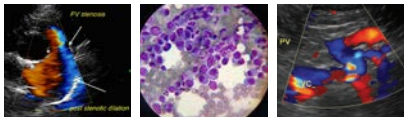
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

DATE

6/23/22

PATIENT

Oreo Hall

SPECIES

Canine

BREED

Chih Tzu

SEX

Spayed Female

AGE

6/24/13

WEIGHT

16.4 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Andi Parkinson RDMS

HOSPITAL NAME

Lake Shore Pet Hospital

REFERRING VET

Dr. Ashley

INVOICE

39027

PRESENTING CLINICAL SIGNS

Presented to Emergency Hospital for anorexia and ADR. Had extremely elevated liver enzymes in house. Pet still is not eating much and does not appear to be improving.

Current Medications: Enrofloxacin Flavor Tabs 68 mg Give 1 tablet, by mouth, once daily, Clavamox 125mg 1 tab once daily, Prednisone 5mg 1.5 tab once daily, Entyce 30mg/ml 0.75ml once daily, Denamarin 225mg 1 tab once daily.
Lab Results: Elevated liver enzymes.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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.

The left kidney has a normal shape and size (4.48 cm) with a single non-obstructive nephrolith. Overall echogenicity is normal with adequate 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.

The right kidney has a normal shape and size (4.11 cm). Overall echogenicity is normal with adequate 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

The left adrenal gland is borderline large in size measuring 0.66 cm at the cranial pole, 0.84 cm at the caudal pole, and 2.93 cm in length. It is observed in its normal position cranial to the left renal artery. It is slightly irregular.

The right adrenal gland is borderline large in size measuring 0.81 cm at the cranial pole, 0.66 cm at the caudal pole, and 1.43 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 abnormal in appearance in that the cranial pole is large and irregular, and slightly hyperechoic as compared to the caudal pole. This region of the cranial pole measures 0.81 cm x 0.75 cm. There is no obvious evidence of vascular invasion. Findings are consistent with a nodular cranial pole of the right adrenal.

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. No focal parenchymal abnormalities are visualized.

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.

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.

Gastrointestinal

The stomach is dilated with a large amount of fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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 uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. Duodenum wall measured 0.32 cm. Jejunum wall measured 0.27 cm. Mild mucosal speckling of the duodenum is present. 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.

ULTRASONOGRAPHIC FINDINGS

- Borderline enlarged irregular adrenal glands with an irregular cranial pole of the right adrenal gland – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended. The irregularity at the cranial pole of the right adrenal gland could represent a benign lesion such as focal hyperplasia, an adenoma, or an early neoplastic lesion.

- 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.

- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

- Large amount of ingesta visualized within the gastric lumen – correlate with feeding history and abdominal radiographs. If the patient was adequately fasted, consider delayed gastric emptying or a partial outflow tract obstruction (none observed).

- Subjective mild small intestinal thickening with mucosal speckling – Bright mucosal speckling has been proposed to represent dilated lacteals or focal accumulation of mucus, cellular debris etc.. in the mucosal crypts of the small intestine.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

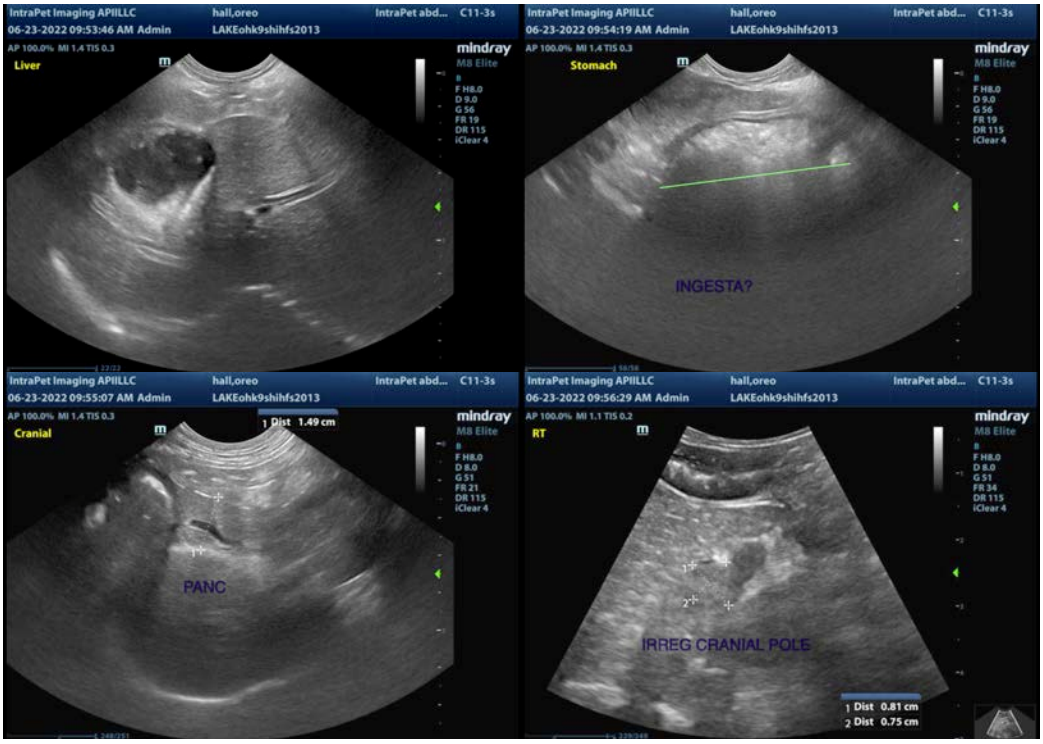
Both adrenals appear somewhat enlarged and irregular. There is a focal area of irregularity on the right adrenal. Recommend a blood pressure evaluation, and if signs of Cushing's are present, adrenal function testing when this patient is feeling better. Additionally, I would consider either continued monitoring of the lesion on the right adrenal gland with ultrasound, or even a CT scan to get better detail and check for any vascular involvement.

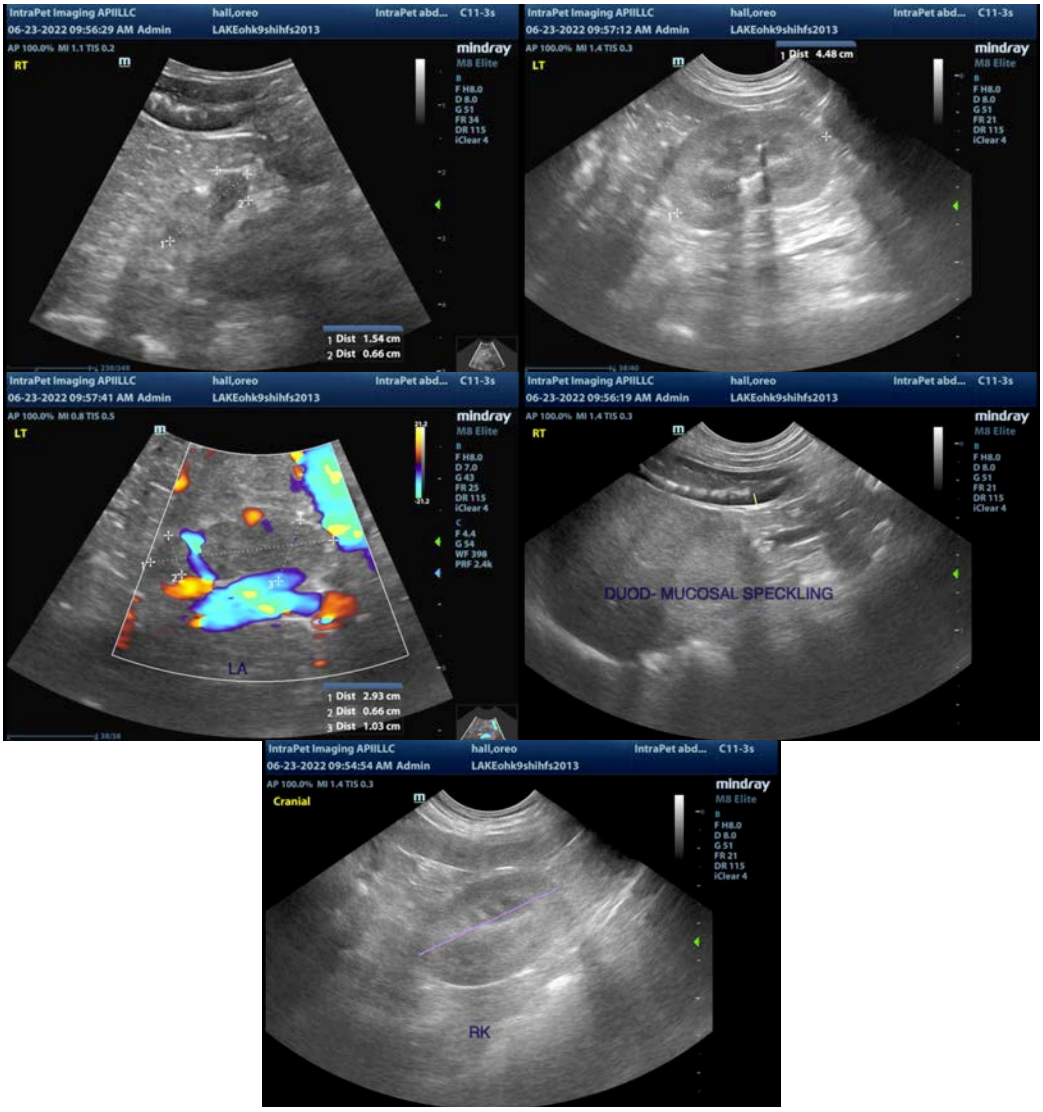
The liver is large and heterogeneous. No focal lesions are visualized to explain the elevation in liver enzymes reported. It is unclear based on the lab work provided if this is solely an ALP elevation, or if there are elevation in bilirubin, ALT, etc. as well. If bilirubin levels are not elevated, consider a liver function test and a fine needle aspirate of the liver. If this is not helpful, a liver biopsy with histopathology may be necessary. Additionally, consider Leptospirosis testing if clinically appropriate.

There is a moderate amount of debris in the gallbladder, but this does not appear to be significantly inflamed at this time. Recommend continued monitoring. Ursodiol therapy could be considered.

There appears to be a moderate amount of ingesta within the gastric lumen. Correlate with feeding history and abdominal radiographs. If the patient has been adequately fasted, consider the possibility of ingested foreign material.

The pancreas is visible, but does not appear overtly inflamed. Correlate with CPL levels, as sometimes the ultrasonographic severity of pancreatic disease does not correlate with clinical severity.





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