

Neurotoxicity perspective: stand behind Prograf[®] (tacrolimus) as a pharmacist.

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Background and Aims: Immunosuppressive tacrolimus (prograf) that is widely used in liver transplantation, could be potentially neurotoxic if its' blood level increases to more than 15 ng/ml. Due to liver transplantation program in Isfahan/Iran and use of prograf, as immunosuppressant, this study aims to investigate drug levels that might be related to neurotoxic effects of tacrolimus in patients after liver transplantation.

Methods: Retrospective data from forty-five liver recipients with a mean age of 49 years (ranged; 25-64 yrs), transplanted at King's College Hospital (London) was analysed. The route of administration was oral. Trough levels of tacrolimus were determined by microparticle enzyme immunoassay (MEIA). Statistical analysis was performed using SPSS (version 18) for windows.

Conclusions: There was no correlation between dose and trough level ($p= 0.270$, $r= 0.168$). In the 80% of occasions tacrolimus dose was 5 mg. Trough levels of tacrolimus showed highly variable. The mean trough level was 13.2 ng/ml (ranged; 0.1-41.4 ng/ml). In the 35% of recipients, the level was more than 15 ng/ml (could be neurotoxic). To prevent neurotoxic side-effects dosage adjustment should be performed with cautions and assisted by programmed therapeutic drug monitoring (TDM).

Keywords: Tacrolimus; Neurotoxicity; Liver recipients