Communications

Campylobacter Enteritis

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Case Report

An 18-day-old male infant presented to the Family Practice Clinic with an 8-hour history of bloody diarrhea. The patient's temperature was 37.2°C, pulse was 108 beats/min, systolic blood pressure was palpable at 88 mmHg, and weight was 3.85 kg. He was alert and active, feeding well, and without signs of dehydration. The patient, a term infant weighing 3.15 kg, was born without labor, delivery, or neonatal complications to a 24-year-old $G_2P_0Ab_1$ mother. The infant was breast fed and occasionally received supplemental feedings of commercial formula. Prior to the onset of diarrhea, he had approximately 6 to 10 "milk stools" per day. The prenatal history was complicated by intermittent nonbloody diarrhea in the mother which persisted after delivery.

A hematocrit of 52 percent was obtained at the initial visit, and sigmoidoscopy was performed because of the severity and bloody character of the diarrhea. Edematous, friable, and hemorrhagic mucosa was noted up to 11 cm (the extent of sigmoidoscope penetration). No other blood, urine, or spinal fluid studies were obtained. Stool cultures were obtained, and the infant was placed on an elemental formula. Within 16 hours, the infant showed dramatic resolution of the bloody diarrhea. Two days later stool cultures were reported as growing Campylobacter jejuni.

On the third day after sigmoidoscopy, the infant was re-evaluated. At that time, the mother reported that the child was having approximately three to five formed stools per day and never exhibited fever or poor feeding. The stool was recultured and was again positive for C jejuni. The infant was given a seven-day course of erythromycin, 40 mg/kg/d, divided every six hours. Stool culture after completion of therapy was negative. Stool cultures from the infant's mother, obtained after spontaneous resolution of her diarrhea, yielded only coliforms.

Discussion

First associated with human diarrheal illness in 1946,[1] Campylobacter jejuni has now been isolated on six continents and may be the most common recognizable cause of bacterial diarrhea in human beings.[2] C jejuni is a motile, spiral or curved gram-negative rod that is microaerophilic and unable to grow in room air. C jejuni infection commonly presents as a benign, self-limited enteritis. However, asymptomatic infection, massive intestinal hemorrhage, septic arthritis, urinary tract infection, cholecystitis, meningitis, toxic megacolon, mesenteric adenitis, appendicitis, infectious proctitis in homosexuals, a typhoid-like syndrome, and reactivation of inflammatory bowel disease have also been reported.[3-6] In addition, C jejuni infec-

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tion can mimic pseudomembranous colitis and inflammatory bowel disease by clinical, radiographic, sigmoidoscopic, and biopsy criteria.[4,7,8]

C jejuni enteritis can present at any age. A benign, self-limited, watery diarrhea is by far the most common clinical presentation. This may be preceded by a 24- to 48-hour prodrome of headache, myalgia, lower abdominal pain, and low-grade fever. The diarrhea may be grossly bloody or mucoid and accompanied by nausea or vomiting. Fever may be entirely absent or pronounced, and abdominal pain may be severe enough to mimic acute abdominal emergencies.[3,4] Though various laboratory abnormalities may be found, including transaminase elevation, elevated erythrocyte sedimentation rate, and leukocytosis with a left shift, these are commonly absent.[4] At present, the most sensitive and inexpensive diagnostic screening test for Campylobacter enteritis may be a stool swab for leukocytes, which is positive in over three fourths of cases of C jejuni enteritis.[3,4,9,10] Culturing of stool for C jejuni is simple, but it requires special preparation by the microbiological laboratory.[3] Because of the frequency of C jejuni infection, culture of the stool should be a routine part of the workup for any severe or prolonged diarrheal illness. Cultures should also be obtained in the evaluation of inflammatory bowel disease, pseudomembranous colitis, and any surgical illness associated with diarrhea, as a positive culture for C jejuni may preclude invasive diagnostic and therapeutic maneuvers.

Transmission of C jejuni from mothers to their neonates has been described,[11] and that was probably the situation in this case. One wonders whether the relatively benign course in the infant might have been due, in part, to maternal antibodies passed to the child through breast milk. Transmission occurs by the fecal-oral route (via contaminated food and water) or by direct contact with fecal material from infected animals or people. A history of foreign travel, exposure to sick animals or people, or ingestion of well or stream water is often obtained. There are many reservoirs for C jejuni, but avian species (including commercial chicken and other poultry) are the most important.[3,4] Though C jejuni has been isolated from the stools of healthy controls, the asymptomatic carrier is uncommon in developed nations.[3]

Diarrhea due to C jejuni is frequently self-limited, although relapses may occur in up to 20 percent of untreated patients.[9] Though anecdotal reports indicate fewer relapses and more rapid resolution of symptoms in patients receiving antibiotics, a recent double-blind, controlled clinical trial showed no significant shortening of the natural course in patients treated four to six days after the onset of symptoms (though C jejuni was eradicated from the feces of treated patients). When antibiotics are used, erythromycin, which does not appear to increase the duration of convalescent fecal excretion, is the drug of choice.[3,12] Until conclusive evidence regarding the efficacy of treatment is available, antibiotic treatment is currently warranted when symptoms have been prolonged, diarrhea is severe or bloody, or when the patient appears toxic.[3] In the case presented, the continued presence of C jejuni in the stool of the infant was felt to warrant treatment.

Diarrhea is a common problem encountered by the primary care physician, and an awareness of C jejuni enteritis, as well as the laboratory capability for culturing this organism, is of great importance. Early diagnosis of C jejuni enteritis may prevent needless expense and invasive procedures in patients presenting with symptoms suggestive of acute abdominal, pelvic, or inflammatory bowel disease.

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