Candida auris—Associated Candidemia, South Africa

To the Editor: We noted the report by Chowdhary et al. (1) and report *Candida auris* as a causative agent of candidemia in South Africa, with an estimated prevalence of 0.3% (N.P. Govender et al., unpub. data). First isolated in 2009, *C. auris* is an emerging species associated with clinical disease (2–6). We analyzed 4 isolates submitted to the National Institute for Communicable Diseases (Johannesburg, South Africa) from 4 patients with candidemia who had been admitted to different public- and private-sector hospitals from October 2012 through October 2013.

Identification of the isolates was undertaken by using ChromAgar *Candida* medium (Mast Diagnostics, Merseyside, UK), Vitek-2 YST (bioMérieux, Marcy l’Etoile, France), API 20C AUX (bioMérieux), and sequencing of internal transcribed spacer (ITS) and D1/D2 domains of the ribosomal RNA gene (7), followed by microbroth dilution susceptibility testing (8). All isolates were misidentified as *C. haemulonii* and *Rhodotorula glutinis* by Vitek-2 YST and API 20C AUX assays, respectively (Table).

Similar to the findings of Chowdhary et al., all isolates assimilated N-acetyl-glucosamine (1). With the use of the CBS-KNW database, pairwise sequence alignment of ITS region showed 99% sequence homology to Kuwait isolates, and alignment of D1/D2 domain showed 98% homology to the Kuwait/India isolates (9). In a neighbor-joining phylogenetic tree based on ITS sequences, South Africa isolates formed a cluster with India and Kuwait isolates (online Technical Appendix Figure, http://wwwnc.cdc.gov/EID/article/20/7/13-1765-Techapp1.pdf).

Alberto Enrique Paniz-Mondolfi, Teresa Gárate, Christine Stavropoulos, Wen Fan, Luis Miguel González, Mark Eberhard, Fred Kimmelstiel, and Emilia Mia Sordillo

Author affiliations: Yale University School of Medicine, New Haven, Connecticut, USA (A.E. Paniz-Mondolfi); St. Luke’s-Roosevelt Hospital Center of Columbia University College of Physicians and Surgeons, New York, New York, USA (A.E. Paniz-Mondolfi, C. Stavropoulos, W. Fan, F. Kimmelstiel, E.M. Sordillo); Servicio Autonomo de Biomedicina/Instituto Venezolano de los Seguros Sociales, Caracas, Venezuela (A. Paniz Mondolfi); Instituto de Salud Carlos III, Madrid, Spain (T. Gárate, L.M. González); and Centers for Disease Control and Prevention, Atlanta, Georgia, USA (M. Eberhard)

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**References**


Address for correspondence: Alberto E. Paniz-Mondolfi, Yale–New Haven Hospital, Microbiology Laboratory (PS656), 55 Park St, New Haven, CT 06511, USA; email: albertopaniz@yahoo.com

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including New York (8 cases), Massachusetts, Pennsylvania, Connecticut, and Rhode Island (3 cases each) (1,2); single cases have been identified in Michigan, Ohio, North Carolina, Oklahoma, New Jersey, Louisiana, Florida, and California (1,2). Four other cases have been reported: 3 in South America (Colombia, Brazil, Peru) (3,7,8) and 1 in Africa (Ethiopia) (9). Only a few *Brugia* species have been identified, including *B. leporis*, found in rabbits in the northeastern United States (1,10); *B. beaveri*, found in raccoons and bobcats in the southern United States; and *B. guayanensis*, found in coatis and other vertebrates in South America (8). Definitive identification with molecular techniques will better identify causative species and help clarify many of the ecologic and epidemiologic questions surrounding zoonotic filarial infections.

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Author affiliations: Yale University School of Medicine, New Haven, Connecticut, USA (A.E. Paniz-Mondolfi); St. Luke’s-Roosevelt Hospital Center of Columbia University College of Physicians and Surgeons, New York, New York, USA (A.E. Paniz-Mondolfi, C. Stavropoulos, W. Fan, F. Kimmelstiel, E.M. Sordillo); Servicio Autonomo de Biomedicina/Instituto Venezolano de los Seguros Sociales, Caracas, Venezuela (A. Paniz Mondolfi); Instituto de Salud Carlos III, Madrid, Spain (T. Gárate, L.M. González); and Centers for Disease Control and Prevention, Atlanta, Georgia, USA (M. Eberhard)
Fluconazole MICs were high for all isolates (Table). Isolates 209 and 224 showed reduced voriconazole susceptibility with MICs of 1 μg/mL and 2 μg/mL, respectively, which is above the epidemiologic cutoff value for 11 Candida species (10). Isolates were susceptible to amphotericin B and echinocandins at low MICs Clinical data were available for 1 patient (online Technical Appendix Table). Two C. haemulonii isolates were identified during laboratory-based sentinel surveillance for candidemia in South Africa; the ITS region of one isolate was sequenced and the isolate identified as C. auris (N.P. Govender, pers. comm.). In this study, C. auris was misidentified by routinely used tests and was accurately identified by sequencing, in keeping with previous findings (1,3,4,6).

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Author affiliations: National Institute for Communicable Diseases, Johannesburg, South Africa (R.E. Magobo, N.P. Govender); National Health Laboratory Service, Johannesburg, South Africa; University of the Witwatersrand, Johannesburg (S. Seetharam); and Amaphath National Reference Laboratory, Pretoria, South Africa (C. Corcoran)

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References


Address for correspondence: Nelesh P. Govender, National Institute for Communicable Diseases–Centre for Opportunistic, Tropical and Hospital Infections, Private Bag X4, Sandringham, 2132, South Africa; email: neleshg@nicd.ac.za

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Technical Appendix

Technical Appendix Figure. Phylogenetic relatedness of internal transcribed spacer region of the ribosomal RNA gene of Candida auris with closely related Candida species. Scale bar indicates nucleotide substitutions per site.
<table>
<thead>
<tr>
<th>Isolate ID</th>
<th>Risk factor</th>
<th>Antifungal treatment</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>224</td>
<td>Referred to a public-sector specialist burn unit from a private-sector hospital; 40% third-degree burns with inhalational injury; required débridement, skin grafts, and tracheostomy; In situ: central venous catheter(s), arterial line, urinary catheter; Mechanically ventilated; Multiple episodes of sepsis requiring broad-spectrum antimicrobial drugs, including β-lactams, colistin, linezolid, and vancomycin; Renal failure requiring hemodialysis</td>
<td>Amphotericin B deoxycholate (received only 1 dose)</td>
<td>Died 35 d after admission to hospital</td>
</tr>
</tbody>
</table>