


**PATIENT PRESENTING CLINICAL SIGNS**

Sophie Bolcar History: p presented for lethargy, anorexia, HL weakness. p is known diabetic. Diagnosed with DM ~8 weeks ago. BW today revealed Hyperglycemia Hyperosmolar Syndrome.

**SPECIES Abnormal PE/Chem/CBC/UA Results**

Canine  
 CPL: normal  
 BUN>120  
 Creat 5.88  
 U/A pending

**BREED**

Golden Retriever

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**
**Urinary System**
**SEX**

Spayed Female

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. The region of the trigone is normal.

**AGE**

13 years

The left kidney is normal size (7.05 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. The cortex is hyper relative to the spleen. Mild pyelectasia is present (0.21 cm in the transverse plane). There is no evidence of nephroliths, infarcts or hydroureter.

**WEIGHT**

28.3 lbs

The right kidney is normal size (8.37 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. The cortex is hyper relative to the spleen. Trace pyelectasia is present. A small, cortical cyst is observed at the lateral aspect. There is no evidence of nephroliths, infarcts or hydroureter.

**INTERPRETED BY**

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

**Adrenal Glands**

The region of the adrenal glands is evaluated. No obvious pathology is observed.

**IMAGING PERFORMED BY**

Dr Carver

**Spleen**

The spleen is normal in size (1.50 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**

Animal Emerg  
 Hospital Volusia

**Liver**

The liver is subjectively prominent in size with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely heterogenous, with several, small, ill-defined, hyperechoic nodules/areas. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

**REFERRING VET**

Dr Carver

The gall bladder is moderately distended. The wall is diffusely thickened (up to 0.73 cm) and hypoechoic with a "double-walled" effect. A small amount of echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

**Gastrointestinal**

The gastric lumen is not distended. The gastric wall is normal in thickness with a normal layering pattern. 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 colonic wall is normal. There is no evidence of an obstructive pattern.

**INVOICE**

11882

**DATE**

11.21.22

### ***Pancreas***

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional 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.

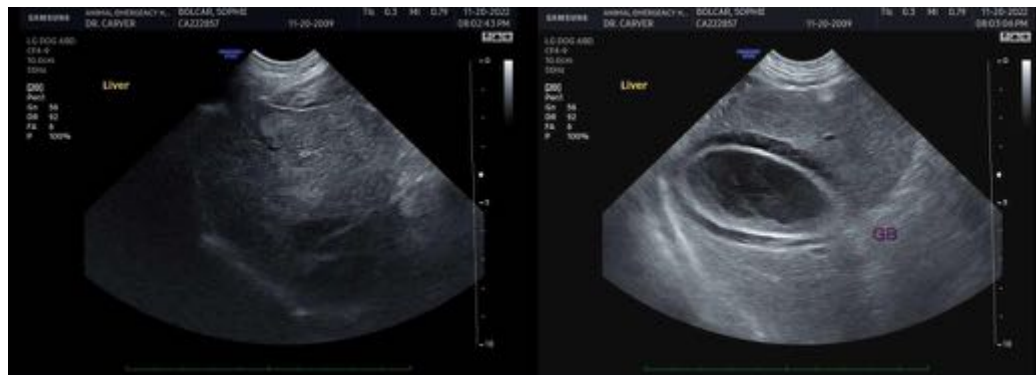
## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Bilateral, nonspecific, chronic renal changes with trace pyelectasia
- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely. However, correlation with the patient's liver values is recommended.
- The gallbladder wall changes could be consistent with cholecystitis, hypoalbuminemia, anaphylaxis, increased hydrostatic pressure (congestive heart failure), immune-mediated disease, other.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Supportive care for Hyperglycemic Hyperosmolar Syndrome is recommended, including judicious IV fluid therapy, regular insulin and other symptomatic measures.
- Given the azotemia, consider the following:
  1. Urine culture and sensitivity
  2. UPC (if proteinuria is present in the absence of infection)
  3. Baseline blood pressure measurement
  4. Serial monitoring of the renal values to assess for progression
- Also consider three-view thoracic radiographs are recommended to evaluate cardiopulmonary status.





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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