Candida dubliniensis Infection, Singapore

To the Editor: We read with interest the letter by Marriott et al. (1) describing the first case of Candida dubliniensis fungemia in Australia.

We report the first two cases of C. dubliniensis infection in Singapore. We have been using the API 20C AUX on all yeast isolates from blood, sterile fluids, and tissue to screen for C. dubliniensis since May 2000. To our knowledge, this infection has not been previously reported from a Southeast Asian country.

The first patient was a 49-year-old woman with adult polycystic kidney and liver disease; she had mild chronic renal failure and a past history of nephrotic syndrome. She was admitted to the renal unit on May 9, 2001, for management of ascites. A septic workup showed leukocytosis (34.67 x 10^9/L) with predominance of neutrophils (95%). Blood culture received on May 31 grew yeast with two slightly different forms, one large and one small. The isolates, investigated separately, were germ-tube positive. The API 20C AUX profile for the larger isolate was 6072114 at 48 hours’ incubation (96.2% certainty for C. dubliniensis) and 6072134 for the smaller isolate (99.8% certainty for C. dubliniensis). The yeasts grew well on potato dextrose agar at 35°C but poorly at 42°C and 45°C. In addition, electrophoretic karyotyping with pulsed-field gel electrophoresis showed that both isolates had identical patterns, with eight chromosome fragments, one of which was <1 megabase (Mb), indicating that the two morphologically different strains were the same karyotypically. The pattern obtained was in keeping with results obtained by Jabra-Rizk et al. (2), with C. dubliniensis showing a chromosome-sized band of <1 Mb. For C. albicans, by contrast, all bands were >1 Mb. Five control strains—C. dubliniensis (RCPA Microbiology QAP item 2001:2:7A), C. albicans ATCC 90028, and three clinical strains of C. albicans—were also run together with the two strains; the results obtained were consistent with those of Jabra-Rizk et al. (2). The MIC of the isolates to fluconazole by E-test was 0.75 μg/mL, indicating susceptibility. Disseminated intravascular coagulopathy due to sepsis from a possible ruptured liver cyst developed in the patient. Despite broad-spectrum antibiotics and amphotericin B, hemodialysis, and intensive-care support, she died 5 weeks after admission. Except for C. dubliniensis candidemia, Candida species isolated from the urine and endotracheal secretions (speciation not done), and Acinetobacter baumannii (cultured from the endotracheal secretions and femoral catheter tip), no other important microorganisms were isolated. Peritoneal fluid cultures did not yield any microorganisms.

Soon after the first case, C. dubliniensis was isolated from a sputum culture and bronchial alveolar lavage
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, 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.

Acknowledgment

We acknowledge David Ellis for help in confirming the isolates.

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References


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 (TTP). 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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