

CYTOMEGALOVIRUS INFECTION IN KIDNEY TRANSPLANTATION: 2012-2014 PERIOD

Escudero-Jiménez, A(1); Lozano Serra, J(1); Simarro Córdoba, E(1); Lorenzo González, I(2); Blas Señalada, J.J(1); Crespo Sánchez, M.D(1)

(1) Microbiology and Parasitology department. (2) Nephrology department. Complejo Hospitalario Universitario de Albacete (CHUA)



BACKGROUND:

Cytomegalovirus (CMV) infection is one of most frequent infectious complications after kidney transplantation (KT). The first six months after transplantation are the higher risk period to develop a CMV infection, mainly second and third month. Our objective was to review the CMV infection episodes and recurrence episodes in kidney transplantation recipients (KTRs).

MATERIALS/METHODS:

Retrospective study involving CMV infection episodes in KTRs between 2012 and 2014. The collected data included gender, age at the KT, donor (D) and recipient (R) CMV serological status, use of anti-lymphocyte antibodies (ALA), and the results for CMV viral load (VL) during the first year after KT performed by quantitative real time PCR (CMV R-gene™, Argene). High risk KTRs (serological match D+/R- or ALA treatment) received prophylaxis with ganciclovir/valganciclovir for the period of 3 to 6 months. An episode (primo-infection, reactivation or recurrence) was defined by CMV VL ≥ 1000 copies/mL. All CMV infection episodes were treated with ganciclovir/valganciclovir and immunosuppressive therapy was modified when was necessary.

RESULTS:

A total of 102 patients received a KT in this period, mean age was 53.6 years old (range 24 - 78) and 72.5% were men. Serological match distribution was: D+/R+ 66.7%, D+/R- 14.7%, D-/R+ 13.7%, unknown/R+ 3.9% y D-/R- 1%. The 27.4% KTRs received ALA treatment. Out of a total of 1646 samples, 86 had CMV VL ≥ 1000 copies/mL which correspond to 60 CMV infection episodes in 42 KTRs. Two KTRs suffered CMV disease during their follow-up with a favorable resolution.

Table 1. CMV infection episodes distribution.

Transplantation year	2012	2013	2014	Total
KTRs	N=18	N=41	N=43	N=102
-First episode*	4(22,2%)	20(48,8%)	18(41,9%)	42(41,2%)
-Recurrence	2	7	9	18
1 episode/patient	2	5	4	11
≥ 2 episode/patient	-	1	2	3
High risk	N=9	N=18	N=13	N=40
-First episode*	1(11,1%)	6(33,3%)	5(38,5%)	12(30,0%)
-Recurrence	-	4	2	6
1 episode/patient	-	2	2	4
≥ 2 episode/patient	-	1	-	1
Moderate-Low risk	N=9	N=23	N=30	N=62
-First episode*	3(33,3%)	14(60,9%)	13(43,3%)	30(48,4%)
-Recurrence	2	3	7	12
1 episode/patient	2	3	2	7
≥ 2 episode/patient	-	-	2	2

*Primo-infection or reactivation

Mean time for CMV infection first episode was 80 days (median: 63 days; ICR: 39 - 86); 54 days (median: 47 days; ICR: 34 - 70) for moderate-low risk KTRs and 144 days (median: 172 days; ICR: 64 - 199) for high risk KTRs.

CONCLUSIONS: Incidence of cytomegalovirus primo-infection or reactivation is accord with the available bibliography as well as the period in which it occurs. Cytomegalovirus episodes are mostly asymptomatics. Cytomegalovirus recurrence episodes occur mainly at moderate-low risk kidney transplantation recipients.

