

The pattern of CMV (Cytomegalo-virus) viremia post kidney transplantation; 4 years follow up.

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Introduction: CMV viremia is common after organ transplantation. Objectives to assess rate, grade, and impact of antiviral prophylaxis and timing of CMV viremia in kidney transplant recipients.

Methods: A retrospective study of 395 transplanted patients between April 2010 and March 2014 .The cohort was divided as shown on table 1.

Table 1.Total kidney transplantation according to CMV serological status and type of kidney transplant:

CMV serostatus	D-/R-	D+/R-	D+/R+	D-/R+	total
DCD	32	26	36	32	126
DBD	36	38	38	34	146
LDTx	49	20	34	20	123
Total	117	84	108	86	395

DCD= donation after cardiac death, DBD= donation after brain death, LDTx=live donor transplant, D=donor, R= recipient

Results: At four years follow up, the rate of CMV viremia among the transplant cohort was 24%. The highest rate of viremia were among the D+/R+ CMV mismatch which was 46.3% (n=44/95), followed by D+/R- and D-/R+ CMV mismatch which were 26.3%(n=25/95) and 26.3% (n=25/95), respectively. 77% (n=73/95) of CMV viremia occurred during first six months, declined sharply to 12.6% (n=12/95) between 7 and 12 months, then the rate were 10.5% (n=10/95) after 12 months post-transplant. Breakthrough viremia occurred in 31.6% (n=30/95) of patients, 46.3% (n=44/95) after antiviral prophylaxis and in 22.1% (n=21/95) of those had no prophylaxis. High grade viremia were frequent in D+/R+ and D+/R- CMV mismatch in which 19% (n=18/95) and 17% (n=16/95) respectively , and less frequent in D-/R+, D-/R- CMV mismatch groups were 9.4% (n=9/95), 2.1% (n=2/95), respectively.

Conclusion: The rate of CMV viremia was 24%. More common in the first 6th months post-transplant, after antiviral prophylaxis, and D+/R+ CMV serostatus. Our recommendation is to extend CMV prophylaxis to 180 days and considering prophylaxis for D+/R+ regardless which induction agent used.