Escherichia coli O157 Enterocolitis Followed by Non-diarrheagenic *Escherichia coli* Bacteremia

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To the Editor: *Escherichia coli* (*E. coli*) O157 is part of the verotoxin-producing *E. coli* (VTEC) strains, and a causative pathogen of bacterial enterocolitis in children. VTEC also causes hemolytic uremic syndrome (HUS). However, serious bacterial infections due to VTEC have rarely been reported [1]. A previously healthy, 3-y-old boy presented with a 3 d history of abdominal pain and frequent bloody diarrhea. On admission, his general condition was stable and abdominal ultrasound indicated an extensive edematous colon. VTEC O157 was detected on stool culture. Based on these reports, bacterial enterocolitis was diagnosed. Because use of antibiotics might increase the risk of developing HUS, the patient was closely monitored without antibiotic treatment [2]. Meanwhile, his symptoms improved and bloody diarrhea stopped 7 d after admission but he continued to have mild diarrhea. However, fever recurred after 11 d, accompanied by tachycardia. The cause of fever could not be detected through examination and laboratory investigations including cerebrospinal fluid and urine test. Under suspicion of bacteremia, two blood samples were sent for culture and intravenous cefotaxime was administered. Later, the two blood culture samples detected *E. coli* which was sensitive to ampicillin. The PCR assay detected serotype O18:K1:H4/ST357 and no virulence factor genes for diarrheagenic *E. coli*, including VTEC, in these samples. Finally, we diagnosed the patient as having *E. coli* O157 enterocolitis, followed by non-

diarrheagenic *E. coli* O18:K1:H4/ST357 bacteremia, due to bacterial translocation. The antibiotic was changed to a 2 wk course of ampicillin and he was discharged without sequelae. This case differs from previous cases in that bacteremia can be a complication of *E. coli* O157 enterocolitis even after bloody diarrhea has stopped. Although a few cases of VTEC with bacteremia have been reported earlier, they occurred during the acute phase of VTEC infections, unlike in our patient and developed HUS [1, 3, 4]. In addition, the causative organisms for bacteremia and enterocolitis were different.

Non-diarrheagenic *E. coli* O18:K1:H4/ST357 bacteremia may be explained by bacterial translocation-induced prolonged diarrhea. Blood culture is important if *E. coli* O157 enterocolitis patients develop fever without an apparent focus of infection in order to diagnose bacteremia due to bacterial translocation.

Compliance with Ethical Standards

Conflict of Interest None.

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