Fluconazole Susceptibility of Candida Species in Singapore by Disc Diffusion Test
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Abstract

Introduction: Resistance of Candida species to fluconazole has been increasingly reported worldwide. To date, the prevalence of resistance to fluconazole in Singapore is unknown. The aim of this study was to use a newly described agar disc diffusion method to study levels of susceptibility of Candida species to fluconazole in several hospitals in Singapore. Materials and Methods: Three hundred and ninety Candida isolates from clinical specimens collected from different sites were tested, of which 191 isolates (49.0%) were C. albicans, 69 (17.7%) were C. parapsilosis, 59 (15.1%) were C. glabrata, 51 (13.1%) were C. tropicalis and 4 (1.0%) were C. krusei. Susceptibility testing was performed using 25 µg fluconazole discs and standard Mueller-Hinton agar supplemented with 2% glucose and 0.5 µg/mL of methylene blue. Results: Overall, 381 (97.7%) isolates were susceptible, 6 (1.5%) were susceptible dose-dependent, and 3 (0.8%) were resistant to fluconazole. Of the individual species, 99.5% of C. albicans, 93.2% of C. glabrata, 0% of C. krusei, and 100% of C. parapsilosis, C. tropicalis and other Candida species were susceptible. Conclusion: The resistance of Candida species to fluconazole, as measured using a new disc diffusion method, is low in Singapore, with the exception of C. krusei. Fluconazole remains a useful agent for the treatment of candidiasis in this country.

Key words: Antifungal susceptibility testing, Disc diffusion method, Resistance

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