



PATIENT

Jax Morningstar

PRESENTING CLINICAL SIGNS

Increased ALP, diabetic. Current meds: Insulin
Abnormal PE/Chem/CBC/UA Results: ALKP 603, Mono 992, Glu 321

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

BREED

Chihuahua X

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

SEX

Neutered Male

The prostate is normal in size (0.79 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

AGE

10 Years

The left kidney has a normal shape and size (5.39 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

25.7 Pounds

The right kidney has a normal shape and size (5.53 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

INTERPRETED BY

Kathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)

The left adrenal gland is normal/borderline “plump”, measuring 0.72 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

IMAGING PERFORMED BY

Shari Reffi, CVT

The right adrenal gland is normal/borderline “plump”, measuring 0.61 cm at the cranial pole, 0.93 cm at the caudal pole, and 2.05 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is somewhat atypical in appearance in that it is heterogeneous with an irregular hyperechoic area towards the caudal pole. There is no overt mass effect or evidence of vascular invasion visualized.

HOSPITAL NAME

Mount Olive VH

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is a mixed echogenic, hypoechoic mass/nodule visualized measuring 1.1 cm x 0.81 cm that deviates the splenic capsule.

REFERRING VET

Dr. Logan

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

INVOICE

40490

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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8/16/22



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Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Other

A brief view of the heart was submitted. No significant pericardial effusion was seen.

PRIMARY FINDINGS

- Hypoechoic, mixed echogenic splenic mass/nodule – Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. This is likely consistent with a diabetic hepatopathy.
- “Plump” adrenal glands with anil-defined hyperechoic region in the caudal pole of the right adrenal gland – The significance of this is unclear. The adrenals are not overtly enlarged, but appear somewhat prominent. Additionally, there is an irregularity on the right adrenal. Recommend blood pressure evaluation and continued monitoring.

SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is



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unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

SPECIES

No focal lesions are visualized associated with the liver to explain the elevation in ALP. I suspect this is most consistent with a diabetic hepatopathy, but both adrenal glands are somewhat “plump”, and there is an irregular area on the right adrenal. Recommend blood pressure evaluation and a recheck ultrasound of the right adrenal gland in approximately 2-3 months to look for progression of this lesion.

Canine

BREED

There is a discrete, mixed echogenic, hypoechoic mass/nodule associated with the spleen. This lesion deviates the splenic capsule. Options moving forward would include a splenectomy for both diagnostic and therapeutic purposes, or a fine needle aspirate.

Chihuahua X

SEX

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

Neutered Male

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10 Years

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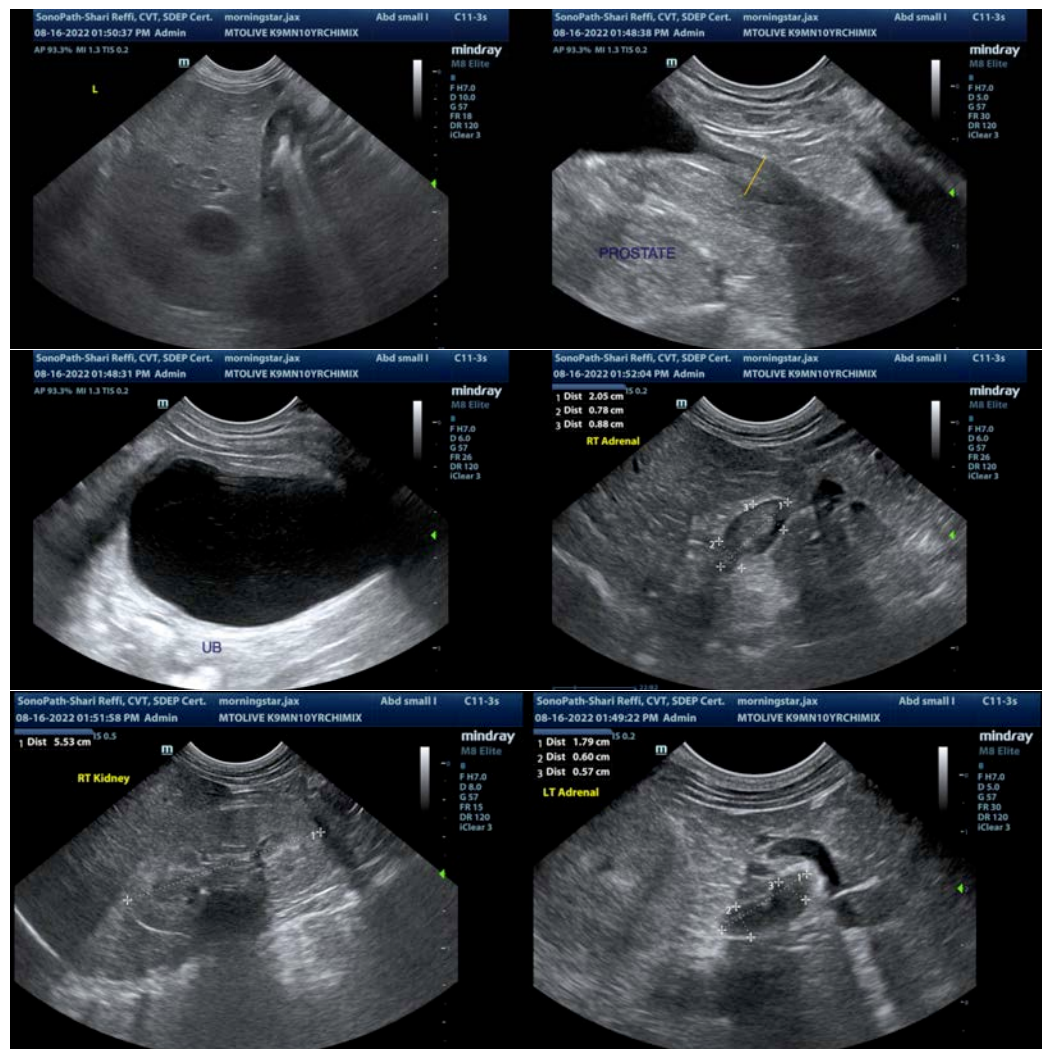
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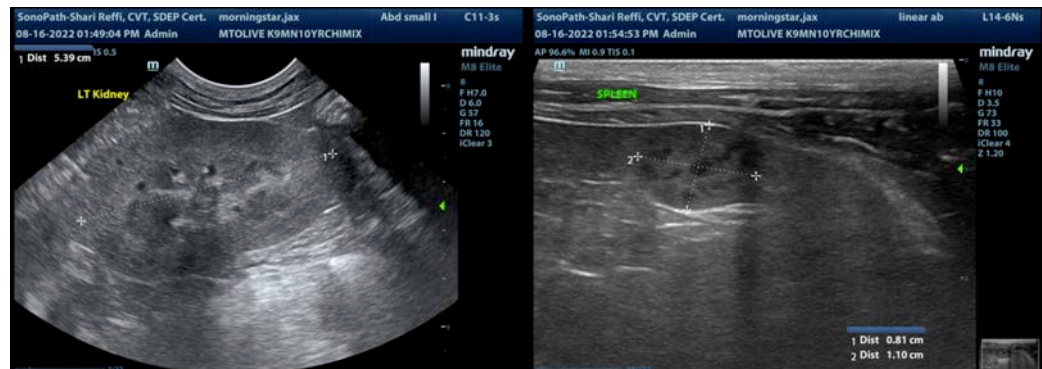
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com