

## ANTIFUNGAL AGENTS PROBABLY INFLUENCE THE CHANGE OF THE EPIDEMIOLOGY OF FUNGEMIA

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**Background:** It is reported that the incidence of invasive fungal infections is increasing over the past 2 decades. Several investigators have reported that the incidence of fungemia caused by non-*albicans* species of *Candida* is increasing because of indiscriminate use of fluconazole (FLCZ), but others have reported that such change of the epidemiology of fungemia was not observed. In our country, the new antifungal agent can be used from December 2002, it is important that the analyzing of trends in antifungal use and the epidemiology of fungemia before clinical use of the new agent.

**Purpose:** To evaluate the trends in incidence of fungemia due to different yeast species during the past 2 decades, we analyzed data from 1982 to 2001 in a university hospital.

**Methods:** The medical records of patients with fungemia at our university hospital between 1982 and 2001 were retrospectively reviewed. We divided the 20 years into 4 periods according to the change of antifungal agents use (period 1: 1982-1985(before miconazole use) , period 2: 1986-1988 (before FLCZ use) , period 3a: 1989-1994 (dose of FLCZ use were below 1000g/year at the hospital), period 3b: 1995-2001 (FLCZ use were over 1000g/year). Both the trends in the epidemiology of fungemia and antifungal agents use were analyzed.

**Results:** 188 isolates of fungi were isolated from 181 patients in the 20 years. The incidence of fungemia increased until period 3a, but significantly decreased in period 3b. The isolated fungi were *Candida parapsilosis* (31%), *C. albicans* (31%), *C. tropicalis* (10%), *C. glabrata* (8%), *Trichosporon asahii* (7%), and so on. During the study period, there was no change in incidence of *C. albicans* infection but a significant increase of *C. glabrata* infection ( $<0.05$ ) and a significant decrease of *T. asahii* infection ( $p<0.01$ ). In addition, of 36 cases of breakthrough fungemia, the incidence of *T. asahii* isolates was decreasing but *C. glabrata* isolates was increasing in recent period.

**Conclusions:** There was a significant increase of *C. glabrata* infection and a significant decrease of *T. asahii* in study period. Antifungal agents probably influence the change of the epidemiology of fungemia.