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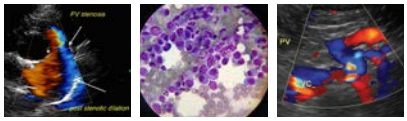

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

3/30/22

PATIENT

Lily Agic

SPECIES

Canine

BREED

Bichon Frise

SEX

Spayed Female

AGE

8/28/09

WEIGHT

15.9 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Stephanie Pearce RDCS, RVT

HOSPITAL NAME

Northwind AH

REFERRING VET

Dr. Wilson

INVOICE

36534

PRESENTING CLINICAL SIGNS

P presented for an annual exam 1/2022 and had routine bloodwork performed which revealed a moderate increase in ALT. p was asymptomatic, so o elected medical management with liver support meds and antibiotics. At this time, p was also started on Hill's I/D. A 1 month recheck revealed mild improvement in ALT. P was treated with Denamarin for an additional month. P came in 3/25 with complaint of vomiting and lethargy. ALT had significantly increased since then. p was off meds 1 week prior to recheck.

Current Medications: Denamarin 225mg 1 SID since 1/2022.
Lab Results: 3/25/2022- ALT 809, ALP 215, GGT 20.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Requested. – Patient was not fasted for scan. Owner and DVM would like to proceed with ultrasound.

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 (5.16 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 (5.04 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 0.57 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 right adrenal gland is normal in size measuring 0.54 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal.

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. There is an ill-defined hyperechoic nodule visualized near the gallbladder, measuring 1.32 cm x 0.72 cm.

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 mild 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 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 large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with mild pancreatitis. Visualization of the right limb of the pancreas is limited due to a large amount of ingesta within the gastric lumen.

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.

There is a small shadowing structure caudal to the left kidney measuring 0.58 cm. This appears very superficial in the abdomen. Correlate with abdominal radiographs. There is no surrounding inflammation in this area.

PRIMARY FINDINGS

- Prominent, hypoechoic left limb of the pancreas – The pancreatic changes are most consistent with mild pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.

- Large, heterogeneous liver with ill-defined hyperechoic nodule – 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.

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

SECONDARY FINDINGS

- Hyperechoic foci visualized within the spleen – Findings are most consistent with benign myelolipomas. Recommend continued monitoring, as an underlying neoplastic process cannot be excluded.

- Small, hyperechoic, shadowing structure caudal to the left kidney – The nature of this lesion is unclear. There is no surrounding inflammation. Correlate with abdominal radiographs and recommend continued monitoring. Suspect this is an incidental finding.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A small, focal, hyperechoic nodule is visualized within the liver. This trends towards a benign lesion, but an underlying neoplastic process cannot be excluded as a possibility. The liver parenchyma in general appears somewhat heterogeneous.

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...

- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history

- If not already done, consider pre and post prandial bile acids to evaluate liver function

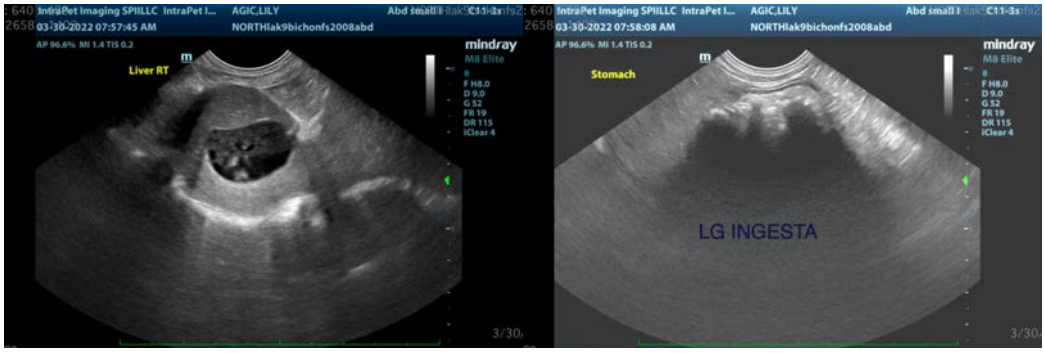
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with cushings are present, consider adrenal function testing (ACTH stim)

- Recommend a fine needle aspirate of the “normal” liver tissue and the hyperechoic nodule (if able to reach).

- If no response to medical care (denamarin, antibiotics,+/- ursodiol etc…) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

The left limb of the pancreas appears prominent and hypoechoic with mild hyperechoic mesentery surrounding. Given the symptoms of acute vomiting, consider pancreatitis as a possibility. Consider a quantitative PLI measurement.

There is a small, hyperechoic shadowing structure visualized caudal to the left kidney. I cannot identify an association with any organs or associated inflammation, etc. Recommend correlating with abdominal radiographs and continued monitoring, as I suspect this is an incidental finding.

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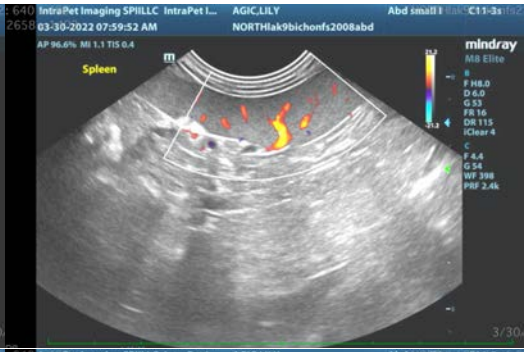
AP 96.6% MI 1.4 TIS 0.2
Liver
1 Dist 1.32 cm
2 Dist 0.72 cm
mindray
M8 Elite
HYPER NODULE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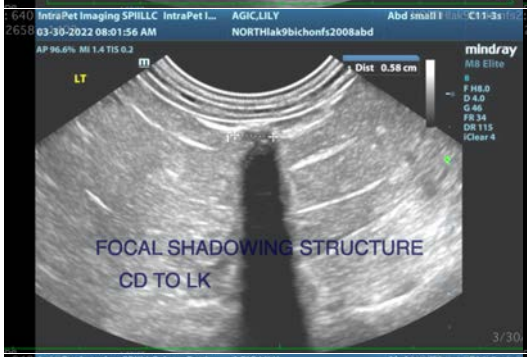
AP 96.6% MI 1.1 TIS 0.4
Spleen
mindray
M8 Elite


IntraPet Imaging SPIILLC IntraPet I... AGIC,LILY Abd small I C11-3s
03-30-2022 08:00:27 AM NORTHlak9bichonfs2008abd
AP 96.6% MI 1.4 TIS 0.2
LT
1 Dist 5.16 cm
mindray
M8 Elite


IntraPet Imaging SPIILLC IntraPet I... AGIC,LILY Abd small I C11-3s
03-30-2022 08:01:04 AM NORTHlak9bichonfs2008abd
AP 96.6% MI 1.0 TIS 0.2
LT
1 Dist 1.88 cm
2 Dist 0.57 cm
3 Dist 0.51 cm
mindray
M8 Elite


IntraPet Imaging SPIILLC IntraPet I... AGIC,LILY Abd small I C11-3s
03-30-2022 08:01:56 AM NORTHlak9bichonfs2008abd
AP 96.6% MI 1.4 TIS 0.2
LT
1 Dist 0.58 cm
mindray
M8 Elite
FOCAL SHADOWING STRUCTURE
CD TO LK


IntraPet Imaging SPIILLC IntraPet I... AGIC,LILY Abd small I C11-3s
03-30-2022 08:03:58 AM NORTHlak9bichonfs2008abd
AP 96.6% MI 1.4 TIS 0.2
RT
1 Dist 5.06 cm
mindray
M8 Elite


IntraPet Imaging SPIILLC IntraPet I... AGIC,LILY Abd small I C11-3s
03-30-2022 08:04:20 AM NORTHlak9bichonfs2008abd
AP 96.6% MI 1.0 TIS 0.2
RT
1 Dist 2.12 cm
2 Dist 0.54 cm
3 Dist 0.53 cm
mindray
M8 Elite


IntraPet Imaging SPIILLC IntraPet I... AGIC,LILY linear ab L14-6Ns
03-30-2022 08:11:27 AM NORTHlak9bichonfs2008abd
AP 96.6% MI 0.8 TIS 0.0
MID
1 Dist 0.25 cm
mindray
M8 Elite
SI

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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