

**DATE**

3/16/22

PRESENTING CLINICAL SIGNS

Unregulated diabetes, PU/PD, Hepatopathy. Has had a murmur as far back as 2017. Grade 4/6 systolic murmur as of 2/24/22.

Current Medications: NPH 3 units BID.

PATIENT

Lab Results: High blood glucose consistent with diabetes; ALT 529, ALKP 382.

Scotlin Payton

Radiographs:

Date of Previous IntraPet Ultrasound: 7/2/20. See attached.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, RDMS.

SPECIES

Canine

BREED

Miniature Schnauzer

SEX

Neutered male

AGE

2/17/10

WEIGHT

5.35 kg

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

HOSPITAL NAME

BPH Towson

REFERRING VET

Dr. Chadha

INVOICE

96936

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 prostate was prominent and focally mineralized. The prostate was uniform similar to the prior sonogram and measured 0.93 cm.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 5.0 cm. The left kidney measured 4.42 cm.

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 1.65 x 0.66 cm at the cranial pole and 0.47 cm at the caudal pole. The left adrenal gland measured 1.83 x 0.66 cm at the caudal pole and 0.54 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

Exam of the cranial abdomen demonstrated excessive **liver** size and swollen contour. Mild, coarse architecture was noted with increased portal markings and minor parenchymal remodeling is suggestive of an inflammatory component. Minor excessive GB debris was noted with the presence gall bladder dilation and precipitate without the overt formation of mucocele but this may be an issue in the future. This type of liver presentation typically is associated with slow and gradual SAP elevations with low-grade ALT rise. USG-FNA sampling is encouraged if more aggressive LE profiles are present such as ALT > 200 or rapid rise in SAP. These presentations are usually reactive hepatopathies owing to other disease processes either endocrine

(Diabetes, Hypothyroidism, Cushing's disease), "antigen surveillance" from the gut/pancreas, or idiopathic breed predisposed progressions.

Gastrointestinal

The **gastrointestinal tract** revealed diffuse, hyperechoic fogging or overlay throughout the small intestine as well as areas of mucosal striations and speckling. This striation + fogging effect appeared to exclusively affect the mucosal layer with the submucosa, muscularis and serosa left in-act. Reactive mesentery was present associated with the serosa indicative of active inflammation. This is most consistent with protein losing enteropathy/lymphangectasia. Full thickness biopsies or endoscopic-guided biopsies would be ideal to confirm. No obstructive disease or obvious suspicion of neoplasia.

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

Stable abdomen.

Benign hepatopathy with remodeling.

Age related pancreatic changes.

Mucosal fogging. Possible emerging lymphangectasia.

Prominent pancreas, history of pancreatitis is likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The albumin levels should be evaluated. FNA of the liver could be considered for further definition of inflammatory cell type. Subxiphoid palpation is recommended to assess for any discomfort in the region of the pancreas. Low-grade inflammation is possible. There was no significant progression from the prior sonogram.

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

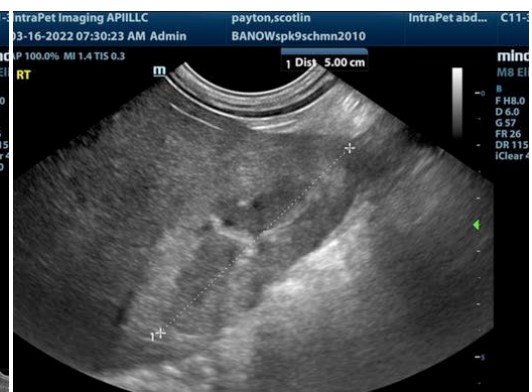
Owner compliance

Insulin quality issues

Antibodies to insulin

Underlying Neoplasia

Diffuse liver disease





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.

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