

عنوان مقاله:

Invasive fungal infections in children with leukemia in a tertiary hospital in Oman: An eight-year review

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خلاصه مقاله:

Background and Purpose: Invasive fungal disease (IFD) is a common and serious consequence of leukemia in children and the incidence of these infections has increased due to chemotherapy. This study aimed to present the epidemiology of IFD in a cohort of children with leukemia from a tertiary reference institution in Oman. **Materials and Methods:** A retrospective study of IFDs in pediatric patients below ۱۳ years of age with newly diagnosed or relapsed leukemia was conducted at the Royal Hospital in Muscat, Oman. From ۲۰۱۰ to ۲۰۱۷, IFD episodes in children with leukemia were evaluated retrospectively, considering age, gender, type of leukemia, chemotherapy regimen, IFD detection phase, neutropenia, prevention, diagnostic method, and treatment. **Results:** Between ۲۰۱۰ and ۲۰۱۷, ۱۹۸ children with leukemia were admitted and treated at Royal Hospital. Invasive fungal infection (IFI) was diagnosed in ۳۲ patients out of ۱۹۸ (۱۶.۱%), and IFI was defined as probable and proven in ۵۳% (n=۱۷) and ۴۷% (n=۱۵) of the cases, respectively. At ۱:۱:۱, the male-to-female ratio was roughly equal. According to chest computed tomography scans, ۶۵.۶% of patients had radiological features of fungal infections. Positive fungal cultures were found in the bronchoalveolar lavage of three patients, ۳۷.۵% of whom had positive blood cultures, and ۳% had positive urine cultures as a neonatal invasive candidiasis. In three patients, invasive aspergillosis caused pulmonary IFD, accounting for ۹.۳% of all infection sites. Candidaemia was found in ۲۸% of IFD patients, and the most common organism was *Candida tropicalis* (۱۵.۶%), followed by *Candida prapsilosis* (۶.۲۵%). Furthermore, the major risk factor was febrile neutropenia. **Conclusion:** In children with leukemia, invasive fungal infection is common and serious. Despite aggressive treatment, mortality among these high-risk patients remains high.

کلمات کلیدی:

Acute Lymphoblastic Leukemia, Antifungal, Aspergillus, Candida, children, Invasive fungal infection, Prevalence

