

P0061

Poster Session I

Confronting fungal infections

**A SEVEN-YEAR SURVEY OF CANDIDA BLOODSTREAM INFECTIONS AT A LARGE ITALIAN UNIVERSITY HOSPITAL**

G. De Angelis<sup>1</sup>, T. D'Inzeo<sup>1</sup>, B. Fiori<sup>1</sup>, V. Prete<sup>1</sup>, E. Liberto<sup>1</sup>, E. De Carolis<sup>1</sup>, R. Torelli<sup>1</sup>, B. Posteraro<sup>1</sup>, T. Spanu<sup>1</sup>, M. Sanguinetti<sup>1</sup>

<sup>1</sup>Microbiology, Catholic University, Roma, Italy

**Objectives:** *Candida* bloodstream infection (BSI) is a major cause of morbidity and mortality in the healthcare setting. Recent epidemiological studies suggest that the etiological agents of invasive *Candida* infections are changing and shifting toward antifungal drug-resistant *Candida* species. A retrospective survey of *Candida* BSIs occurring at a tertiary-care Italian university hospital was performed to analyse the *Candida* epidemiology, species distribution and antifungal resistance rate.

**Methods:** All *Candida* BSIs from hospitalised patients between January 2005 and December 2012 were retrospectively analysed. Using standard laboratory techniques, *Candida* isolates were identified at the species level and their antifungal susceptibility patterns were determined. Statistical analyses were performed to assess the temporal trend of *Candida* BSIs according to the species and the rate of antifungal resistance of the patients' isolates.

**Results:** A total of 1123 *Candida* species were isolated from single BSI episodes of 1080 patients. The most frequent *Candida* species were *Candida albicans* (671; 59.7%), followed by *C. parapsilosis* (224; 19.9%), *C. tropicalis* (102; 9%) and *C. glabrata* (75; 6.6%). Non-*albicans Candida* species, in particular *C. parapsilosis*, were most frequently responsible for BSI among medical patients ( $p < 0.01$ ). However, in intensive care unit patients, the rate of BSI due to *C. albicans* was higher than that of BSI due to non-*albicans Candida* species ( $p = 0.02$ ). The majority of BSI episodes (86%) were detected after 8 days of hospitalisation, with a median time to the BSI onset of 25 days (interquartile range 14-42). Among the late onset BSIs ( $\geq 8$  days), *C. albicans* was the most frequent species compared to non-*albicans Candida* species (89% versus 81%,  $p < 0.001$ ), in both medical and surgical patients. Importantly, *C. albicans* was the *Candida* species with a significantly temporal increase ( $p < 0.001$ ), whereas the frequencies of *C. glabrata*, *C. parapsilosis* and *C. tropicalis* remained unchanged during the study period. In addition, the rates of antifungal resistance to fluconazole, echinocandins and amphotericin B did not show a significant increase over the same time period.

**Conclusions:** While *C. albicans* remained the leading cause of *Candida* BSIs in medical and surgical hospital settings, especially among patients with long hospital stays, the antifungal resistance rates were low for both *C. albicans* and non-*albicans Candida* species.