Letters to the Editor

Case Report of Aurantimonas altamirensis Bloodstream Infection

Luong et al. (7) recently described the first report and characterization of Aurantimonas altamirensis recovered from human clinical specimens. According to that report, the isolates were described as being "possibly associated" with infection. In April 2008, a 50-year-old male patient with a 10-day history of scrotal swelling and redness was admitted to Methodist Hospital in Indianapolis, IN. An A. altamirensis (002-2918A) bacteremia isolate recovered on the third hospital day (HD) was presumptively associated with the scrotum infection, which we describe below.

The patient had numerous prior hospitalizations with a complicated clinical history of diabetes mellitus, hypertension, congestive heart failure (CHF), peripheral neuropathy, hyperthyroidism, hyperlipidemia, and chronic renal failure (stage IV). In addition, both legs had been amputated below the knees due to complications of diabetes mellitus. On admission, the patient presented with fever and dysuria and complained of urinary frequency for 14 days prior to hospitalization. Significant findings on physical examination included swelling and pitting edema of the scrotum and swelling of the lower abdominal skin and extremities with suprapubic pain. Prominent redness and tenderness of the scrotum and adjacent area along with swelling of the thighs were also observed.

The scrotal swelling was presumptively diagnosed as secondary to CHF or infection. Intravenous Lasix was administered due to exacerbation of CHF during hospitalization along with clindamycin, vancomycin, and ciprofloxacin and continued and unusual infectious processes and the limitations when treating immunocompromised patients with complicated and unusual infectious processes and the limitations when treating immunocompromised patients with complicated clinical history of diabetes mellitus, hypertension, congestive heart failure (CHF), peripheral neuropathy, hyperthyroidism, hyperlipidemia, and chronic renal failure (stage IV). The presence of clinical symptoms of infection, clinical relevance of the genus Aurantimonas has remained uncertain, since few reports have demonstrated an etiological role for the species, and it has usually been implicated as a contaminant derived from environmental and/or water sources (7). However, we describe a case of A. altamirensis bacteremia possibly associated with a scrotum infection. The presence of clinical symptoms of infection and the clinical response to appropriate antimicrobial therapy suggest an etiological role for this organism. Additionally, this report emphasizes the major diagnostic challenges in the M100-S18 document (CLSI, 2008) (2). The isolate identification was confirmed as A. altamirensis. The 16S rRNA sequence displayed greatest identity with that of A. altamirensis under accession number EF595814 (99.9%) (7), followed by DQ372921 (99.6%) (6) and EU442517 and EU442518 (99.5%) (7) (Fig. 1).

The isolate was tested for susceptibility using the broth microdilution method as described by the Clinical and Laboratory Standards Institute (CLSI; M7-A7, 2006) (1). MICs were interpreted according to the breakpoints for Pseudomonas aeruginosa and other non-Enterobacteriaceae published in the M100-S18 document (CLSI, 2008) (2). The 002-2918A isolate was fully susceptible to 32 antimicrobial agents, except for a modestly elevated MIC for aztreonam (8 to 16 μg/ml); however, previous publications have reported isolates displaying a phenotype of resistance to fluoroquinolones, trimethoprim-sulfamethoxazole, and nitrofurantoin (3, 7).

The clinical relevance of the genus Aurantimonas has remained uncertain, since few reports have demonstrated an etiological role for the species, and it has usually been implicated as a contaminant derived from environmental and/or water sources (7). However, we describe a case of A. altamirensis bacteremia possibly associated with a scrotum infection. The presence of clinical symptoms of infection and the clinical response to appropriate antimicrobial therapy suggest an etiological role for this organism. Additionally, this report emphasizes the major diagnostic challenges in treating immunocompromised patients with complicated and unusual infectious processes and the limitations when treating immunocompromised patients with complicated and unusual infectious processes and the limitations of contemporary automated identification systems.

REFERENCES


FIG. 1. Phylogenetic relationships obtained by the ClustalW method using the 16S rRNA gene sequences from Aurantimonas spp. The accession numbers EF595814 (7), DQ372921 (6), EU544515 and EU442517 (7), and EU442518 (7) represent A. altamirensis species. The accession number EF373540 represents Aurantimonas kwangyangensis used as the outlier species.


Rodrigo E. Mendes*
JMI Laboratories
345 Beaver Creek Centre, Suite A
North Liberty, Iowa 52317

Gerald A. Denys
Clarian Pathology Laboratory
Indianapolis, Indiana 46202

Thomas R. Fritsche
Marshfield Laboratories
Marshfield, Wisconsin 54449

Ronald N. Jones
Tufts University School of Medicine
Boston, Massachusetts

*Phone: (319) 665-3370
Fax: (319) 655-3371
E-mail: rodrigo-mendes@jmilabs.com

Published ahead of print on 26 November 2008.