

cultures from a 50-year-old Chinese woman, who had myelodysplastic syndrome and was hospitalized for pneumonia. She had been previously treated with chemotherapy and had multiple admissions for infection. The same phenotypic and karyotypic methods as the first patient were used to identify the isolate. The API 20C AUX profile was 2152134 at 48 hours (98.5% certainty for *C. dubliniensis*). The MIC of fluconazole by E-test was also 0.75 µg/mL. Pancytopenia developed, and the patient's condition deteriorated. She died of pneumonia despite transfusions and treatment with broad-spectrum antibiotics and amphotericin B. Microbiologic investigations for bacteria, tuberculosis, pneumocystis, *Legionella*, and viruses did not yield positive results except for *Corynebacterium* species in the bronchial alveolar lavage fluid.

Although *C. dubliniensis* was first associated with oral candidiasis in HIV-infected persons (3), several reports now link the organism to non-HIV patients who were immunosuppressed due to chemotherapy, hematologic malignancy (4), and end-stage liver disease (1). Our two patients were not HIV positive but were immunosuppressed. In vitro susceptibility results showed that our patients should have responded to the usual antifungal treatment. However, they died despite appropriate therapy.

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References

1. Marriott D, Laxton M, Harkness J. *Candida dubliniensis* candidemia in Australia. *Emerg Infect Dis* 2001;7:479.
2. Jabra-Rizk MA, Baqui AAMA, Kelley JJ, Falkler WA Jr, Merz WG, Meiller TF. Identification of *Candida dubliniensis* in a prospective study of patients in the United States. *J Clin Microbiol* 1999;37:321-6.
3. Sullivan DJ, Westermemg TJ, Haynes KA, Bennett DE, Coleman DC. *Candida dubliniensis* sp. nov.: phenotypic and molecular characterization of a novel species associated with oral candidiasis in HIV-infected individuals. *Microbiology* 1995;141:1507-21.
4. Meis JFGM, Ruhnke M, DePauw BE, Odds FC, Siegert W, Verweij PE. *Candida dubliniensis* candidemia in patients with chemotherapy-induced neutropenia and bone marrow transplantation. *Emerg Infect Dis* 1999;5:150-3.

O157:H7 Shiga Toxin-Producing *Escherichia coli* Strains Associated with Sporadic Cases of Diarrhea in São Paulo, Brazil

To the Editor: Shiga toxin-producing *Escherichia coli* (STEC) strains are associated with a spectrum of diseases ranging from mild to severe bloody diarrhea and complications such as hemolytic uremic syndrome (HUS) and thrombotic thrombocytopenic purpura (1). Since STEC was linked with hemorrhagic colitis in 1982 (2), strains—particularly serotype O157:H7—have been associated with numerous outbreaks and many sporadic cases of infections worldwide. STEC is now a major cause of foodborne disease, primarily in the United States, Canada, Japan, and Europe (1,3). Although most sporadic cases and outbreaks have been

reported from developed countries, human infections associated with STEC strains have also been described in Latin American countries, including Argentina and Chile (3). In Brazil, STEC infections have been related to sporadic cases of nonbloody diarrhea caused by non-O157 strains (4,5); serotype O157:H7 has not been previously isolated from human infections in our country.

We report the characterization of three O157:H7 strains isolated in São Paulo State, Brazil. The first strain was identified among a laboratory collection of 2,573 *E. coli* strains that were retrospectively analyzed and isolated from patients with diarrhea in São Paulo State, from 1976 through 1999, at the Central Laboratory of Instituto Adolfo Lutz (IAL). This strain was isolated in 1990 from an 18-year-old patient with diarrheal disease who had AIDS. The two other O157 strains were recently isolated from a 4-year-old girl with bloody diarrhea and from an adult with severe diarrhea. Both patients were admitted to the same hospital at Campinas, São Paulo State, in June and July 2001, respectively. The strains, isolated by routine diagnostic procedures on MacConkey agar plates, were presumptively identified as *E. coli* O157 by standard methods with specific O157 antiserum. These last two strains were confirmed as sorbitol-negative *E. coli* O157 at the IAL Regional Laboratory at Campinas and were sent to the IAL Central Laboratory for further characterization.

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The three O157 *E. coli* strains underwent biochemical identification and serotyping by standard methods. Enterohemolysin production was determined according to Beutin et al. (5). Polymerase chain reaction assays were used to detect the *stx1* and *stx2* genes (6), and colony hybridization assays with specific DNA probes for *stx1*, *stx2* and *eae* genes were performed as described (7). Cytotoxicity to Vero cells was assayed as described (4). The strains were characterized as sorbitol-negative O157:H7, containing the *stx2* and *eae* sequences. The enterohemolytic phenotype and production of Stx were also observed in all isolates.

To our knowledge, these O157:H7 STEC strains are the first to be associated with human diseases in Brazil. Cultivation of stool specimens in sorbitol MacConkey agar is strongly recommended for screening O157 strains, and, indeed, all three strains were isolated from MacConkey agar plates. Laboratories should attempt to examine stool specimens from all patients (children and adults) with HUS, severe diarrhea (nonbloody and bloody stools) requiring hospitalization, or both, as well as from patients reporting a history of bloody diarrhea.

Despite the importance of O157:H7 serotype in causing life-threatening complications such as HUS and the isolation of this serotype from clinical specimens in São Paulo State, the relatively low prevalence of this serotype in healthy dairy and beef cattle in Brazil (8), as well as the occurrence of other non-O157 STEC strains associated with human infections (4,5,9), suggest that *E. coli* O157:H7 may be not as frequent as non-O157 STEC strains in our country.

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References

- Riley LW, Remis RS, Helgerson SD, McGee H.B, Wells JG, Davis BD, et al. Hemorrhagic colitis associated with a rare *Escherichia coli* O157:H7 serotype. *N Engl J Med* 1983;308:681-5.
- Nataro JP, Kaper JB. Diarrheagenic *Escherichia coli*. *Clin Microbiol Rev* 1998;11:142-201.
- Giraldi R, Guth BEC, Trabulsi LR. Production of Shiga-like toxin among *Escherichia coli* strains and other bacteria isolated from diarrhea in São Paulo, Brazil. *J Clin Microbiol* 1990;28:1460-2.
- Guth BEC, Ramos SRTS, Cerqueira AMF, Andrade JRC, Gomes TAT. Characterization of Shiga toxin-producing *Escherichia coli* (STEC) strains isolated from children in São Paulo, Brazil. 4th International Symposium and Workshop on Shiga toxin (Verocytotoxin)-producing *Escherichia coli* infections —VTEC 2000. Kyoto, Japan, 2000. p. 149.
- Beutin L, Prada J, Zimmermann S, Stephan R, Orskov I, Orskov F. Enterohemolysin, a new type of hemolysin produced by some strains of enteropathogenic *E. coli* (EPEC). *Zentralbl Bakteriell Mikrobiol Hyg [A]* 1988;267:576-88.
- Pollard DR, Johnson W., Lior H, Tyler SD, Rozee KR. Rapid and specific detection of verotoxin genes in *Escherichia coli* by the polymerase chain reaction. *J Clin Microbiol* 1990;28:540-5.
- Gonçalves AG, Campos LC, Gomes TAT, Rodrigues J, Sperandio V, Whittam T, et al. Virulence properties and clonal structure of strains of *Escherichia coli* O119 serotypes. *Infect Immun* 1997;65:2034-40.
- Cerqueira AMF, Guth BEC, Joaquim RM, Andrade JRC. High occurrence of Shiga toxin-producing *Escherichia coli* (STEC) in healthy cattle in Rio de Janeiro State, Brazil. *Vet Microbiol* 1999;70:111-21.
- Irino K, Gomes TAT, Vaz TMI, Kano E, Kato MAMF, Dias AMG, et al. Prevalence of Shiga toxin and intimin gene sequences among *Escherichia coli* of serogroups O26, O55, O111, O119 and O157 isolated in São Paulo, Brazil. In: Abstracts of the 4th International Symposium and Workshop on Shiga toxin (Verocytotoxin)-producing *Escherichia coli* infections. Kyoto, Japan, 2000. p.107.

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