

Clinical Experience with Everolimus in Heart Transplant Recipients at the Sheba Medical Center – Efficacy and Tolerability

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Background: Everolimus (EVR) is a potent novel immunosuppressive drug which, when combined with reduced dose of cyclosporine, can minimize adverse side effects of the calcineurin inhibitor (CNI). *Purpose:* To compare the clinical and laboratory results in heart transplant (HT) patients (pts) receiving EVR with those receiving the standard CNI-based protocol. *Methods:* Between July 2005 and November 2009, 31 HT pts treated at the Sheba Medical Center with an EVR-based protocol were compared to 31 pts matched in age, gender, time since transplant and indication, treated with the standard CNI-based protocol. *Results:* In all but one of the 31 EVR treated pts the drug was begun at a minimum of 6 months post-transplant (mean 56.8 months) due to adverse events related to CNI's (56%) or MMF (22%), malignancies (25%) and established coronary disease (22%). The drug was discontinued in 3 pts in less than 1 month due to adverse events (2 cases of drug eruption and 1 case of leukopenia). Three deaths occurred among patients receiving EVR: one due to acute graft rejection, one metastatic lung cancer and one self injury. No cases of cardiac allograft vasculopathy (CAV) were noted in the EVR group compared to 2 cases (7%) in the CNI group. Rates of acute graft rejection, infection or malignancy were similar in both groups. Despite higher mean serum creatinine levels at baseline (2 vs 1.4 mg/dL; $p < 0.02$), by 6 months pts receiving EVR had similar levels compared to those receiving CNI's (1.6 vs 1.5 mg/dL). Conversely, while baseline mean serum cholesterol levels were lower in the EVR group (168 vs 184 mg/dL; $p < 0.04$), they have increased to 176 mg/dL after 6 months of EVR and decreased to 166 mg/dL in the CNI group. ($p < 0.004$). *Conclusion:* EVR provides a safe alternative to CNI based treatment for HT recipients, with comparable rates of acute graft rejections, CAV, infections and malignancies, with improved renal function but with a significant increase in serum cholesterol levels.