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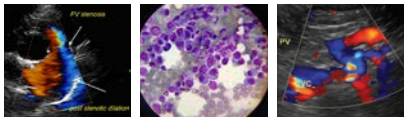

SonoPath
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DATE

9/24/21

PATIENT

Lyric Amtmann

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

3/28/10

WEIGHT

9.5 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Timonium AH

REFERRING VET

Dr. McMichael

INVOICE

25783

PRESENTING CLINICAL SIGNS

History: Presented for annual exam - historic suspected behavioral overgrooming of caudal abdomen. h/o FIC. Bloodwork abnormal - ALT: 459, Alkp: 100, AST: 112, Tbili normal.

Current Medications: Gabapentin 200mg for ultrasound
Dasuquin, Viralyse.
Lab Results: ALT: 459, AST: 112, ALKP: 100, BNP normal, T4: 2.7.
Radiographs: Not provided by the veterinarian.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: Gabapentin administered prior to the scan.
Stat Report: STAT report not requested by the veterinarian.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. 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 calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

The left kidney has a normal shape and size (3.88 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.

The right kidney has a normal shape and size (3.88 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 normal in size measuring 0.32 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.

The region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect.

Spleen

The spleen is normal/borderline enlarged in size (1.2 cm in diameter at the hilus), 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 subjectively normal in size, and 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 gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.36cm 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 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. Jejunum wall measured 0.25 cm. 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 prominent and hypoechoic as compared to the surrounding isoechoic 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.

PRIMARY FINDINGS

- 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.

- Hypoechoic, prominent pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- Shadowing material in the gastric lumen – Correlate these findings with feeding history. Both the stomach and small intestine are moderately dilated with fluid and shadowing material. If the patient was adequately fasted before the ultrasound, then consider such differentials as delayed gastric emptying or partial gastric outflow obstruction. Correlate with abdominal radiographs.

SECONDARY FINDINGS

- Echogenic urine in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.

- Borderline large spleen with normal appearing parenchyma – This could be an incidental findingin a larger cat, or could be consistent with infiltrative disease. Cytology would be necessary to obtain more information.

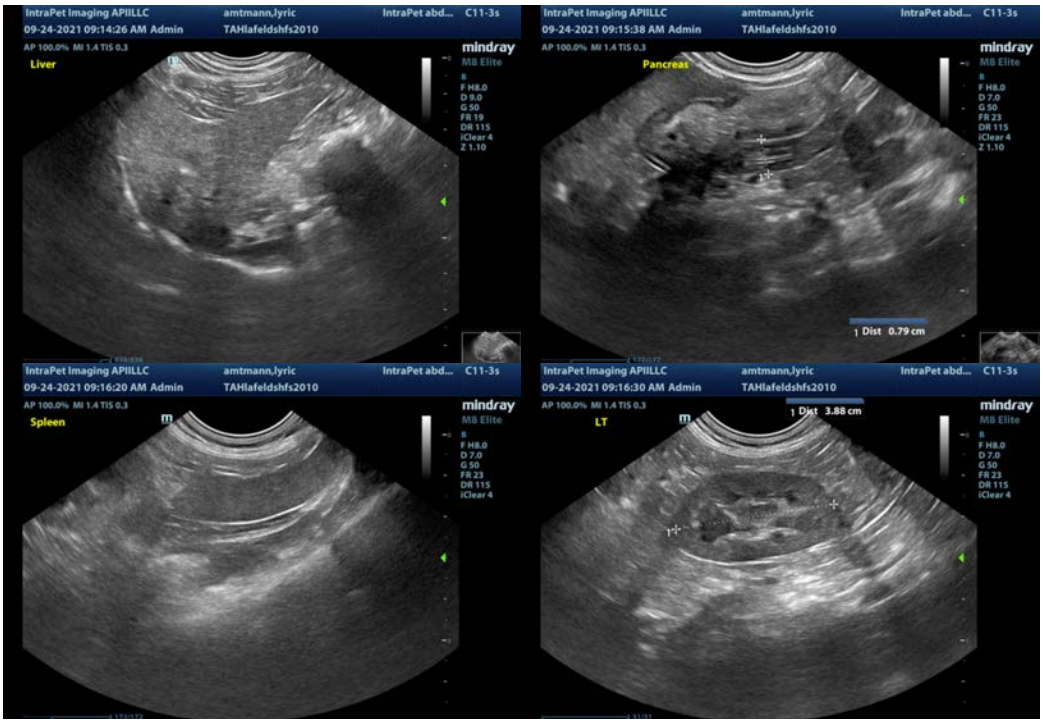
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

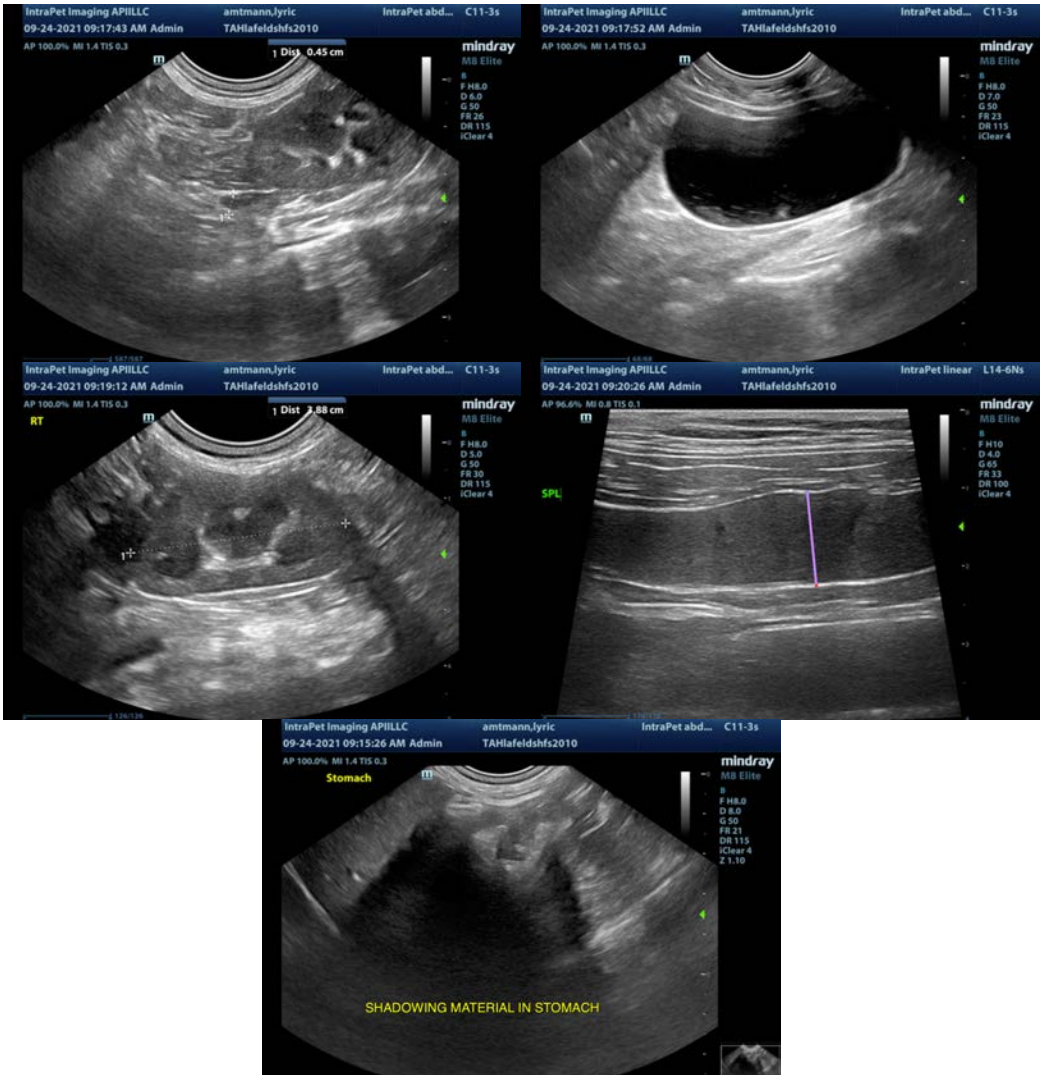
The changes observed on today's scan were relatively mild and non-specific. An obvious focal cause for the ALT elevation reported was not identified. Possible systemic causes for an elevated ALT include

hyperthyroidism (already tested for), diabetes, sepsis, toxicity (medications, etc.), FIP, etc. Many of these are ruled out based on normal lab work. If metabolic disease seems unlikely, then a primary hepatopathy is suspected (infectious, inflammatory, lipidosis, neoplasia, etc.).

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc.
- Recommend thyroid evaluation (if not already done)
- If not already done consider pre and post prandial bile acids to evaluate liver function
- Consider fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- If cytology is not helpful and there is no response to therapy, consider liver biopsy with samples obtained for histopathology and culture.
- Triaditis could be considered based on the prominent pancreas. Consider therapy for cholangiohepatitis (fluids, antibiotics , +/- ursodiol,+/- steroids), testing for pancreatitis and evaluation for IBD (GI panel to Texas A&M GI lab)

Recommend urinalysis and culture due to the echogenic debris in the urinary bladder. Recommend continued observation for possible foreign material in the stomach. A fine needle aspirate of the spleen could be considered at the same time as the liver. Recommend 3-view thoracic radiographs (whole body films).





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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