

**P2147 MBT ASTRA: applicability of rapid antifungal susceptibility testing against anidulafungin for *Candida glabrata* strains directly obtained from positive blood culture**

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**Background:** Invasive candidiasis caused by *C. glabrata* is an increasing health care problem resulting in an increased application of only few antifungals. Although echinocandins are still the best candidates for treatment, *C. glabrata* isolates resistant to echinocandin are reported from all over the globe. In this study, Matrix-Assisted Laser Desorption Ionization-Time of Flight Mass Spectrometry was applied for rapid antifungal susceptibility testing (MBT ASTRA) of *C. glabrata* isolates against anidulafungin.

**Materials/methods:** A total of 40 *C. glabrata* isolates (susceptible= 30, resistant= 10) derived from stock cultures of routine samples were analysed from positive blood cultures that had been enriched with 10 ml whole sheep blood and inoculated with the respective *C. glabrata* isolates. Positive blood cultures were purified by MALDI Sepsityper kit and pellets were directly used for MBT ASTRA anidulafungin susceptibility assay. Twofold serial dilutions of anidulafungin ranging between 0.06 µg/ml and 4 µg/ml plus a control without antifungal were used in this assay. After 6 hours incubation, cells were lysed and spotted in duplicate. Dried spots were overlaid with MALDI matrix containing an internal standard. Spectra were acquired in the mass range between 2 and 20 kDa and analyzed by MS-ASTRA prototype software. Relative growth values above 0.5 were considered as growth. MBT ASTRA results were compared to the microdilution results according to the current CLSI guideline M60 (November 2017).

**Results:** Recommended anidulafungin breakpoints for MBT ASTRA are as followed: susceptible  $\leq 0.5$  µg/ml and resistant  $\geq 1$  µg/ml. Accordingly, all 10 resistant strains were correctly detected, resulting in a sensitivity of 100%. One out of thirty susceptible strains was wrongly detected as resistant, resulting in a specificity of 97%. A comparison between MBT ASTRA and CLSI method calculated a categorical agreement of 97.5%.

**Conclusions:** MBT ASTRA was demonstrated to be applicable for the rapid antifungal susceptibility testing of *C. glabrata* derived from positive blood cultures within a total time to result of about 7 hours. However, a larger panel of strains will have to be investigated to confirm results obtained in this study.