

R2860

Abstract (publication only)

Epidemiology, species distribution, antifungal susceptibility and outcome of nosocomial yeast bloodstream infection in a tertiary hospital in Shanghai: a four year retrospective analysis

Z.T. Yang*, L. Wu, X.Y. Liu, M. Zhou, Y. Chen, E.Z. Chen (Shanghai, CN)

Background: Yeast, especially *Candida* is an important cause of bloodstream infections, causing significant mortality and morbidity in hospitals, and the epidemiology and species distribution vary from different region.

Methods: From May 2008 to September 2012, a total of 90 patients developed yeast bloodstream infection were enrolled in the study with an incidence of 3 episodes/10000 admissions.

Results: The incidence of candidemia caused by non-*C. albicans* *Candida* species (60.0%), including *C. parapsilosis* (17.8%), *C. tropicalis* (14.4%), *C. guilliermondii* (6.7%), *C. glabrata* (5.6%) and *C. sake* (5.6%) was higher than that of candidemia caused by *C. albicans* (31.1%) and other yeast (8.9%). The overall crude 7-days, 28-days and 12 weeks mortality were 21.1%, 34.4% and 42.2%, respectively. Regarding the 12 weeks mortality in the different units, patients in ICU had the highest mortality rate (63.6%), followed by patients in Internal Medicine wards (45.8%) and Surgical Wards (18.8%). Patients with *C. parapsilosis*, *C. guilliermondii* and *C. sake* had the lowest mortality rate at 28-days (11.1%; $p=0.021$) compared with patients infected with *C. albicans* (39.3%), *C. tropicalis* (61.5%) and other *Candida* (42.9%) or other yeasts (37.5%). *C. tropicalis* and *C. krusei* candidemia was most commonly associated with hematologic malignancy ($p=0.009$, 41.2 vs. 5.5%), neutropenia ($p=0.000$, 41.2% vs. 13.7%), rather than other candida. Patient's 7 days mortality was associated with the appropriate initial antifungal therapy within 6 days after onset of candidemia ($p=0.028$, 13.6% vs. 35.5%). A borderline statistically significant difference in the 12 weeks survival distributions ($p=0.05$) was found based on age (100% for <20 years of age, 61.5% for 21-65 years of age and 45.4% for > 65 years of age). Regarding the antifungal susceptibility, the rate of susceptibility to fluconazole was 88.5% for *C. albicans*, 93.8% for *C. parapsilosis* and 69.2% for *C. tropicalis* according to CLSI. The rate of non-susceptible to itraconazole was particularly high in *Candida* spp. (37.2%), while amphotericin B remained 100% to *Candida* spp., except to *C. lusitanae*.

Conclusion: The rate of Candidemia mortality remains high. The epidemiology of candidemia and antifungal susceptibility to *Candida* spp. in our study are rapidly changing and are different to other studies in occidental countries. Additional and a large cohort prospective or case-control study are needed to determine the best therapeutic regimen.