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Editorial

Immunization of transplant recipients

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For the Infectious Diseases Working Party of the European Group for Blood and Marrow Transplantation (EBMT)

The review of Singhal and Mehta in this issue of *Bone Marrow Transplantation* comes at a pertinent time. The issue of reimmunization of stem cell transplant recipients had, until a decade ago, not caught the attention of the community of physicians treating these patients. However, during the last few years the topic has been addressed in a substantial number of scientific articles, as well as reviewed by Singhal and Mehta.

It has become increasingly clear from the available data that there is a need for transplant centers to establish reimmunization programs for the long-term surviving patients. This was recognized 5 years ago by the Infectious Diseases Working Party of the European Group for Blood and Marrow Transplantation (EBMT) and the first version of their recommendations was published in *Bone Marrow Transplantation* in 1995.[1] These recommendations were put together after a survey of current practices among European transplant centers. At that time 65% of centers had a reimmunization policy. A new survey was performed within the EBMT in 1998, and now 95% of the centers reimmunize their patients against important infectious agents such as tetanus, diphtheria and poliovirus.

During the last year the US Center for Disease Control (CDC) in Atlanta, GA has initiated an ambitious program to develop recommendations for prevention of infections in stem cell transplant recipients, in which one important part is a program for reimmunization. This work will be finished in early 1999.

Since the knowledge regarding reimmunization of stem cell transplant recipients has improved during the 4 years since the previous recommendations were assembled, it is now also time for the EBMT to update the recommendations (Table 1). The EBMT Infectious Diseases Working Party has collaborated with the Center for Disease Control (CDC) during the work in finalizing the US recommendations, and although the final version of the US recommendations is not yet available, the differences between the EBMT and CDC recommendations are likely to be minor. It is important to recognize, however, that although most of the recommendations are independent of where in the world the patient lives, there are also local variations in the panorama of infections that could (and should) make each transplant center adjust the recommendations to suit the local situation. One example is the need for immunization against hepatitis B virus. In many countries where

Table 1 EBMT recommendations for immunization after SCT

Vaccine	*Allogeneic SCT*	*Autologous SCT*	
Tetanus toxoid	Recommended to all	Recommended to all	6–12 months
Diphtheria toxoid	Recommended to all	Recommended to all	6–12 months
Inactivated poliovirus	Recommended to all	Recommended to all	6–12 months
Pneumococci (polysaccaride vaccine)	Recommended to all	Recommended to subgroups	6–12 months
H. influenzae	Recommended to all	Recommended to subgroups	Season dependent
Influenza	Recommended to all	Recommended to all	Season dependent
Measles	Individual recommendation based on risk/benefit assessment	Individual recommendation based on risk/benefit assessment	Not earlier than 24 months after alloSCT
Rubella	Individual consideration based on risk/benefit assessment; females with potential to become pregnant	Individual consideration based on risk/benefit assessment; females with potential to become pregnant	Not earlier than 24 months after alloSCT
Hepatitis B	Regional variations depending on epidemiological situation	Regional variations depending on epidemiological situation	6–12 months

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the infection is common, children are routinely immunized against hepatitis B virus and it is logical that transplant recipients are reimmunized against hepatitis B. In other countries where the infection is rare, such as Sweden, the need for reimmunization is doubtful.

Despite these advances, additional studies are needed. New vaccines which are undergoing early clinical testing include conjugated pneumococcal vaccines. Other existing vaccines such as varicella vaccine have not been evaluated in stem cell transplant recipients. Hopefully we will have the results from such studies within the next few years.

References

1 1 Ljungman P, Cordonnier C, de Bock R *et al*. Immunizations after bone marrow transplantation. *Bone Marrow Transplant* 1995; **15**: 455–460.