

Nonmalignant late effects and compromised functional status in hematopoietic cell transplantation

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This research aimed to investigate the prevalence of health issues before and after hematopoietic cell transplantation (HCT) in patients over the past decade, considering changes in transplantation practices. The study involved 1,087 adult patients who underwent HCT at the Fred Hutchinson Cancer Center between 2004 and 2009. The focus was on identifying nonmalignant late effects, such as musculoskeletal, endocrine, cardiovascular, organ-specific, and miscellaneous conditions, and their impact on long-term morbidity. The results showed a high burden of late complications, with 44.8% of autologous recipients and 79% of allogeneic recipients experiencing at least one late effect by 5 years post-HCT. Moreover, 26% of allogeneic transplant survivors experience at least three late effects, compared to only 2.5% of autologous survivors. Chronic graft-versus-host disease, a common complication of allogeneic transplants, was highly associated with specific late effects, such as osteoporosis and diabetes mellitus. Associations between late effects and impaired functional status were also found, emphasizing the need for interventions to address long-term morbidity after HCT to improve survivors' health and quality of life.

The analysis considered factors like age, sex, donor type, and conditioning regimen intensity. The study highlighted that despite advancements in transplantation techniques, the incidence of late effects remained substantial, particularly in allogeneic recipients. The research suggests the importance of ongoing efforts to prevent or alleviate long-term complications, emphasizing a shared care approach involving close coordination between transplantation centers and primary care physicians to enhance patient outcomes and quality of life.