STEM CELL TRANSPLANTATION

Current issues in allogeneic stem cell transplantation

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Abstract
Hematopoietic stem cell transplantation (SCT) has evolved as a central treatment modality in the management of different hematological malignancies. However, 2 major issues still impact overall mortality and morbidity post transplant.

1. Despite adequate post-transplantation immunosuppressive therapy, acute graft-versus-host disease (GvHD) remains a major cause of morbidity and mortality in the hematopoietic stem cell transplantation setting, even in patients who receive human HLA identical sibling grafts. Up to 30% of the recipients of stem cells or bone marrow transplantation from HLA-identical related donors and most patients who receive cells from other sources (matched-unrelated, non-HLA-identical siblings, cord blood) will develop Grade II or more acute GvHD despite immunosuppressive prophylaxis. Thus, GVHD continues to be a major limitation to successful hematopoietic stem cell transplantation.

2. With improvements in outcome, an increasing number of patients survive free of the disease for which they were treated. Today, about 60% of patients will survive 5 years after diagnosis. Therefore, immediate survival is no longer the sole concern. The aim of the allogeneic SCT now is to cure a patient's underlying disease and, at the same time, to minimize the incidence of post-treatment complications and ensure the best possible long term quality of life. The long time span between initial therapy and late effects, the multiple factors influencing cancer related health risk and the unknown effect of treatment on aging are common characteristics of late effects. While the treatment strategy of a cancer patient depends widely on the type and extension of the disease, considerations for a long term survivor depend much more on the type of treatment applied, age of the patient, its general health status, as well as his familial and social integration.

I will discuss, based on the most recent knowledge, advances and current issues in GvHD and some typical examples of late effects in survivors, and the practical recommendations that could assist practitioner and patient decision about appropriate healthcare for specific clinical circumstances.