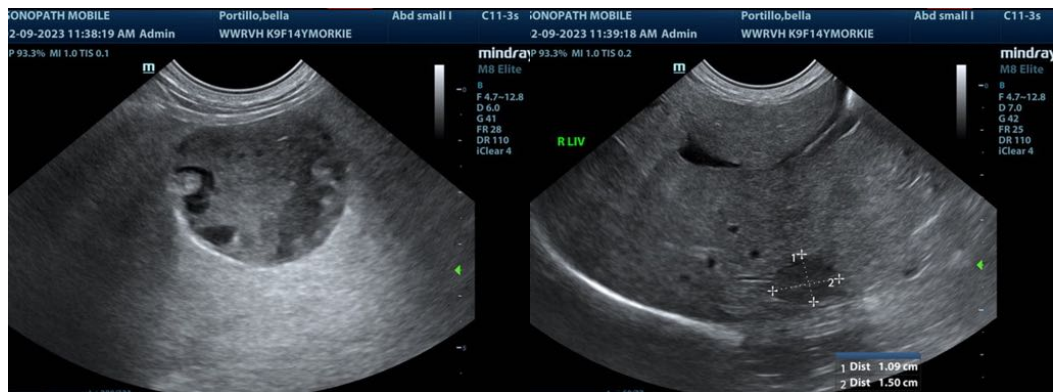
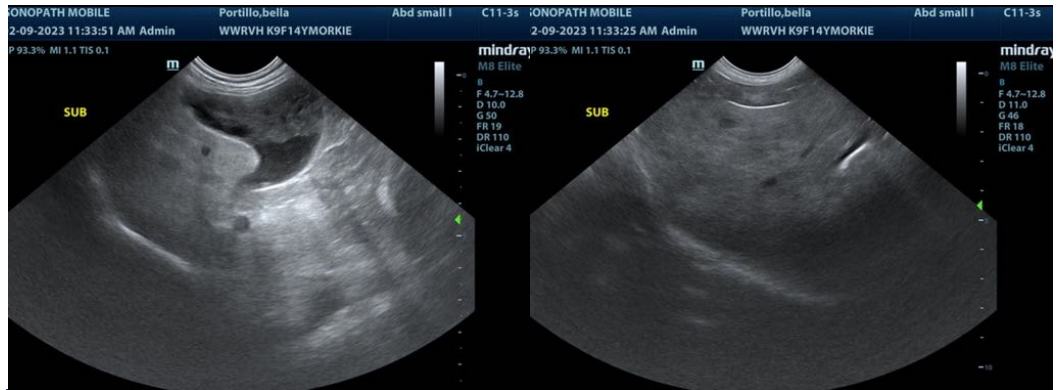
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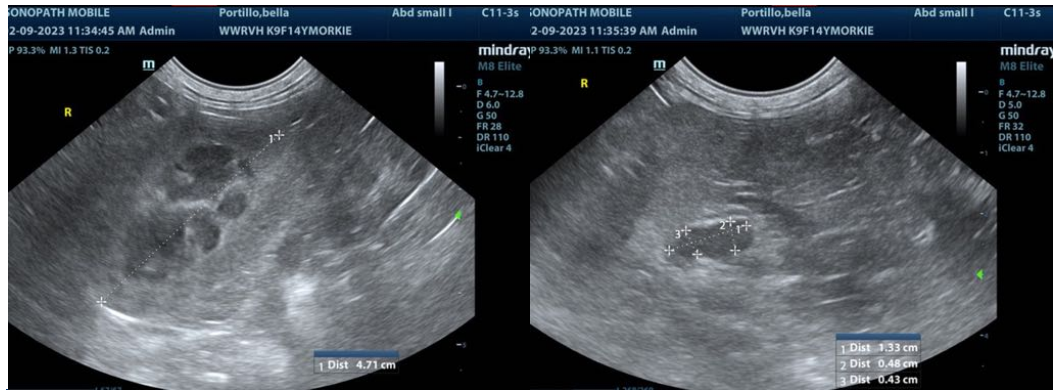
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WEIGHT



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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