

Management of Invasive Fungal Infections in The Immunocompromised Host

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The past several decades have witnessed a substantial progress in the management of opportunistic mycoses, especially with the introduction of new, potent and less toxic agents for prophylaxis and therapy. Specifically, the introduction of the echinocandins, the lipid amphotericin B products and the broad spectrum triazoles has been a welcomed addition to our antifungal armamentarium. Yet, these infections remain a formidable frontier in modern infectious diseases, mainly because of suboptimal diagnosis, poor host immunity and the emergence of resistant fungal pathogens. Therefore, there are no treatment guidelines that could be applied universally, but each institution's predominant fungal pathogens and resistance patterns should guide the empiric and pre-emptive choice of antifungals. It is unclear whether the prompt initiation of monotherapy with a broad-spectrum antifungal agent to combination therapy. Clearly, this is an important area for future investigation. The development of risk stratification models that would allow the identification of patients at high risk for treatment failure or relapse of their infection, pharmacogenetic differences in metabolism of antifungals and the role of antifungal drug monitoring and "indexing" the net state of immunosuppression are important areas of preclinical and clinical research. Finally, it is hoped that the development of new non-culture-based diagnostic methods will allow early detection of invasive infections and therefore, empiric therapy will be replaced by pathogen-specific, pre-emptive therapy.

Reference

1. Walsh TJ, Anaissie EJ, Denning DW, et al. Infectious Diseases Society of America. Treatment of aspergillosis: Clinical practice guidelines of the Infectious Diseases Society of America. Clin Infect Dis 2008; 46:327-60.