

P985

Abstract (poster session)

Epidemiology of *Candida* species from sterile specimens in Germany and susceptibility to antifungal agents in vitro using the EUCAST method

M. Kresken*, B. Körber-Irrgang, C. Lass-Flörl, A.H. Groll on behalf of the Working Party Antimicrobial Resistance of the Paul Ehrlich Society of Chemotherapy

Objectives: *Candida* species have emerged as major pathogens of invasive infections in hospitalised patients. They rank fourth among the organisms causing bloodstream infections and represent a major cause of morbidity and mortality in critically ill patients. *C. albicans* is the predominant species, but a shift to increasing rates of non-*albicans* *Candida* spp. with reduced susceptibility (susc.) to commonly used antifungal agents has been observed during the last two decades. The purpose of this surveillance study was to assess the distribution and antifungal susc. patterns of *Candida* species isolated from blood and other sterile body sites. **Methods:** Between October 2010 and September 2011, 24 laboratories from Austria (n=1), Switzerland (n=3) and all regions of Germany (n=20) were requested each to consecutively collect 20 non-duplicate isolates from sterile specimen. Organisms were shipped to a coordinating laboratory for species confirmation and susc. testing. MICs were determined by the microdilution method described in the EUCAST document EDef 7.1. Plates were read with a plate reader. Two wavelengths (405 and 450 nm) were used for measuring the absorbance. MICs were read after 24 h and interpreted by EUCAST species-related clinical breakpoints (version 4.1). **Results:** A total of 542 isolates were included. The most common isolated species was *C. albicans* (62.5%), followed by *C. glabrata* (21.4%), *C. parapsilosis* and *C. tropicalis* (5% each), and *C. krusei* (2.4%). MIC-90 values for these species are provided in the Table. MICs showed a shift towards higher MICs at 450 nm, which resulted in more strains with amphotericin B MIC values above the breakpoint at 450 nm (7/522; 1.34%) as compared to 405 nm (2/522; 0.38%). With both wavelengths, resistance (res.) to anidulafungin and fluconazole was observed in 1/495 (0.2%) and 1/393 (0.25%) evaluable isolates, respectively. The anidulafungin-res. isolate of *C. glabrata* showed also reduced susc. to micafungin (0.25 mg/L) and caspofungin (0.5 mg/L). All isolates of *C. albicans*, *C. parapsilosis* and *C. tropicalis* were susc. to posaconazole and voriconazole. Of the 27 *C. tropicalis* strains, 70,4% showed reduced susc. to 5-fluorocytosin. **Conclusion:** *C. albicans* remains the predominant *Candida* species isolated from blood and other sterile body sites. Overall, the level of res. to first-line antifungal agents among invasive *Candida* isolates seems to be favourable in Germany and the central European area.

Table: MIC-90 values (mg/L)

	C. albicans (n=339)		C. glabrata (n=116)		C. parapsilosis (n=27)		C. tropicalis (n=27)		C. krusei (n=13)	
	405 nm	450 nm	405 nm	450 nm	405 nm	450 nm	405 nm	450 nm	405 nm	450 nm
Ampho- tericin B	0.5	0.5	1	1	1	1	1	1	1	2
5-fluoro- cytosine	≤0.031	≤0.031	≤0.031	≤0.031	0.063	≤0.031	4	4	0.5	0.5
Fluco- nazole	0.125	0.25	16	16	0.25	0.25	0.25	0.25	16	32
Itraco- nazole	≤0.016	≤0.016	>2	>2	0.031	0.031	0.031	0.031	0.25	0.25
Posaco- nazole	0.016	0.016	2	4	0.031	0.031	0.031	0.031	0.125	0.25
Vorico- nazole	≤0.008	≤0.008	0.5	1	0.016	0.031	0.031	0.031	0.5	0.5
Anidula- fungin	0.016	0.016	0.031	0.031	1	1	0.031	0.063	0.031	0.031
Caspo- fungin	0.063	0.063	0.125	0.125	0.5	1	0.125	0.125	0.25	0.25
Mica- fungin	0.016	0.016	≤0.008	≤0.008	1	1	0.031	0.031	0.063	0.063