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Abstract (poster session)

Incidence, risk factors, and consequences of neutropenia in cytomegalovirus (CMV)-seronegative kidney transplant recipients of seropositive donors (D+/R-), treated with prophylactic valganciclovir

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Objectives: Post-transplant neutropenia (PTN) is a major complication of valganciclovir (V-GCG) use in CMV D+/R- kidney transplant recipients, but limited data are currently available regarding its incidence, risk factors, and consequences. More information on this potentially fatal event may better inform current controversies on the optimal prophylactic strategy for CMV disease in this population. Methods: Retrospective, observational, study performed in the Rennes University Hospital, France, between November 2003 and May 2011. During the study period, prophylactic V-GCV was routinely initiated in CMV D+/R- patients during the week following kidney transplant. All CMV D+/R- kidney transplant recipients were identified through our computerized database. Data were extracted from medical charts through a standardized questionnaire. PTN was defined by neutrophil count below 2000/mm3 at any time during the year following kidney transplant. Patients who developed PTN (PTN+) were compared to patients who did not (PTN-), using Wilcoxon tests for quantitative variables, and Chi2 tests for qualitative variables. Results: Of the 93 D+/R- patients treated with V-GCV, 72 (77.4%) presented at least one episode of PTN, with a median delay of 94 days after kidney transplant [range, 74-120], and a median neutropenia duration of 21 days [1-368]. PTN+ patients had lower neutrophil count before V-GCV was introduced, during the first week post-transplant, with a median of 5900/mm3 [2150-17860] versus 7710/mm3 [4460-12250] in PTN- ($P<0.05$). Thereafter, neutrophil counts gradually decreased in both groups. We found no significant difference between PTN+ and PTN- for the following variables: age, sex, daily or total doses of mycophenolate mofetil, daily or total doses of V-GCV, calcineurin antagonist, post-transplant renal function, neutrophil counts decrease slope, and acute rejection. Infections were more frequent in PTN+ (26.5% versus 0%, $P<0.01$), and one attributable death was recorded (septic shock). PTN-related V-GCV discontinuation was associated with earlier onset of CMV primo-infection (median, 169 days post-transplant in PTN+ vs. 299 days in PTN-, $P<0.01$) and a trend toward more CMV disease (14.3% vs. 0%, $P=0.06$). Conclusion: PTN occurs in > 75% of CMV D+/R- kidney transplants receiving prophylactic V-GCV. The most potent predictive variable for the risk of PTN is neutrophil count before V-GCV introduction.