Preventive Strategies Against Cytomegalovirus and Incidence of α-Herpesvirus Infections in Solid Organ Transplant Recipients: A Nationwide Cohort Study

C Martin-Gandul, S Stampf, D Héquet, N J Mueller, A Cusini, C Van Delden, N Khanna, Katia Boggian, C Hirzel, P Soccal, H H Hirsch, M Pascual, P Meylan, O Manuel &

We assessed the impact of antiviral preventive strategies on the incidence of herpes simplex virus (HSV) and varicella-zoster virus (VZV) infections in a nationwide cohort of transplant recipients. Risk factors for the development of HSV or VZV infection were assessed by Cox proportional hazards regression. We included 2781 patients (56% kidney, 20% liver, 10% lung, 7.3% heart, 6.7% others). Overall, 1264 (45%) patients received antiviral prophylaxis (ganciclovir or valganciclovir, n = 1145; acyclovir or valacyclovir, n = 138). Incidence of HSV and VZV infections was 28.9 and 12.1 cases, respectively, per 1000 person-years. Incidence of HSV and VZV infections at 1 year after transplant was 4.6% (95% confidence interval [CI] 3.5-5.8) in patients receiving antiviral prophylaxis versus 12.3% (95% CI 10.7-14) in patients without prophylaxis; this was observed particularly for HSV infections (3% [95% CI 2.2-4] versus 9.8% [95% CI 8.4-11.4], respectively). A lower rate of HSV and VZV infections was also seen in donor or recipient cytomegalovirus-positive patients receiving ganciclovir or valganciclovir prophylaxis compared with a preemptive approach. Female sex (hazard ratio [HR] 1.663, p = 0.001), HSV seropositivity (HR 5.198, p < 0.001), previous episodes of rejection (HR 1.95, p = 0.004), and use of a preemptive approach (HR 2.841, p = 0.017) were significantly associated with a higher risk of HSV infection. Although HSV and VZV infections were common after transplantation, antiviral prophylaxis significantly reduced symptomatic HSV infections.