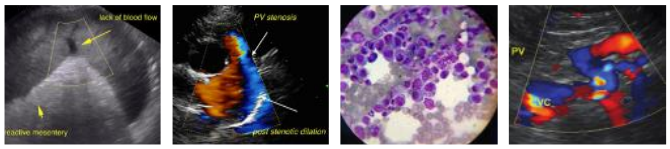
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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1-800-838-4268 info@sonopath.com

PATIENT

Baby Riley

SPECIES

Canine

BREED

Rottweiler

SEX

Spayed Female

AGE

6 Years

WEIGHT

106 Pounds

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jack Reese

HOSPITAL NAME

Willow Run VC

REFERRING VET

Molly Arnold, DVM

INVOICE

16954

DATE

8/22/22

PRESENTING CLINICAL SIGNS

History: Presented in April 2022 as new diabetic - insulin therapy initiated at that time. Soon after, P presented for acute vomiting, diarrhea - ultrasound performed at that time was suggestive of obstructive pattern. Exploratory laparotomy was elected and no foreign body or obstruction was found. Baby had been doing well over last 4 months - diabetes has been fairly well controlled, P has been maintaining weight, normal appetite. Presented this morning due to decreased appetite, vomiting, depressed demeanor. Suspecting acute renal disease.

Abnormal PE/Chem/CBC/UA Results: Glucose 225 (74 - 143 mg/dL) Creatinine 6.0 (0.5 - 1.8 mg/dL) BUN 80 (7 - 27 mg/dL) Potassium 6.2 (3.5 - 5.8 mmol/L) Cholesterol 367 (110 - 320 mg/dL) Amylase 2,420 (500 - 1,500 U/L) Lipase 5,531 (200 - 1,800 U/L)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** and visible pelvic urethra were unremarkable for the level of repletion presented. The urine, however, did present some mildly echogenic debris consistent with mucous, exfoliated cells from renal or bladder origin, and/or blood clots as these echogenic changes can all present similarly. This is often related to urinary tract infection but may represent simple evidence of exfoliated debris or sterile inflammation. Cystocentesis, urinalysis, +/- culture would be recommended to rule out and define any UTI. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex. The capsules were acceptably uniform without significant irregularities. The right kidney measured 7.7 cm with corticomedullary mineralization. The left kidney measured 6.4 cm. Pyelectasia was noted in the left kidney. Minor hyperechoic medullary rim was present in the left kidney, consistent with diabetic nephropathy.

Adrenal Glands

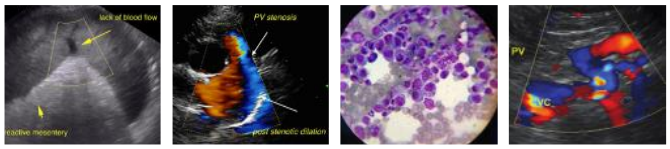
Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.48 cm at the caudal pole and 0.45 cm at the cranial pole. The right adrenal gland measured 1.5 cm at the cranial pole and 0.65 cm at the caudal pole.

Spleen

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 were noted.

Liver

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably



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thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

Gastrointestinal

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.

Pancreas

The **pancreas** was uniform throughout the cranial abdomen. No overt evidence of structural disease, however, given the amylase/lipase elevation, some level of pancreatitis is likely or cross reactivity from intestinal insult.

ULTRASONOGRAPHIC FINDINGS

- Moderate degenerative renal changes with diabetic nephropathy, pyelectasia and mineralization
- Urinary bladder debris
- Partially full stomach

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Full urinary work up is warranted, if not already performed to assess for underlying UTI, which may be embedded in the renal pelvises. Pelvic scarring, owing to periodic passage of calculi, may also be an issue.

There was some residual chyme and gas was noted in the stomach, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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.

Potential Causes of Diabetic Dysregulation

This is a suggestive checkoff list when faced with an unregulated diabetic patient:

UTI

Dietary indiscretion/intolerance

Pancreatitis

Hyperthyroidism/hypothyroidism

Exogenous steroids (including topical eye meds)

Cushing's

Acromegaly

Owner compliance

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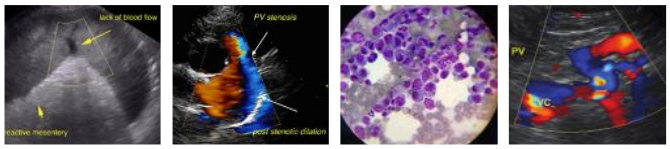

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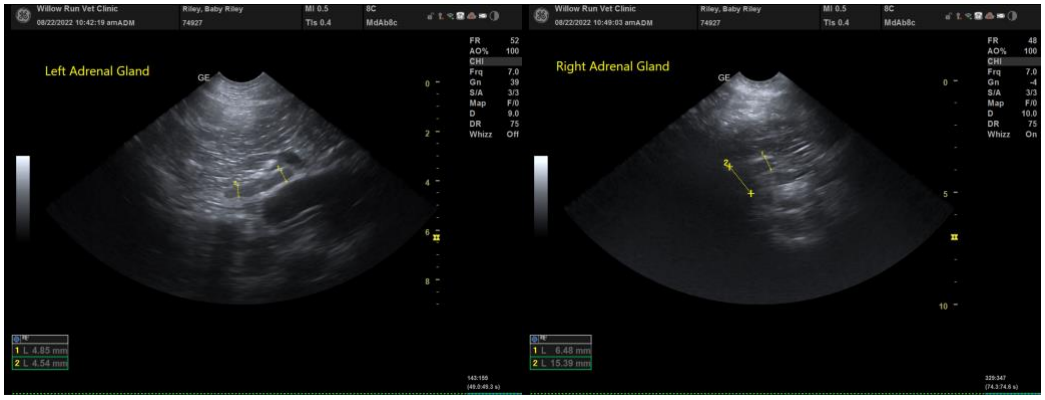
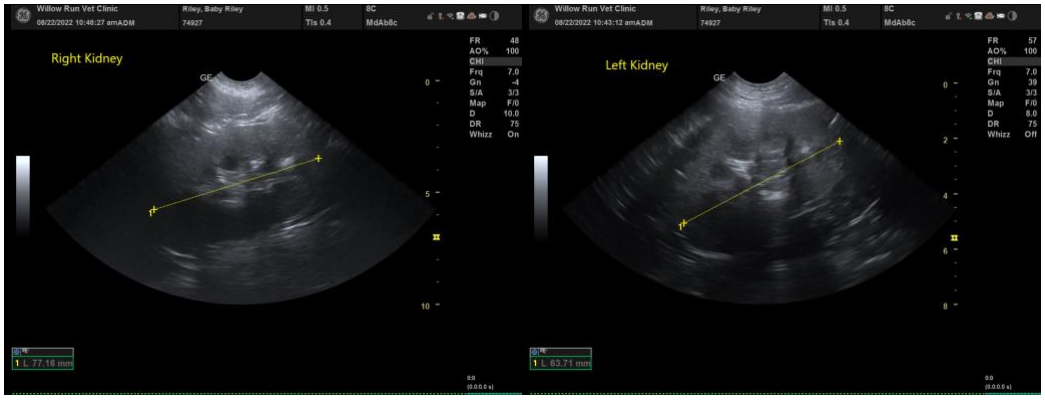
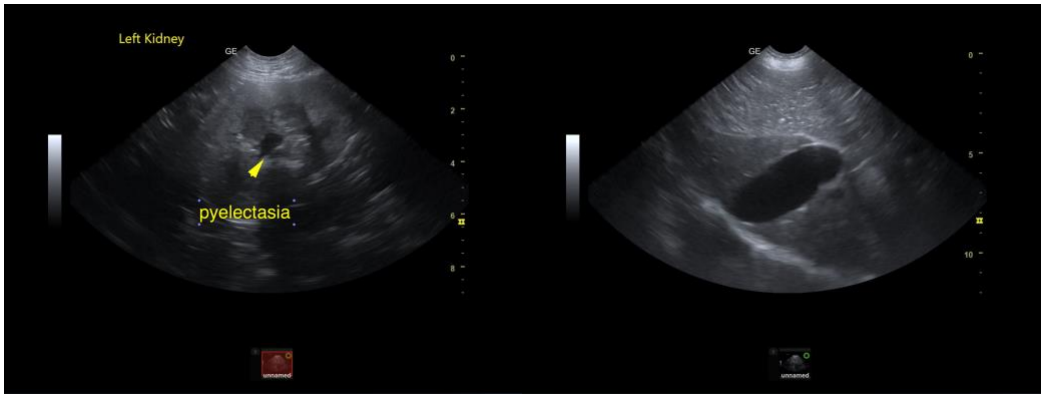
Insulin quality issues

Antibodies to insulin

Underlying Neoplasia







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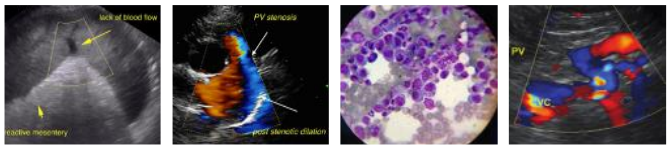

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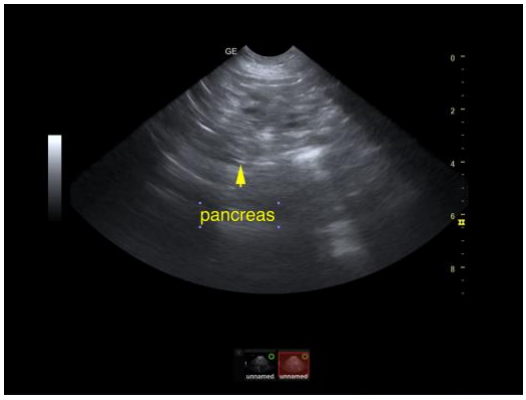

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com