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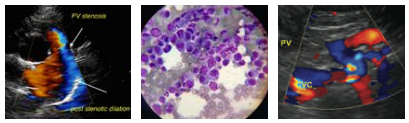

SonoPath
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DATE
10/8/21

PATIENT
Joshua Haack

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Neutered male

AGE
2011

WEIGHT
16.3 lbs

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

HOSPITAL NAME
Animal Emergency Hospital

REFERRING VET
Dr. Kalwa

INVOICE
92274

PRESENTING CLINICAL SIGNS

Foreign Body, Vomiting, & Appetite Decreased.
History: Date: vomiting, calcified region/object by gallbladder / stomach, ground glass/hazy SI.
Current Medications: Vitamin B12 1,000mcg/mL Injection (Per mL), Gabapentin Tablets 50mg, Pantoprazole (Protonix) 40mg/vial Injection (Per mL), Oral Buprenorphine 0.3mg/ml
Lab Results: PCV = 46 % (30 – 45)
TS = 8.8 g/dL (5.0 - 8.0)
Date of Previous IntraPet Ultrasound: No previous
Sedation: not needed
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 (5.14 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.

The right kidney has a normal shape and size (4.73 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

The left adrenal gland is normal in size measuring 0.51 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 0.51 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 large and measured 1.04 cm (normal is less than 1.0 cm). The spleen is hypoechoic, mildly mottled and prominent with a scalloped edge capsule.

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. There are numerous focal mineralizations within the hepatic parenchyma. This is most consistent with intrahepatic biliary stones and measured 0.5 cm, 0.41 cm. Additionally, there is a large mineralization that measured 1.0 cm and may be two separate stones. Either within or adjacent to the cystic duct the gallbladder does not appear overly distended. The gallbladder lumen is moderately distended. The wall of the gallbladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic, but there is some sandy debris present. There are numerous intrahepatic biliary stones visualized. Additionally, there is a large, 1.0 cm mineralization, which I

suspect is two larger stones either within or adjacent to the cystic duct. Lack of distension of the gallbladder makes me suspect that this is adjacent to the cystic duct. The common bile duct is measured distally at 0.37 cm.

Gastrointestinal

The stomach contains minimal luminal contents. 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 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 0.13-0.38cm in wall thickness) and the jejunum measured as normal (between 0.15-0.36cm.) 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 mottled 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

A moderate volume of free fluid was noted. There was a prominent, cranial abdominal lymph node that measured at approximately 1.0 cm. The omentum is generally hyperechoic and inflamed in the cranial abdomen.

Other

There was no significant pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- Heterogenous liver with intrahepatic biliary stones. 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.

- Large mineralization either adjacent to or within the cystic duct with dilation of the cystic duct. Shadowing in this area makes it difficult to determine if this is definitively within or adjacent to the duct.

- Large, scalloped mottled spleen. The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

- Prominent, mottled pancreas. The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

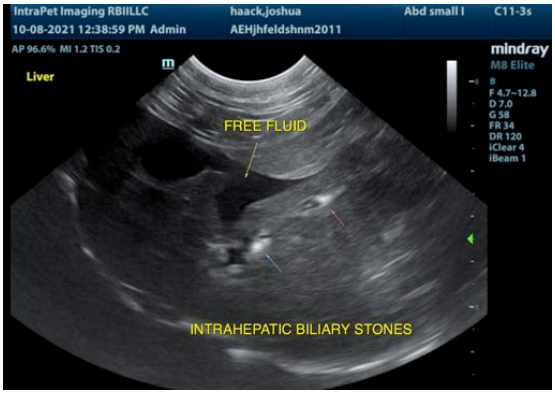
- Free abdominal fluid. I am concerned that this is likely inflammatory fluid. Differentials would be sterile versus bacterial peritonitis. I recommend sampling, cytology and culture.

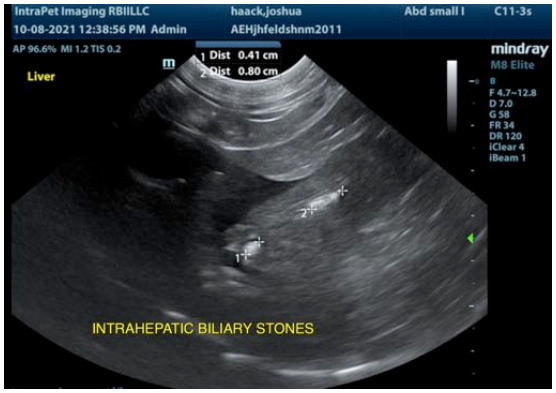
SECONDARY FINDINGS:

- Decreased corticomedullary distinction in both kidneys. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The findings are not consistent with a GI foreign body. Three are numerous intrahepatic biliary stones and a larger stone adjacent to the cystic duct. It is difficult to tell whether this is causing a true obstruction or not. Correlate with blood work. If the bilirubin is not elevated this seems less likely. Additionally, the gallbladder does not appear distended. I do not see evidence of rupture, but this cannot be 100% ruled out as a possibility as there appears to be a large amount of cranial abdominal inflammation. I recommend sampling of the abdominal fluid with fluid analysis and cytology +/- culture to look for evidence of septic peritonitis. Additionally consider a CT scan of the abdomen to determine if there are surgical options for this patient as I cannot definitively determine if this a bile peritonitis, reactive peritonitis, etc. I recommend three view thoracic radiographs.

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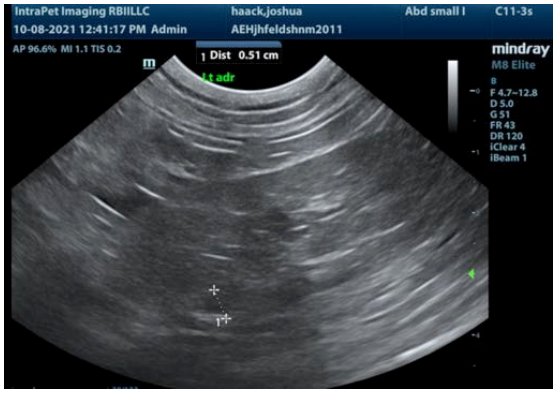
2 Dist 0.80 cm
Liver
mindray
M8 Elite
INTRAHEPATIC BILIARY STONES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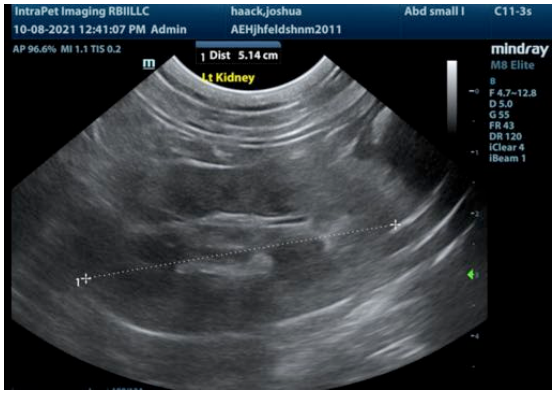
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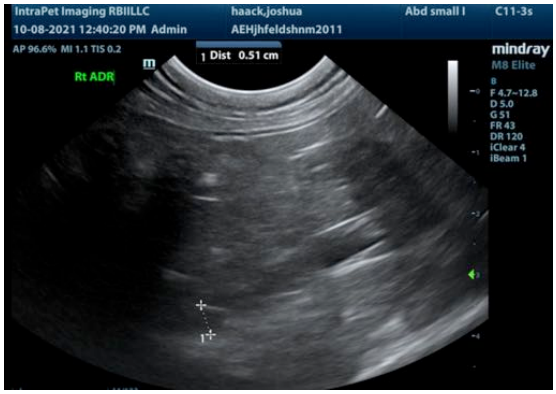
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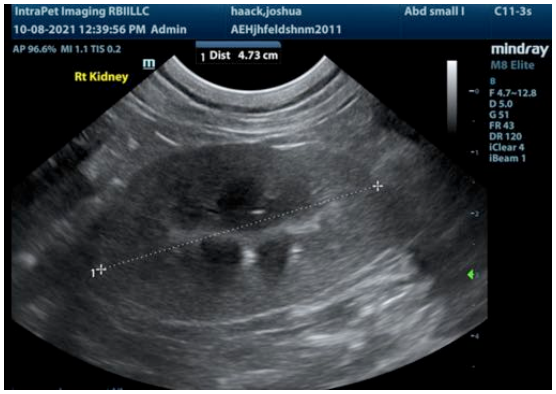
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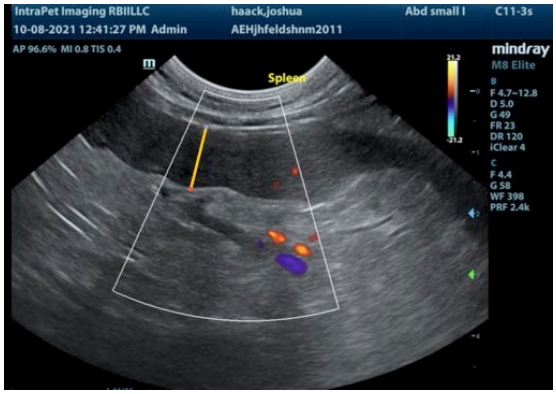
Rt Kidney
mindray
M8 Elite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C11-3s
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AP 96.6% MI 0.8 TIS 0.4
Spleen
mindray
M8 Elite

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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