When is a tumor … not? A treatable diagnosis not to be missed

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CASE PRESENTATION

A 62-year-old man with a history of type-1 diabetes and end-stage renal disease status-post simultaneous-pancreas-kidney (SPK) transplant 11 years prior to admission presented with three weeks of progressive, dull right-lower quadrant (RLQ) pain and constipation with 2 weeks of fever and night sweats. Pertinent medications included prednisone, tacrolimus, and azathioprine. Prior to his recent illness he had otherwise been in excellent health with no complications following his SPK. Social history was notable for frequent camping, hunting, and fishing in the Northwest with recent hunting and field-dressing wild elk. The patient denied any exposures to undercooked meat or untreated water.

ADMISSION VITALS AND LABS
BP 122/71 | Pulse 59 | Temp 36.8 °C | RR 16 | SpO2 97% 8.3 | 9.5 | 27.8 | 407
AST 22 | Creatinine: 7.2
ALT 23 | Albumin: 3.2
ALKP 82 | Lipase 103
ESR 62 | INR 1.22
THLL 0.8

CLINICAL COURSE

Admission exam was notable for normal vital signs, normal abdominal contour and a palpable non-tender R mid quadrants transplant kidney. He had mild RLQ tenderness without guarding or rebound and bilateral axillary lymphadenopathy. Labs revealed anemia and an elevated erythrocyte sedimentation rate and were otherwise remarkable. Imaging revealed a largeecal mass (Figure 1).

Figure 1. Abdominal computed tomography with oral contrast showing a large intramural mass in the cecum without other areas of focal inflammation.

Figure 2. Colonoscopy images demonstrating a non-obstructing circumferential ulcerating rectal mass.

Figure 3. Pathology shows marked acute inflammation with crypt destruction noted on high power. Yellow acinar ducts contain non-caseating granulomas with multinucleated giant cells. Photomicrograph courtesy of Lisa E. Hooper, MD

With concerns for sub-acute infection, primary gastrointestinal malignancy or inflammatory bowel disease, endoscopic diagnosis was pursued, which revealed a non-obstructing, ulcerative cecal lesion concerning for malignancy (Figure 2).

Blood cultures grew Yersinia enterocolitica, and the patient was diagnosed with gastrointestinal Yersiniosis. He was treated with ceftriaxone and metronidazole, in order to target both Yersinia and typical enteric flora. Despite a debate over the wisdom of partial colectomy, he ultimately received conservative management due to the patient’s complex post-transplant anatomy. Due to the large abscess size and risk of perforation, he was treated with a 4-week course of parenteral and PO antibiotics.

EPIDEMOLOGY OF YERSINIA ENTEROCOLITICA

• Y. enterocolitica is an enteroinvasive gram negative facultative anaerobic bacilli of the gastrointestinal tract. The most common serotypes in the United States are: O:9, O:5,27, and O:1,2,3
• It is ubiquitous in the environment, and is found in the earth, water, human, and animal hosts that include: rodents, sheep, pigs, cattle, dogs, horses, wild game
• Current incidence in the United States is 1 case per 100,000 per year.
• Infections occur from undercooked or contaminated meat, most commonly pork unpasteurized milk, direct contact in the environment, or from blood transfusions
• Patients in immunocompromised states such as diabetes, cirrhosis, or other chronic diseases are at higher risk for infection as well as those with iron-storage disorders
• There have been 11 case reports of bowel wall abscesses/perforations
• Diagnosis can be made via serologic antibody titers that remain elevated as long as 18 months post-exposure or by direct body fluid culture

Differential Diagnosis of Abdominal masses in solid organ transplant recipients

Malignancy •Adenocarcinoma, lymphoma
Infectious •Post-transplant lymphoproliferative disorder
Autoimmune •Ulcerative colitis, Crohn’s disease

NATURAL HISTORY OF YERSINIA ENTEROCOLITICA

• Most commonly occurs in children with fever, abdominal pain and diarrhea (often bloody) due to direct invasion of the terminal ileum
• Symptom onset 1 week after exposure and typically self-limited with a 1-3 week course
• Antibiotics can reduce duration of illness
• Complications include: systemic abscesses, septicemia, reactive arthritis, endocarditis, meningitis, ophthalmitis, and hemolytic anemia

MANAGEMENT OF YERSINIA ENTEROCOLITICA BOWEL ABSCESSES & RECOMMENDATIONS

• Early surgical intervention may have better outcomes, however data is limited
• Typically resistant to aminoglycosides and 1st generation cephalosporins
• Optimal duration of antibiotics is unknown but cases reports vary between 2-4 week combinations of IV and PO courses
• Our case represents the only report of successful non-surgical management
• Consider conservative management in stable hosts with good follow-up

EPILOGUE

At 4 weeks follow-up the patient had complete resolution of symptoms and marked radiographic improvement. He suffered no complications. We presume his vector was wild elk and that he was at an increased risk for invasive disease due to therapeutic immune suppression. We did not alter his transplant medications due to his rapid recovery and clinical stability

REFERENCES: