COMPARISON OF CYCLOSPORINE TROUGH LEVEL (C0) AND C2 MONITORING IN KIDNEY TRANSPLANT RECIPIENTS

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Cyclosporin A (CyA) is a drug with a narrow therapeutic window and highly variable pharmacokinetics. Therapeutic drug monitoring is essential and conventionally has been guided by trough level (C0). Recent evidence indicates that a single blood concentration measurement 2 h after CyA administration (C2) is a more accurate predictor of drug exposure and clinical events than determination of C0. The aim of this prospective study was comparission of C0 and C2 monitoring in kidney transplant recipients in our center. In a descriptive, cross sectional study in 35 kidney allograft recipients we determined conventional C0 and also C2 and observed clinical outcome and renal function test from the fist month to 2 years after transplantation. Then statistical analysis was performed. From 35 kidney recipients 18 were female and 17 were male with mean age of 41 +/- 12 years. Mean CyA dose was 351 +/- 37 mg/day (5.6 +/- 1.4 mg/kg/day). Mean serum CyA trough level was 290 +/- 153 ng/ml and 448 +/- 230 ng/ml within the first month and 6 month after transplantation respectively. Mean C2 level were 1333 +/- 803 ng/ml and 1880 +/- 730 ng/ml within the first month and 6 month after transplantation respectively. About 57% of these patients had C2 level more than 1600 ng/ml and 50% had C0 more than 400 ng/ml. There was significant correlation between female sex and C2 level >1600 ng/ml (p=0.05). There was also invers relationship between serum creatinin and CyA level especially C2 (Pearson correlation: -0.479 versus -0.436) In conclusion, our patients were clinically good and renal function tests were stable exept for small creatinin rising during study and therewasn't any significant comparable differanse regarding to transplant rajection or CyA toxicity between C0 and C2 monitoring.