EXTENDING VALGANCICLOVIR PROPHYLAXIS IN KIDNEY TRANSPLANT RECIPIENTS IS ASSOCIATED WITH LOWER INCIDENCE OF CYTOMEGALOVIRUS INFECTION

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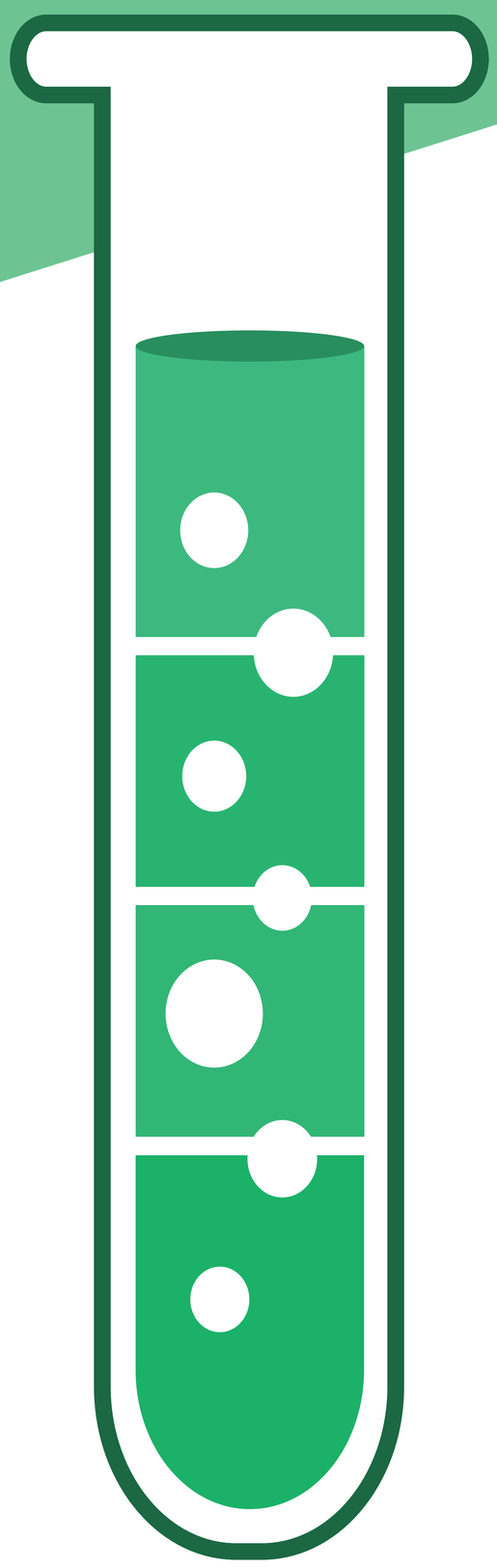

INTRODUCTION AND AIMS

Cytomegalovirus (CMV) is the most common and serious viral infection affecting kidney transplant recipients (KTRs). The greatest recognized risk factor for CMV disease is a serological mismatch between donors and recipients. Ganciclovir and derivatives are widely used for prophylaxis and treatment of CMV infection in the transplantation setting. Until recently the emphasis on prophylaxis with these agents focused on early disease, occurring in high risk patients, and typically lasted no longer than 3 months, although several clinical trials proved benefits from extension of prophylaxis to 6 months. The aim of our study was to compare the efficacy and safety of two subsequent CMV prophylaxis regimens and to explore whether applying a more intense antiviral prophylaxis resulted in lower incidence of CMV viremia and disease 12 months after kidney transplantation in our KTRs.

METHODS

This single-center, retrospective study compared two CMV prophylaxis protocols: the short protocol in which D+/R- (high risk group for the development of CMV disease) received valganciclovir for up to 3 months post transplantation and extended protocol in which prophylaxis for high risk recipients was extended to 6 months and a 3 months prophylaxis for D+/R+ and D-/R+ (both intermediate risk groups) KTRs was introduced. Incidence of CMV viremia, disease and neutropenia were assessed 12 months after kidney transplantation.

RESULTS

A total of 457 KTRs were included in this historic cohort analysis; 167 KTRs received short CMV prophylaxis (group 1) and 290 were treated with extended protocol of CMV prophylaxis (group 2). Most deceased-donor kidney grafts were accepted from seropositive donors (n = 317/457; 69.4%). The patient's characteristics, comparison of treatment outcomes and treatment side-effects between both groups are portrayed in Table 1. Comparison of CMV viremia incidence between different donor/recipient CMV serostatus subgroups is shown in Table 2.

TABLE 1: Comparison of patient's characteristics, incidence of cytomegalovirus (CMV) viremia, disease and prophylaxis side-effects in short and extended CMV prophylaxis groups

Parameter	Short CMV prophylaxis	Extended CMV prophylaxis	P value
N	167	290	/
Age* (yrs)	48 +/- 13	53 +/- 10	/
Male	54%	63%	/
CMV Viremia[b]	29.2%	17.6%	0.001
CMV viremia detection (days posttransplant)	89 (range 10-270)	167 (range 22-565)	/
CMV disease[b]	10.2%	5.2%	0.04
Neutropenia[b]	33.5%	41.7%	0.09

[a]at the time of transplatation; [b]until 12 months after transplatation
Data are presented as mean +/- SD

TABLE 2: Incidence of cytomegalovirus (CMV) viremia in different donor/recipient CMV serostatus subgroups

	Short CMV prophylaxis	Extended CMV prophylaxis	P value
D+/R-[a]	47.4%	50%	0.79
D-/R+[b]	5.7%	3.1%	0.05
D+/R+[c]	23.6%	9.7%	0.0004

[a]Donor CMV seropositive/Recipient CMV seronegative
[b]Donor CMV seronegative/Recipient CMV seropositive
[c]Donor CMV seropositive/Recipient CMV seropositive

CONCLUSION

Introduction of prophylaxis for medium risk KTRs (D+/R+ or D-/R+) resulted in significant reduction in incidence of CMV viremia and disease at 12 months' observational period without significant additional safety concerns.

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