Belatacept for Kidney Transplant Patients- Addition to the Immunosuppressive Task Force

Muhammad Asad Khan, Nida Zubair

Dear Madam,

The drought of immunosuppression in transplantation is over. The US food and Drug administration (FDA) recently approved belatacept for kidney transplant recipients[1]. It is a selective T- cell co-stimulator blocker especially CD 86/CD 28 interaction and also blocks CD 80[2]. It is indicated for prophylaxis of acute organ rejection in adult patients with a renal transplant. Belatacept is used in combined induction with Basiliximab, Myco-phenolate Mofetil (MMT) and Corticosteroids[3]. However, Belatacept can only be used for patients who are Epstein Bar Virus (EBV) seropositive and should not be used in patients who are EBV seronegative because of the increased risk of lymphoproliferative disorders and can only be given to kidney transplant recipients[4]. The dosage schedule for Belatecept is shown in (Table 1).

Table 1. The dosage schedule for Belatacept[4]:

Dosage for initial phase	**Dose**
Day 1(day of transplantation, prior to implantation) and Day 5 (approx 96 hours after day1 dose)	10 mg per kg
End of week 2 and week 4 of transplantation	10 mg per kg
End of week 8 and week 12 of transplantation	10 mg per kg
Dosage for maintain phase	**Dose**
End of week 16 after transplantation and every 4 weeks(plus or minus 3 days) thereafter	5 mg per kg

Patients receiving Belatacept are at increased risk of developing Post Transplant Lympho-proliferative Disorders (PTLD). Physicians should consider PTLD in recipients with worsening cognitive and behavioral functions. Patients who are EBV and Cytomegalo virus (CMV) seronegative are at increased risk of developing PTLD5. CMV prophylaxis is recommended for 3 months in transplant patients. In addition to the PTLD in transplant recipients there is also an increased risk of skin malignancies hence ultraviolet light should be avoided by wearing protective clothing and using a sunscreen with high SPF value. There is also increased risk of progressive multifocal leukoencephalopathy (PML) by John Cunningham virus (JC virus) and infection by BK virus has also been reported. Tuberculosis is reported more in patients on Belatacept than cyclosporine in clinical trials[4]. Patients should be evaluated for latent tuberculosis and should be treated for latent TB prior to starting belatacept.

Students Final year
Karachi Medical and Dental College

Correspondence: Muhammad Asad Khan
Final year student KMDC
Phone: 0333 3683254
Email: asadkhan1491@gmail.com

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