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Risk factors of candidemia for different *Candida* species

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Statement of the Problem: The frequency of *Candida* infections has increased in recent years, largely due to the increasing size of the population at risk, which includes immunosuppressive therapy, mechanical ventilation, neutropenia, recent surgical procedures, malignancies, transplantations, corticosteroid therapy, prior antifungal therapy, and other immunosuppressive conditions. Although *C. albicans* is the most common species of candidemia, the incidence of candidemia caused by non-*Candida albicans* species was higher. We aimed to evaluate the species distribution and risk factors of candidemia.

Methodology: This is a retrospective observational study. The patients with a positive *Candida* blood culture were included from January 2011 to January 2016 in our tertiary hospital. A total of 225 candidemia episodes were evaluated and several risk factors for developing invasive candidiasis were investigated; underlying diseases, prior antimicrobial treatments, steroid therapy and chemotherapy.

Findings: The frequency of non-*albicans Candida* species was higher than the frequency of *C. albicans* in blood cultures; *C. albicans* in 42.7%, *C. parapsilosis* in 27.1%, *C. glabrata* in 16.0% and other *Candida* species in 14.2% of all patients (Table 1). Compared to *C. albicans*, *C. glabrata* and other species, *C. parapsilosis* was seen in younger patients ($p=0.001$). In addition, hospitalization periods were longer in candidemia caused by *C. parapsilosis* than that by other *Candida* species ($p=0.002$). Furthermore, the presence of central venous catheter in patients was significant related with candidemia caused by *C. albicans* and *C. parapsilosis*. Candidemia caused by other *Candida* species were more frequently observed in patients with neutropenia, hematological malignancy and receiving chemotherapy.

Conclusion: *C. albicans* was the most prevalent species in candidemia in this study. The species distribution of *Candida* exhibited significant changes depending on some risk factors. Therefore, to know the clinical characteristics and risk factors associated with development of candidemia is important for choosing empirical therapy, because antifungal susceptibilities of isolates vary among different species.

Biography

Yasemin Oz has expertise in areas of medical microbiology and medical mycology. She is interested in human infections caused by fungi. Her studies focused on the detection, identification and antifungal susceptibility of medically important fungi. Currently, she works as the Head of the Mycology Laboratory in the Clinical Microbiology Department in a tertiary university hospital.

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