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ePoster Viewing
Antifungal drug susceptibility and resistance

Comparative evaluation of a new commercial colorimetric microdilution assay (SensiQuattro Candida EU) with E-test and EUCAST broth microdilution for susceptibility testing of invasive Candida isolates

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Objectives. The aim of this study was to assess the performance of the SensiQuattro assay (SQ, Liofilchem, Italy), a novel commercially available colorimetric broth microdilution (BMD) panel, for susceptibility testing of invasive *Candida* isolates against the azoles fluconazole (FLU), posaconazole (POS) and voriconazole (VOR) and amphotericin B (AMB). Methods. The minimum inhibitory concentrations (MIC) obtained by SQ of a total of 187 well characterized blood culture isolates of *Candida* spp. (120 *C. albicans*, 38 *C. glabrata*, 10 *C. parapsilosis*, 12 *C. tropicalis* and 7 *C. krusei*) collected in two University hospitals (Essen, Germany and Vienna, Austria) were compared with BMD and Etest (bioMérieux, France) by using EUCAST recommendations. Reference BMD, Etest and SQ MICs were established after 24 h of incubation. Both, SQ and Etest were performed according to the manufacturer´s instructions. Categorical agreement (CA) was based on interpretive breakpoints of sensitive, intermediate, and resistant. In the case of absence of clinical breakpoints (CBP) for EUCAST or CLSI CBPs were adopted from Pfaller et al.. Results. For *C. albicans* the CA between SQ and BMD was 94% for the azoles and 97.4% for AMB. The CA for *C. glabrata* was 28.4% for VOR and 84.2% for AMB. For *C. glabrata* the CA for POS and FLU could not be assessed because the SQ serial twofold dilution range was not adjusted to the clinical breakpoints of CLSI or EUCAST. The overall CA for all five species between SQ and BMD was 81.5% and for Etest and BMD it was 90.0%. The percentages of very major errors were below 3% for all tested compounds in SQ. Conclusions. With the exception of VOR susceptibility against *C. glabrata* the SQ colorimetric BMD panel appears to be a suitable alternative procedure for routine antifungal susceptibility testing of azoles and AMB against *Candida spp.*.