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ePoster Viewing

Evolving therapeutic strategies for fungal infections

IS TIMELY AND APPROPRIATE ANTIFUNGAL DRUG ENOUGH FOR SURVIVAL OF ADULT CASES WITH CANDIDEMIA?

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**Objective:** Candida bloodstream infections (CBI) were reported to be the fourth most common cause overall of hematogenous infections in the United States and between fourth to seventh in Europe. To evaluate the risk factors associated with mortality in patients with candidemia in context with *Candida* species and their susceptibilities, retrospectively.

**Methods:** All consecutive patients who developed candidemia at training and research hospital with an 800 beds were enrolled in this retrospective, observational, single center study during the period from June 2006 to December 2011.

**Results:** A total of 97 candidemia episodes were identified in 97 patients during the study period with an overall incidence of 4 episodes/10000 admissions in adults. Crude 30-day mortality rates among patients with candidemia were 56% (55 of 97 cases). Urinary catheterization, immunosuppressive therapy, APACHE II score ( $\geq 16$ ), hypoalbuminemia were found to be independent risk factors for fatal candidemia. Central-line catheter (n: 82, 84%) and urinary catheter (n: 81, 83%) were most common recorded risk factors among cases. Fluconazole was initiated as empirical antifungal drug in 20 (62%) cases with *C. albicans*, 26 (68%) cases with *C. parapsilosis*, and eight cases (42%) with *C. tropicalis*. Amphotericin B was initiated as empirical antifungal drug in seven (21%) cases with *C. albicans*, 4 (10%) cases with *C. parapsilosis*, and three cases (15%) with *C. tropicalis*. Caspofungin (CAS) was initiated as empirical antifungal drug in five (15%) cases with *C. albicans*, eight (21%) cases with *C. parapsilosis*, and six cases (31%) with *C. tropicalis*. Urinary catheterization (OR= 0.28; 95% CI: 0,08-0,88;  $P= 0.03$ ), immunosuppressive therapy (OR=0.29; 95% CI: 0,09-0,92;  $P= 0,039$ ), APACHE II score ( $\geq 16$ ) (OR=0,3; 95% CI: 0,12-0,75;  $P= 0.008$ ), hypoalbuminemia (OR= 4; 95% CI:1,63-9,79;  $P= 0.002$ ) were found to be independent risk factors for fatal candidemia. Crude 30-day mortality rates among patients with candidemia were 56% (55 of 97 cases). Control blood culture controls drawn at 72-h of antifungal treatment were negative in 45 patients of 55 fatal cases and all surviving patients. CAS was recorded as empirical therapy in 18 of 42 survivor cases and 15 of 55 fatal cases ( $P= 0.109$ ). Amphotericin B (AmB) was initiated empirically in 4 of 42 survivor cases and 10 of 55 fatal cases ( $P= 0.26$ ). Switching to CAS from after 72-h of fluconazole treatment was in nine survivor patient and nine none-survivor patients. Switching to either CAS or voriconazole (VOR) did not achieve clinical response in two hemathological patients who were under either AmB or CAS treatment.

**Conclusions:** Adult cases with candidemia who are at risk factors associated with mortality are more likely to have poor prognosis inspite of appropriate and timely initiated antifungal drug. Empirical choice of antifungal drug should be tailored with respect to the severity of patients and local antifungal resistance status.