Abstract (publication only)

Clinical epidemiology of nosocomial candidaemia among non-neutropenic adult patients

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Objectives: To evaluate incidence, causative Candida species, risk factors, treatment and outcome of nosocomial candidemia. Methods: Retrospective study of nosocomial candidemia observed from January 2008 to June 2011 at an Italian tertiary care hospital with no pediatric and transplantation departments. Results: One hundred forty-five episodes of candidemia occurred in 139 patients (52% males). Median age was 81 years (range 14-98 yrs). At diagnosis of candidemia, 70% of patients were hospitalized in medical wards, 17% in surgical wards, 13% in intensive care units (ICUs). Overall hospital incidence was 1.56 episodes per 10,000 patient-days (1.90 in 2008, 1.57 in 2009, 1.20 in 2010, 1.57 in 2011). The incidence was 4.28 episodes per 10,000 patient-days in ICUs, 1.69 in medical wards and 0.89 in surgical wards. The most frequent Candida species isolated was C. albicans (55%), followed by C. parapsilosis (24%), C. glabrata (10%), C. tropicalis (4%) and other Candida species (7%). Underlying diseases were: solid cancer (39%), diabetes mellitus (25%), surgery (27%), autoimmune disease (5%), hematological malignancy (3%), HIV (1%). Potential risk factors for candidemia were: antibiotic therapy (93%), urinary catheter (75%), total parenteral nutrition (TPN) (60%), surgery (27%), mechanical ventilation (18%), dialysis (9%), corticosteroid therapy (8%). A central venous catheter (CVC) >= 48 hours before candidemia was present in 53% of patients; of them, 39% had CVC-related candidemia. CVCs were removed in 71% of patients, with median removal time of 2 days (range 0-19 days). Systemic antifungals for at least 7 days were given to 69% of patients. Considering all treated patients, fluconazole and caspofungin were administered to 85% and 12% of cases, respectively. The overall crude mortality at discharge was 52%. Mortality rate was associated to hospitalization in medical wards (p <.018), CVC retention (p <.003) and inadequate antifungal therapy (p <.001). The presence of CVC, CVC timing removal (<= 3 days versus >3 days) and Candida species were not significantly associated with crude mortality. Conclusion: This study shows high incidence of nosocomial candidemia, especially in very elderly patients admitted in medical wards. Only about one fourth of patients had CVC-related candidemia. Mortality rate was highest in medical wards and associated to inadequate antifungal therapy and CVC retention.