



PATIENT PRESENTING CLINICAL SIGNS

Milo Belz

History: New grade V/VI murmur, syncope episodes, increased RR. neuro circling, anorexic, hypothyroidism, elevated liver enzymes. Current meds: Levothyroxine 0.2mg , O2

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: 1/31/2022- AST 81, ALT 1398, ALP 1987, GGT 41, Potass 5.6, Chol 447, BUN 38, T4 0.7

BREED

Chihuahua

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and visualized portion of the proximal urethra are normal

SEX

Neutered Male

The prostate is normal in size (0.59 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

AGE

16 years

The left kidney is normal size (3.66 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

11 lbs

The right kidney is normal size (3.99 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

Andrea Nicastro, DMV,
Diplomate DACVIM
(Small Animal
Internal Medicine)

Adrenal Glands

The left adrenal gland is normal size (0.48 cm at cranial pole) (0.49 cm at caudal pole) (1.28 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

IMAGING PERFORMED BY

Shari Reffi, CVT

The right adrenal gland is normal size (0.86 cm at cranial pole) (0.51 cm at caudal pole) (1.90 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

HOSPITAL NAME

Newton Vet

Spleen

The spleen is normal in size (1.16 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.

REFERRING VET

Dr. Barron

Liver

The liver is subjectively prominent in size with swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

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The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal.

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Gastrointestinal

The gastric lumen is mildly distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is segmentally dilated with chyme. 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. No obstructive or overt infiltrative disease is noted.

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely hyperechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic 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

- Diffuse non-specific hepatopathy. Top differentials include inflammatory/immune-mediated disease (i.e., chronic hepatitis, bacterial cholangiohepatitis, hepatotoxicosis (i.e., copper), accumulation), Leptospirosis, other hepatopathy. Infiltrative neoplasia is possible but considered unlikely in this patient based on the sonographic changes. A concurrent age-related (i.e., vacuolar hepatopathy and/or regenerative nodular hyperplasia) may also be present.

Secondary Findings

- Age-related pancreatic remodeling
- Bilateral degenerative renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Pre-and postprandial serum bile acids are recommended +/- blood ammonia level (to assess for hepatic encephalopathy). Consultation with a board-certified neurologist may also be warranted.
- Also consider Leptospirosis testing (i.e., blood and urine PCR, serology).
- Ideally hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy), would be performed. Surgical biopsies would be ideal as they are more representative of global organ pathology. If biopsies are pursued, aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation are recommended.
- Three-view thoracic radiographs should be performed prior to anesthesia, and anesthetic risk should be determined by the cardiologist



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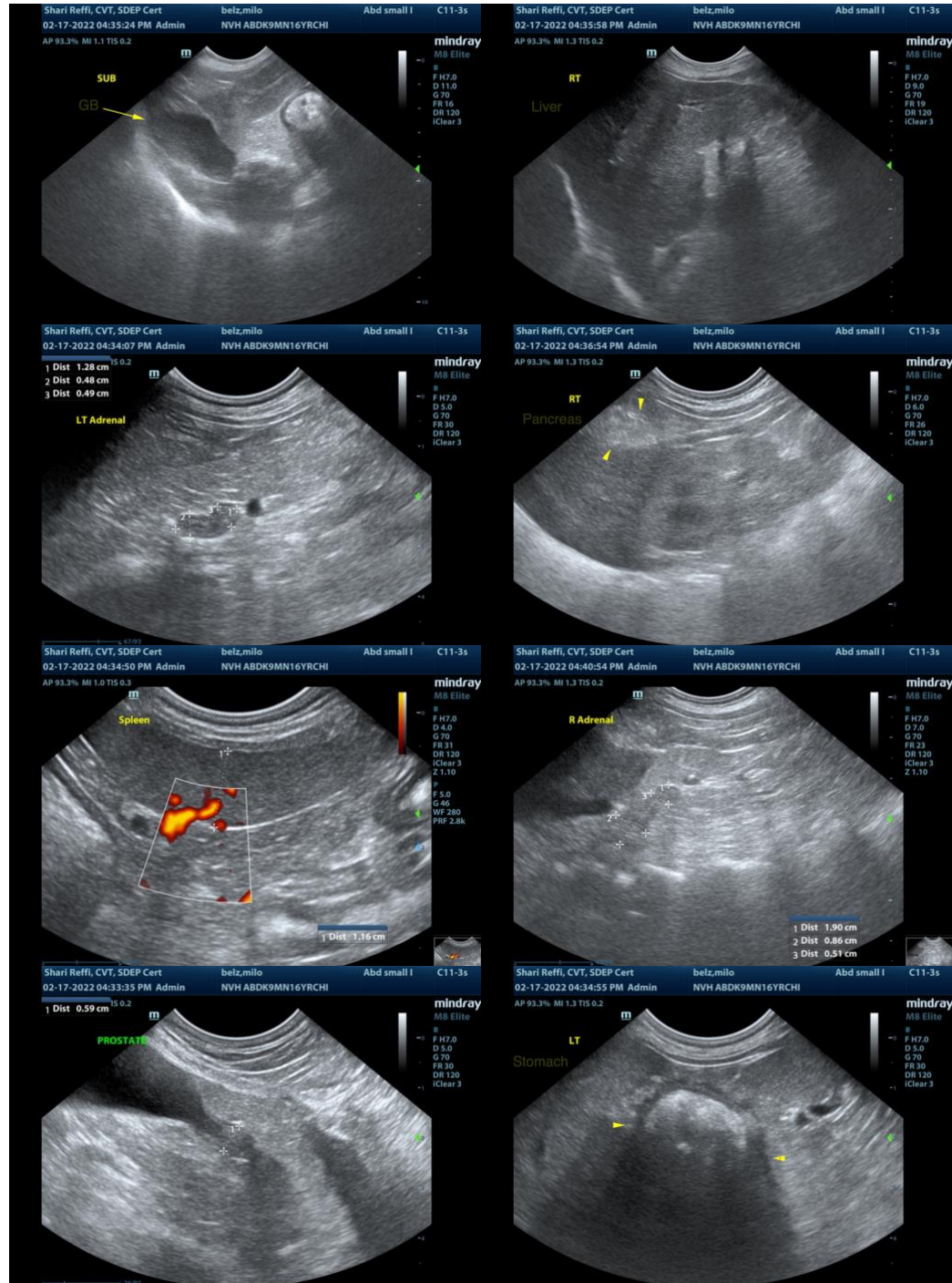
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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