

Cytomegalovirus and invasive fungal disease: trolls of hematopoietic cell transplantation

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Progress in hematological oncology over last 50 years can be measured in the improvement in overall survival. This has been achieved by multiagent chemotherapy, immunotherapy including cellular therapy, and targeted therapy [1, 2]. These achievements were made possible by a combination of excellent everyday multidisciplinary and clinical work with national and international cooperation. Supportive therapy based on prevention and treatment of complications is essential in hematological oncology and hematopoietic cell transplantation [3, 4].

In this issue of *Acta Haematologica Polonica*, Styczyński et al. [5] present eight years of their pediatric experience detailing a continuous fight against fungal infections after hematopoietic cell transplantation or conventional therapy. No-one should be surprised that the incidence of invasive fungal disease (IFD) was highest in patients with acute leukemias, exceeding 50% in acute myeloid leukemia (AML) and reaching 30% in acute lymphoblastic leukemia (ALL). Similarly, no one should be surprised that graft-versus-host disease (GvHD) is a risk factor for the development of IFD.

But their study also provided strong evidence that cytomegalovirus (CMV) replication predisposes to the development of IFD, with mortality of over 20%. What can be done about this? We must prevent both IFD and the occurrence of risk factors, namely CMV and GvHD [6–8]. It seems to be easy for CMV to reactivate with the almost perfect prophylactic drug letermovir [9]. Better GvHD prevention will require however even greater scientific and clinical efforts.

Progress in medicine starts with prophylaxis!

Author's contributions

LG — sole author

Conflict of interest

None

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Ethics

The work described in this article has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans; EU Directive 2010/63/EU for animal experiments; Uniform Requirements for manuscripts submitted to Biomedical journals.

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