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CMV infection in immunosuppressed non-HIV patients

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Summary
In spite of recent developments in diagnosis and treatment, Cytomegalovirus (CMV) infection remains a major cause of morbidity and mortality after organ transplantation. CMV is a frequent pathogen in humans and is usually associated with asymptomatic infection, followed by a state of viral persistence or latency. In patients with congenital or acquired immunodeficiencies, primary CMV infection and reactivation of latent CMV are associated with life-threatening complications such as interstitial pneumonia, enteritis, hepatitis and bone marrow suppression. Therefore, CMV infection significantly contributes to transplant-related morbidity and mortality.

Major improvements in the management of CMV infection during the last decade have been achieved such as the introduction of safe blood product support for CMV-seronegative patients, the development of early pre-emptive antiviral therapy based on sensitive diagnostic tests and antiviral prophylaxis. In contrast to patients treated with high-dose chemotherapy and autologous SCT, patients after allogeneic SCT are at a much higher risk of CMV infection due to the delayed recovery of T and B cell functions. Thus, the rate by which immune function recovers or remains suppressed significantly influences the incidence of CMV infection and disease after organ transplantation. With the better control of CMV infection during the early phase after transplantation an increase in the incidence of CMV infection and disease late after transplant was observed. New methods that allow for the monitoring of CMV-specific immune responses will help to identify patients at higher risk for late onset CMV disease.

In conclusion, an improved management of CMV infection after transplantation has helped to reduce transplant-related mortality.