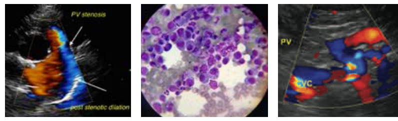


DATE
8/20/21

PATIENT
Hershey Outten

SPECIES
Canine

BREED
Pitbull Mix

SEX
Spayed Female

AGE
2008

WEIGHT
83.5 lbs

INTERPRETED BY
Eric Lindquist, DMV
DABVP, Cert. IVUSS

HOSPITAL NAME
Animal Emergency Hospital

REFERRING VET
Dr. King

INVOICE
91409

PRESENTING CLINICAL SIGNS

Referral. History: Date: 08-19-2021 Notes: known DM, on 35 units Novolin BID Has US in May, overall NSF, suspicious for Cushings. Not doing well, BG running high at home, 500-600 Labwork RDVM 2 days ago--increase BUN 40, ALKP>993, ALT 122, GGT 22 RDVM was suggesting a LDDS. Not better at home, referral for US /IVF and continued care on Gaba and Cosequin for Arthritis--- has been having trouble moving on hind, will lay with legs splayed out, urinate where sitting. seems spacey/distant.
Current Medications: Buprenorphine 0.6mg/mL, Insulin - Humulin R U-100 Injection, Omeprazole Capsules 20mg
Lab Results: Attached
Date of Previous IntraPet Ultrasound: No previous
Sedation: Ace for AUS
Stat Report: not requested

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. The right kidney measured 7.41 cm. The left kidney measured 8.05 cm with slight pyelectasia measuring 0.39 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 right adrenal gland measured 3.0 x 0.1 x 0.88 cm at the caudal pole and 0.94 cm at the cranial pole.

Spleen

The **spleen** presented discrete and diffuse hypoechoic micronodular parenchyma. The capsule was generally smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. These changes are consistent with age related benign nodular hyperplasia. However, early hemangiosarcoma, lymphoma or mast cell neoplasia could not be entirely ruled out. Fine needle aspirate or biopsy following coagulation panel would be ideal especially of any weight loss is an issue. Otherwise, follow up ultrasound in 3-4 weeks to track these changes would be a more conservative approach.

Liver

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia.

Gastrointestinal
The **stomach** was filled with ingesta. The intestines were 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.

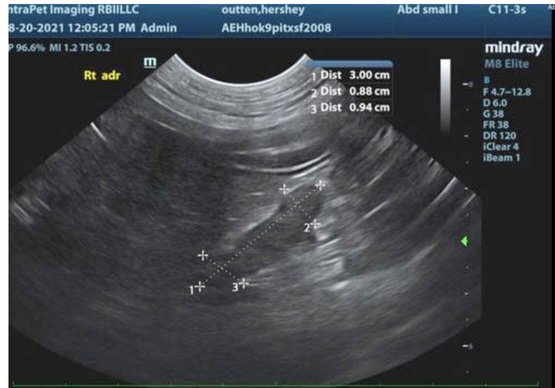
Pancreas
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

ULTRASONOGRAPHIC FINDINGS
Minor diabetic nephropathy. Slight renal pyelectasia.
Diabetic hepatopathy with minor remodeling.
Bilateral adrenal hypertrophy.
Micronodular hyperplasia splenic pattern.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
There is a potential for underlying PDH. If the urine specific gravity is less than 1.020 then work-up for PDH is indicated. Urinary work-up is warranted. If any urinary tract infection is present then this may be the underlying cause of dysregulation +/- the presence of emerging PDH/Cushing's.

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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outten,hershey
Abd small I
C11-3s
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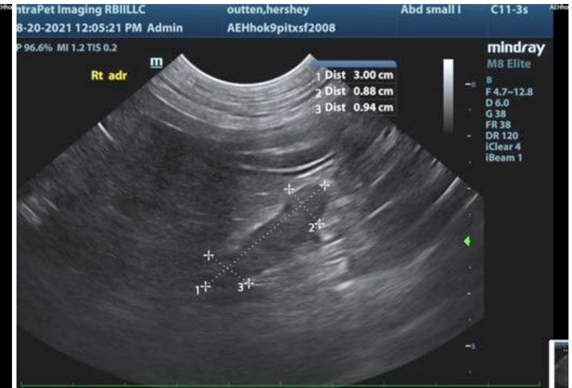
Rt adr
1 Dist 3.00 cm
2 Dist 0.88 cm
3 Dist 0.94 cm
mindray
M8 Elite
B
F 4.7-12.8
D 6.0
G 38
FR 38
DR 120
iClear 4
iBeam 1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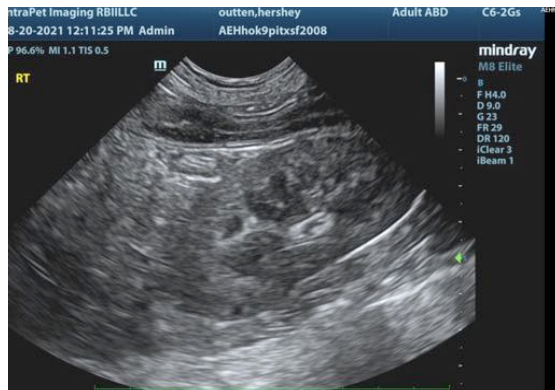
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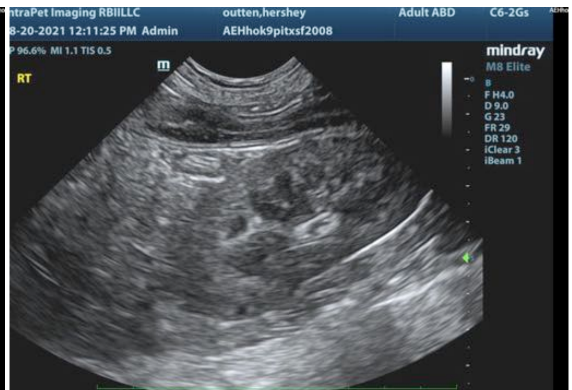
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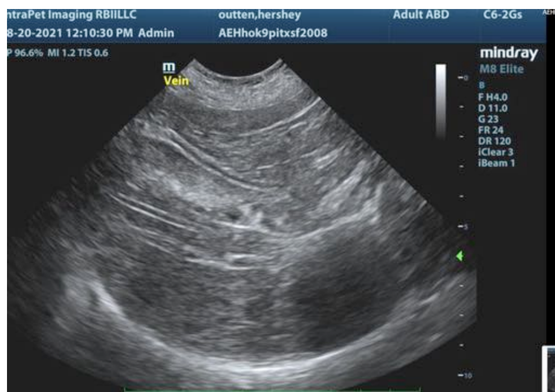
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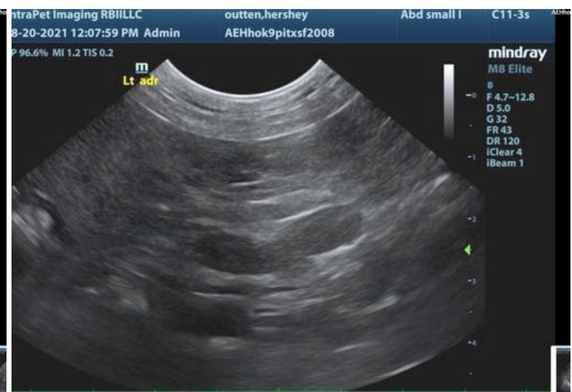
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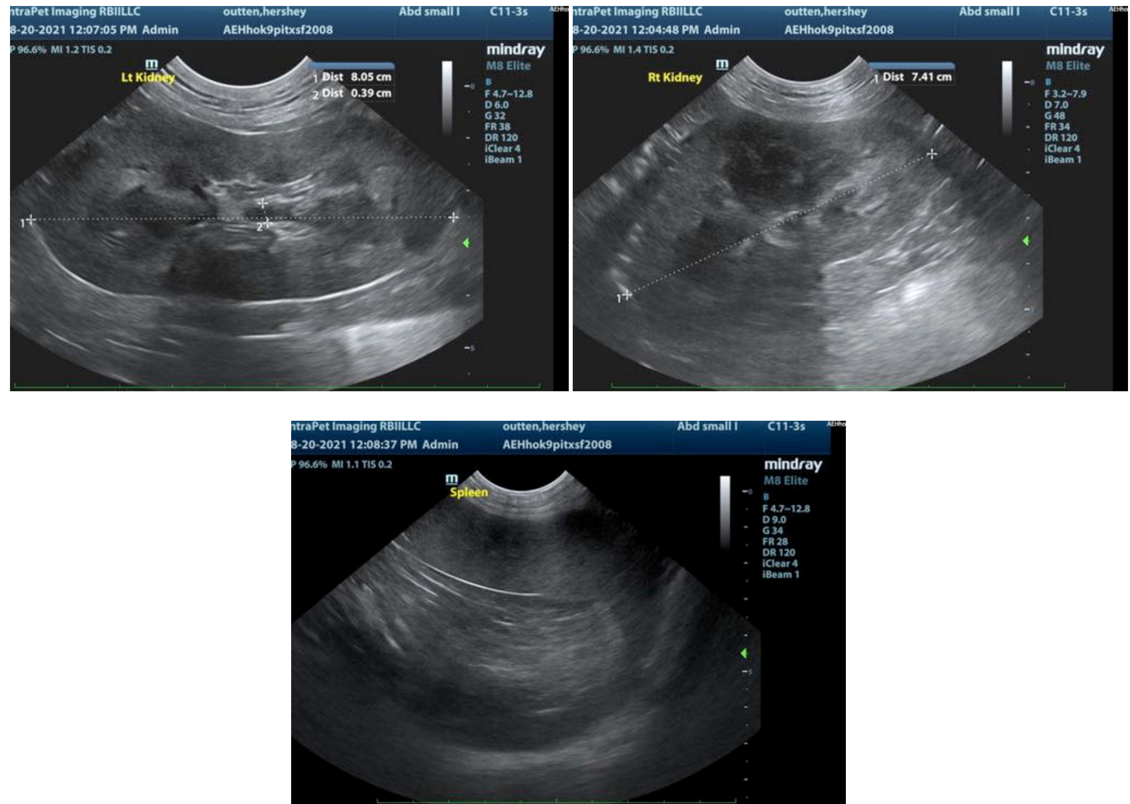

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
Eric.Lindquist@SonoPath.com