

Report Requested By
Rocky Road Animal Clinic
Referring User: Samantha Smith
Submitted By: Jolly Pond
Clinic Email: info@mobileimagingvet.com
Phone: 7575656001
1934 Old Gallows Road, Vienna, VA, USA
Patient: Vincenzo Jones
Feline | DSH | 13 years | Neutered Male | 7 Lbs



Report Provided By
Sample Report, DVM
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PO Box 40398,
Arlington, 22204
Submitted: 11-Aug-2023 09:24 AM
Appointment Date: 11-Aug-2023
Closed: 12-Aug-2023 11:42 AM

Services

IMED Consultation

Abdominal Ultrasound

Clinical Findings

Pertinent Medical History (Laboratory Findings, Radiographic Findings, Current Medications (include dosages))

Recent weight loss of ~2.5 pounds since June 2018. No vomiting or diarrhea, normal appetite. PE - thin, unkempt hair coat - no palpable masses. P does have a history of cholecystitis (4/11/18) diagnosed with u/s, cytology and culture. Was treated with antibiotics and issue resolved. P gained weight from 4/18 (8.94#) to 6/18 (9.5#) BW 2/11/19 - ALT 178 rest wnl. When he had cholecystitis ALT was 780

Will this patient require sedation?

No

If Yes, Have you obtained owner approval for sedation?

Yes

If fine-needle biopsies are recommended, have you obtained owner approval to collect samples for cytology?

Yes

Has the patient been fasted for >12 hours?

Yes

Exam

Liver	<p>Normal size, shape and coarse echotexture. A mildly capsule deforming multi-cystic nodule is present in the ventral left liver measuring 1.0x1.8cm.</p> <p>It is difficult to discern the gallbladder from surrounding multi-focal cystic structures with thickened hyperechoic walls (1.1mm) that appear to be associated with the biliary system (likely dilated bile duct or cystic lesions associated with the biliary system). The largest of these structures measures 2.4x2.7cm. Some of these cysts contain avascular echogenic material.</p> <p>The common bile duct is moderately dilated (3.0-6.8mm) into the duodenal papilla which is not completely visualized but appears not obviously abnormal (~2.6mm width). The common bile duct wall is mildly thickened (1.1mm) and hyperechoic.</p>
Kidneys	<p>Both kidneys have coarse mild to moderately hyperechoic renal cortices which are disproportionately large. There is mild loss of the corticomedullary junction distinction as well as lobar scalloping. The left kidney has a blunted cranial and caudal pole.</p> <p>Mild diverticular mineralization is present bilaterally. Lt/Rt-2.9/3.9cm length</p>
Spleen	<p>Normal size (0.8cm depth), shape, and echogenicity. No focal lesions appreciated.</p>
Urinary Bladder	<p>The bladder is of relatively normal contour and thickness. No overt obstruction, uroliths, or neoplasia noted.</p>
Adrenal Glands	<p>Both adrenal glands were visualized and recognized as having normal shape, size(Lt/Rt-3.5/3.4mm), position, and echogenicity for this breed. No adrenal invasion in the vena cava, phrenic vein thrombosis, dystrophic mineralization or clinically significant nodular changes were noted.</p>

Pancreas

Mildly prominent (0.7-0.8cm depth) with a coarse moderately hypoechoic echotexture and mild-moderate increase in peripancreatic fat echogenicity.

Intestinal Tract

The stomach contains a moderate amount of gas with subjectively normal thickness and layering. The pylorus is visualized and free from outflow obstructions. Normal bowel layering, thickness, and motility. (Duodenum-2.7-3.0mm; Jejunum-2.2-2.9mm; Ileum-3.4mm)

The colon contains a large amount of gas with normal thickness (0.96mm), layering, and motility.

Report

Abdominal Ultrasound Interpretation

1. Liver - the findings are mild - DDX:

- a) Acute cholangiohepatitis
- b) Chronic cholangiohepatitis or active hepatitis
- c) Lymphocytic portal hepatitis
- d) Biliary cirrhosis
- e) Infiltrative neoplasia (lymphoma, mastocytosis, plasmacytoma)

2. Liver cystic mass - the finding is mild - DDX: cystadenoma, well-differentiated cystadenocarcinoma or biliary adenocarcinoma.

Hepatocellular carcinoma or hepatoma cannot be ruled-out. These masses are generally non-malignant/benign but can create clinical signs based on their sheer size and space-occupying nature. Where possible, surgical resection is the best therapy for these lesions.

3. Gallbladder/common bile duct-the findings are moderate-severe-DDX:

Common Causes:

- Cholecystitis/cholangiohepatitis
- Portal hypertension
- Hypoproteinemia/edema
- Right-sided congestive heart failure/edema
- Benign cystic hyperplasia (focal/multifocal)
- Partially empty GB with a relaxed wall
- Ascites

Less Common Causes:

- Adenoma/adenocarcinoma
- Cholelithiasis
- Sepsis
- Porcelain GB (echogenic wall mineralization, which may be associated with adenocarcinoma)

4. Kidneys - the findings are moderate - DDX:

-Chronic nonspecific change - Chronic glomerulonephritis vs. amyloidosis, chronic interstitial nephritis, chronic nephritis. (In cats, the loss of corticomedullary distinction is not unusual with chronic renal disease as interstitial fibrosis in the medulla renders its echogenicity similar to that of the cortex.)

-Acute renal failure/Nephritis (infectious, GN, toxic, etc.) vs. Acute-on-Chronic renal failure

- Lymphosarcoma
- Pyelonephritis

5. Pancreas - the findings are mild-moderate - DDX: pancreatitis vs. pancreatic neoplasia (adenocarcinoma)

Referral Consultations**Internal Medicine Report & Recommendations**

December 11, 2019

Case: Vincenzo Alvino (13y MC DSH)

Requesting practice - veterinarian: Mobile Imaging Veterinary Ultrasound - Kara Woody, DVM

Reason for consultation: Further assessment of hepatobiliary system based on recent abdominal ultrasound as well as history of previous infectious cholecystitis/choledochitis

Ultrasound Assessment:

The ultrasound images and cine loops reveal moderate to marked dilation of the cystic and common bile ducts as well as what appear to be intrahepatic bile ducts, all of which exhibit thickened hyperechoic walls. The walls in some areas are outlined by a thin hypoechoic rim. In addition, the lumina of these ducts are mostly filled with diffuse and homogenous echogenic debris that appears gravitydependent; the debris exhibits distinct borders, suggesting inspissation/organization. The gall bladder is likewise mild/moderately dilated with similar-appearing

luminal debris and what appears to be (in some images) a mildly hyperechoic wall. In one area ventrolateral to the gastric fundus, there is a 1cm x 2cm complex cyst-like structure with hyperechoic septations within and surrounding the anechoic regions. Lastly, there is a prominent and mildly hypoechoic pancreas, and in one area (labeled "pancreas, right") there appears to be mild pancreatic duct dilation with an anechoic lumen.

Clinical Assessment:

This is an unusual and interesting case. In light of the previous septic contents of one of the aspirated structures, infectious cholecystitis, choledochitis, and possibly pancreatitis is the most likely diagnosis. If present, the bigger question, then, is why an infection is present. From the cine loops there does not appear to be an obvious lesion at the duodenal papilla, although it is possible there is subtle sphincter pathology at this location. Other plausible ddx include underlying idiopathic/immune-mediated hepatitis (which would explain the persistently increased ALT activity), pancreatitis, or triaditis. The chronicity of the disease along with lack of obvious findings on ultrasound would suggest against an aggressive neoplasm.

Recommendations:

Given the unusual nature of the findings, I agree with the consideration by Dr. Woody for an abdominal CT to further evaluate the anatomy of the lesions as well as look for any possible underlying cause. Alternatively, or concurrent with CT, ultrasound-guided reaspiration/cytology/culture should be considered with plans for long-term (6-8 weeks or possibly longer) culture-based antibiotic therapy. Treatment length would ultimately be dictated by resolution of weight loss and serial ultrasonography. It's not clear how long treatment was administered, but the best case scenario is that symptom recurrence was simply due to inadequate treatment length in summer 2018. Depending on the CT results (if performed), exploratory celiotomy with liver histopathology along with bile culture may be warranted if the above diagnostics/therapeutics fail to fully resolve the lesion.

Lastly, while it is unlikely to change recommendations in the short-term, a quantitative PLI is recommended. If abnormal, this may be simply secondary to infectious triaditis; however, it would also lend further evidence to the possibility of immune-mediated triaditis, which may ultimately warrant consideration of immunosuppressive therapy (ideally only after liver +/- liver/GI/pancreatic histopathology has been obtained).

Dr. Woody, Thank you for trusting me to partner with you on this challenging case. Please feel free to email (westTXvsc@gmail.com) me if you want to discuss the case further or have questions about this report.

- Kirk

Recommendations:

1. An internal medicine consult has been requested. Please see comments above.
2. CT with contrast or exploratory surgery may be necessary to fully define noted changes.
3. Consider empirical treatment for chronic cholangiohepatitis pending further diagnostics.
4. 3 view thoracic radiographs are recommended if not already performed.
5. Continue to monitor renal values and urinalysis and treat as appropriate.
6. Consider other diagnostics/therapeutics as clinical signs dictate.

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