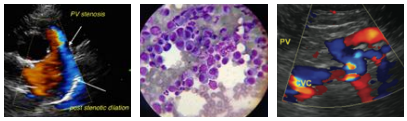
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

2/21/23

PATIENT

Rascal Spivey

SPECIES

Canine

BREED

Maltese

SEX

Neutered male

AGE

10/21/10

WEIGHT

12.74 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

HOSPITAL NAME

Everhart VH

REFERRING VET

Dr. Goodman

INVOICE

42876

PRESENTING CLINICAL SIGNS

Concern for pre-cushings.
Current Medications: Insulin- Novalin 4 units BID.
Lab Results: Repeated abnormal glucose curves.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

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.

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. Corticomedullary mineralization was noted and was non-obstructive. The left kidney measured 4.3 cm. The right kidney measured 5.23 cm.

Adrenal Glands

The **adrenal glands** appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins was noted. No overt suspicion of neoplasia was noted. This is considered likely a hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. The left adrenal gland measured 1.68n x 0.61 cm at the caudal pole and 0.65 cm at the cranial pole. The right adrenal gland was at the upper limits of normal and measured 1.5 x 0.51 cm at the caudal pole and 0.59 cm at the cranial 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 was noted.

Liver

The **liver** revealed diffuse, coalescing, hypoechoic nodular changes amidst hyperechoic fibrotic type pattern. The gallbladder revealed a minor amount of calculi. There were no overt masses noted in the liver. However, diffuse disease is present.

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 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

Diffuse nodular hyperplasia liver pattern.
Concurrent diabetic nephropathy with non-obstructive nephrolithiasis.
Prominent adrenal glands, potential emerging PDH.
Age related pancreatic changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

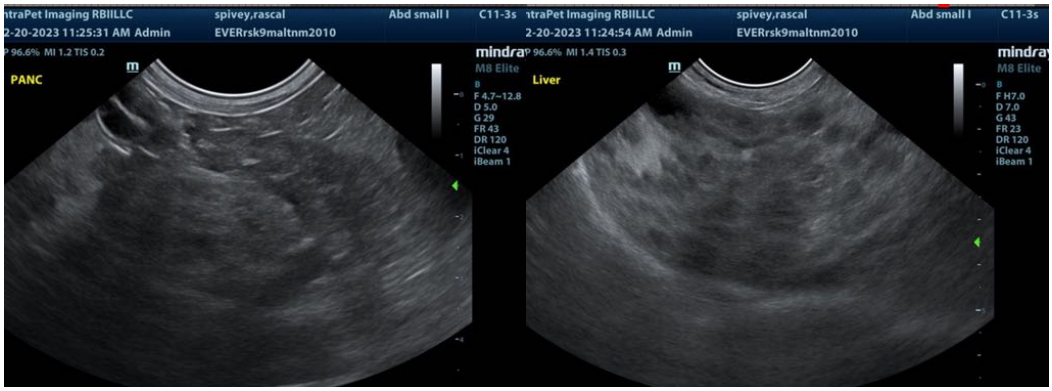
If any crusting skin lesions are present, then the architecture of the liver would be reminiscent of hepatocutaneous syndrome. Otherwise, pronounced nodular hyperplasia and vacuolar hepatopathy is likely. FNA of the nodular changes would be warranted +/- culture. Bile acid profile is warranted. If isosthenuria is a persistent issue then work-up for pituitary dependent Cushing's is indicated. Some history of possible low-grade active pancreatitis may be an issue given the pancreatic presentation. Subxiphoid palpation is recommended to assess for pain in the region of the pancreas.

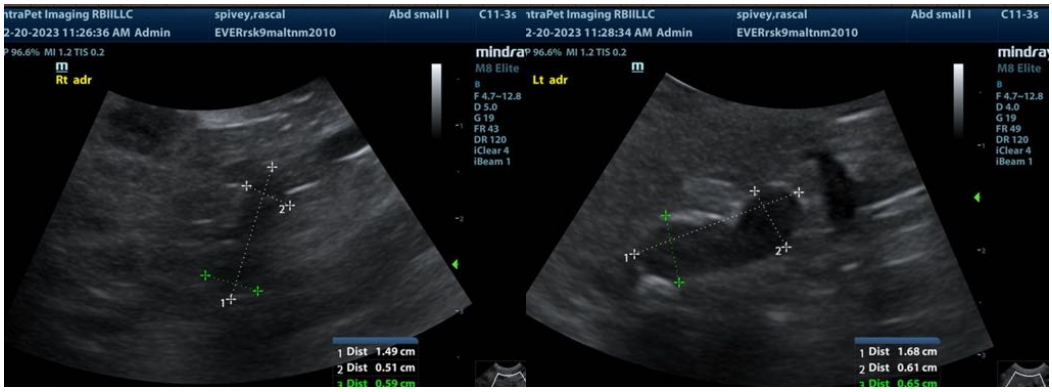
Potential Causes of Diabetic Dysregulation

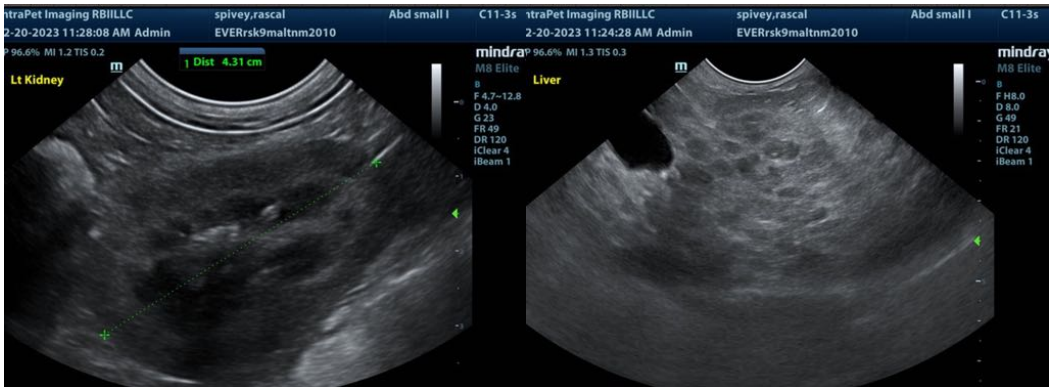
This is a suggestive checkoff list when faced with an unregulated diabetic patient:

UTI
Dietary indiscretion/intolerance
Pancreatitis
Hyperthyroidism/hypothyroidism
Exogenous steroids (including topical eye meds)
Cushing's
Acromegaly
Owner compliance
Insulin quality issues
Antibodies to insulin
Underlying Neoplasia
Diffuse liver disease

Internal medicine consult can be utilized through Sonopath.com. You can select the internal medicine drop down at http://spa.sonopath.com/.
One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services







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
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