In vitro activity of isavuconazole against clinically isolated yeasts from Chile

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Abstract

Isavuconazole is the last antifungal agent approved by the FDA and available for treatment of fungal infections. In the present study, the in vitro activity of isavuconazole against several yeasts was investigated. Two hundred forty-six isolates were included: 64Candida albicans, 53Candida parapsilosissensu stricto, 48Cryptococcus neoformansspecies complex, 27C. glabratasensu stricto, 17C. lusitaniae, 17C. tropicalis, 5C.orthopsilosis, 4C. krusei, 3C. guilliermondiisensu stricto, 3C. pelliculosa, 2C.dubliniensis, 1C.auris, 1C.fermentatiand 1Trichosporon asahii. All isolates were recovered from clinical isolates from Chile, being 221 from hemoculture, 22 from cerebrospinal fluid, 1 pleural fluid, and 1 from tissue culture. The minimal inhibitory concentrations (MICs) and minimal fungicidal concentrations (MFCs) of isavuconazole were determined. Isavuconazole demonstrated good in vitro activity against all species tested. MIC90 values and MFC ranges of isavuconazole forCandida albicanswere 0.03 mg/L and 0.03- > 16 mg/L respectively. Non-Candida albicansspecies isolates were inhibited by <= 1 mg/L, with MFC ranges from < 0.03- > 16 mg/L. Also, isavuconazole was active against the non-Candidayeasts, being inhibited with MIC values <= 0.06 mg/L. Isavuconazole has exhibited potent in vitro activity against clinical isolates ofCandidaspp.,Cryptococcus neoformansspecies complex, and other clinical yeast in Chile. Despite the results obtained in the present work, additional clinical studies are necessary to verify the level of efficacy of this azole.

Keywords

Author Keywords: Isavuconazole; Antifungal agents; Triazoles; Candida; Minimum inhibitory concentration
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