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ePoster Viewing

Evolving therapeutic strategies for fungal infections

**EARLY APPROPRIATE ANTIFUNGAL THERAPY IMPROVES OUTCOMES OF PATIENTS WITH CANDIDAEMIA IN INTENSIVE CARE UNIT**

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**Objectives:** Few studies assessing whether delayed antifungal treatment and inadequate source control affect hospital mortality of critically ill patients with candidaemia. Furthermore, whether appropriate antifungal therapy matters is unknown. This study aimed to analyze the impact of early appropriate antifungal therapy with implementation of updated CLSI criteria 2012 on the outcomes of patients with candidaemia in intensive care unit (ICU).

**Methods** We conducted a prospective observational study of hospitalized adult patients with candidemia since April 2011. The present study retrospectively included the patients with candidaemia in ICU from April 2011 to September 2013. We also performed the antifungal susceptibility test of *Candida* isolates by Sensititre YeastOne panels. Onset of candidaemia was defined as the date and time of the first blood culture positive for *Candida* species. Appropriate antifungal agent was defined as the agent to which *Candida* isolates susceptible, defined by updated CLSI guideline 2012. Besides, the adequate dosage of antifungal agent was defined according to Clinical Practice Guideline for the Management of Candidiasis 2009. Namely, fluconazole was inappropriate for patients with fungemia caused by *Candida glabrata*.

**Results:** One hundred and nine patients with one hundred and eleven *Candida* isolates were identified during the study period. *Candida albicans* was the predominant species (54.1%), followed by *C. tropicalis* (20.7%), *C. glabrata* (18.9%), *C. parapsilosis* (3.6%), and *C. krusei* (2.7%). The all-cause mortality within 14 and 28 days was 45.9% and 58.7%, respectively. Only 9 patients (8.3%) received appropriate antifungal therapy within 12 hours after onset of candidaemia, and all received fluconazole. The 14-day (22.2% vs. 48%) and 28-day (44.4% vs. 60.0%) mortality of patients with appropriate antifungal therapy and those without did not differ (both  $P > 0.05$ ). In multivariate analysis for risk factors associated with 14-day mortality, appropriate antifungal therapy within 12 hours of candidaemia onset (odds ratio [OR] 0.12, 95% confidence interval [CI] 0.02-0.82,  $P = 0.03$ ) was associated with lower mortality while higher acute physiology and chronic health evaluation (APACHE) II score (OR 1.14, 95% CI 1.07-1.21,  $P < 0.001$ ) had higher mortality. As for risk factors associated with 28-day mortality, only APACHE II score (OR 1.14, 95% CI 1.07-1.22,  $P < 0.001$ ) was identified.

**Conclusion:** Among patients with candidaemia in ICU, appropriate antifungal therapy within 12 hours of onset shows benefits of 14-day survival. However, APACHE II score still overrides the effect of the therapeutic intervention for 28-day mortality.