

R2723

Abstract (publication only)

**Antifungal susceptibility profile of bloodstream *Candida* Isolates in an intensive care unit of a tertiary hospital**

B Mete, N. Saltoglu\*, E. Zerdali, G. Aygun, T. Utku, S. Urkmez, R. Ozaras, A. Mert, F. Tabak, R. Ozturk (Istanbul, TR)

Introduction: Incidence of nosocomial fungal infections have been increased in intensive care unit (ICU), especially in patients who underwent surgery. In recent years, azole prophylaxis, have led to change in the distribution of *Candida albicans* and non-*albicans* *Candida* species. Our objective is to evaluate the resistance profile of *Candida* spp. isolated from candidemic patients followed- up in ICU of our hospital. Material- Method: The patients are consulted by infectious diseases and clinical microbiology consultants daily in our 13 bed medical/surgical ICU. The patients with positive peripheral blood cultures for *Candida* species was evaluated from January 1st 2005 to December 31st, 2007. Stored *Candida* spp. at -70°C were subcultured onto Sabouraud dextrose agar and *Candida* spp. grown in cultures were evaluated by germ-tube test, according to the morphological characteristics of colonies in Sabouraud dextrose agar and CHROMagar, and has been identified by the commercial identification system API 32C. Antifungal susceptibility was performed by E-test method according to the manufacturer's instructions. Interpretations of minimal inhibitory concentration (MIC) levels for fluconazole, itraconazole, voriconazole, caspofungin and anidulafungin were evaluated according to Clinical Laboratory Standards Institute. As there are no established breakpoints for amphotericin B, breakpoints proposed by Nguyen et al. were used. Results: 32 candidemia episodes were identified in 32 patients. Incidence of candidemia was 22 per 1,000 admissions. The most frequent species were *C. albicans* (41%), followed by *C. parapsilosis* (19%), *C. glabrata* (19%), *C. tropicalis* (9%) and *C. dubliniensis* (9%). Overall susceptibility to amphotericin B, voriconazole and caspofungin were 100% among all *Candida* species. Although 100% of *C. albicans*, *C. parapsilosis*, *C. tropicalis* and *C. dubliniensis* were susceptible to anidulafungin, only 33% of *C. parapsilosis* were susceptible. Susceptibility to fluconazole were 100% among all *Candida* spp. except *C. glabrata* (83% susceptible). Posaconazole exhibited low MICs for all isolates, except three in *C. glabrata* (MIC > 1 µg/mL). MIC50 and MIC90 levels of the *Candida* spp. are demonstrated in table. Conclusion: In recent years, the distribution of *Candida* spp. has been shifted towards non-*albicans* *Candida* spp. But antifungal susceptibility results have demonstrated that fluconazole may be still used as a first choice in empirical therapy in our unit.

Table. Antifungal susceptibility profile of *Candida* spp. isolated from blood culture in the ICU.

+

<u>Species</u>	<u>MIC90</u> <u>µg/mL</u>	<u>MIC50</u> <u>µg/mL</u>	<u>Range</u> <u>µg/mL</u>
<b><u>C. albicans (13)</u></b>			
<u>Amphotericin B</u>	0.5	0.38	0.19-0.5
<u>Caspofungin</u>	0.047	0.016	0.002-0.094
<u>Anidulafungin</u>	0.003	0.002	0.002-0.008
<u>Fluconazole</u>	0.5	0.19	0.004-0.75
<u>Itraconazole</u>	0.38	0.064	0.023-0.5
<u>Voriconazole</u>	0.023	0.008	0.008-0.47
<u>Posaconazole</u>	0.032	0.023	0.008-0.47
<b><u>C. parapsilosis(6)</u></b>			
<u>Amphotericin B</u>	0.25	0.19	0.10-0.38
<u>Caspofungin</u>	0.38	0.19	0.032-0.5
<u>Anidulafungin</u>	6	1	0.19-12
<u>Fluconazole</u>	3	0.25	0.094-3
<u>Itraconazole</u>	0.5	0.19	0.012-3
<u>Voriconazole</u>	0.094	0.012	0.008-0.32
<u>Posaconazole</u>	0.25	0.047	0.016-0.25
<b><u>C. glabrata(6)</u></b>			
<u>Amphotericin B</u>	0.38	0.19	0.006-0.5
<u>Caspofungin</u>	0.125	0.016	0.002-0.125
<u>Anidulafungin</u>	0.012	0.006	0.002-0.016
<u>Fluconazole</u>	2	6	1.5-12
<u>Itraconazole</u>	4	2	0.5-8
<u>Voriconazole</u>	0.19	0.19	0.002-0.25
<u>Posaconazole</u>	3	1.5	0.25-3

□