

INFECTIOUS COMPLICATIONS IN ORGAN TRANSPLANT PATIENTS

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Introduction. Organ transplantation requires a careful balance between graft preservation, maintenance of adequate suppression and the risks of complications, including infections. The risk of infections (30-60%) on the background of immunosuppression will depend on the state of innate and adaptive immunity, epidemiological exposures to pathogens, and the immunological impact of immunosuppressive drugs.

Materials and methods: A selection and analysis of articles in the PubMed database from the last 10 years was performed in order to elucidate the peculiarities of development and time of manifestation of bacterial, fungal, viral and protozoal infections in people with organ transplantation.

Results: Infections have been shown to be the main cause of graft dysfunction, morbidity, and mortality. 3 periods were found regarding the risk of infection: 1st early (perioperative) or incipient during the first month when immunosuppression is not fully effective; 2nd intermediate – 1-6 months with maximum immunosuppression on the basis of antibacterial prophylaxis; 3rd- late – over 6 months with gradual reduction of immunosuppression with satisfactory functional grafts. In the early period, infections may be due to surgical interventions, pre-existing infections, healthcare-associated infections or donor-acquired infections. In the intermediate period, the range of infections may be caused by reactivation of latent infections (Herpes simplex, Cytomegalovirus, Hepatitis B and C, Mycobacteria) or the association of bacterial (*Legionella*, *Listeria*, *Nocardia*), fungal (*Aspergillus*, *Cryptococcus*, *Gistoplasma*, *Coccidioides*, *Pneumocystes*), viral (Cytomegalovirus, Epstein-Barr virus) and parasitic (*Toxoplasma*) infections. The late period is characterized by community infections or reactivation of chronic viral infections.

Conclusions: Infections in organ transplant patients require the implication of immunosuppression in the pathogenesis of the infection; resolution of infection without reduction of immunosuppression; probability of graft rejection with reduction of immunosuppressive therapy. Therapeutic interventions will depend on the existence of specific therapies (antiviral, antitubercular, antibacterial, antifungal, etc.) or those requiring nonspecific immune responses.

Keywords: immunosuppression, organ transplantation, infectious complications.