

FUNGAL INFECTIONS IN TRANSPLANT PATIENTS AND DRUGS OF CHOICE FOR MANAGEMENT

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Introduction. Fungal infections represent a significant risk for organ transplant recipients due to prolonged immunosuppressive treatment. The incidence varies between 2% and 50%, and mortality can reach up to 50%. Early recognition of common fungal pathogens and appropriate antifungal therapy are essential for effective management and improved survival in these patients.

Materials and Methods. A literature review and analysis of scientific articles published in the PubMed database during the last ten years was performed. The selected studies focused on the epidemiology, risk factors, common fungal pathogens, and therapeutic approaches related to fungal infections in organ transplant patients.

Results. Risk factors for fungal infections include immunological (type, intensity and duration of immunosuppression, prolonged neutropenia, prolonged antibiotics that alter the microbiota, glucocorticoid, anti-proliferative drugs), procedural (surgical complications, prolonged antibiotic use, catheter/devices use, anti-proliferative drugs) and environmental (contaminated water, soil and air). In organ transplant patients, pathogenic fungi include the common fungi *Candida spp.* (*Candida albicans*, *Candida glabrata*, *Candida krusei*), *Aspergillus spp.* (*Aspergillus fumigatus*, *Aspergillus flavus*, *Aspergillus terreus*), *Pneumocystis jirovecii* and *Cryptococcus spp.* (*Cryptococcus neoformans*, *Cryptococcus gattii*) as well as endemic fungi. In addition, endemic fungi such as *Histoplasma capsulatum*, *Coccidioides immitis* and *Blastomyces dermatitidis*.

Conclusions. The choice of antifungal therapy depends on the pathogen involved, the location of the infection, and its severity. Amphotericin B, especially in its liposomal form, is commonly used for severe and disseminated fungal infections. Azole antifungals such as fluconazole, voriconazole, itraconazole, and posaconazole are widely used for both treatment and prophylaxis. Echinocandins (caspofungin, micafungin, and anidulafungin) are effective particularly against candidiasis. However, antifungal therapy requires careful monitoring due to possible adverse reactions and interactions with immunosuppressive drugs used after transplantation.

Keywords: fungal infection, *Candida*, *Aspergillus*, *Pneumocystis*, kidney transplant, kidney transplant recipients, complications