Effect of perioperative administration of a drug regimen on the primary function of human renal allografts.

Abstract:
Delayed graft function (DGF) has one of the greatest effects on short- and long-term outcomes of cadaveric renal allografts. Ischemia reperfusion injury in the context of cold ischemia time and acute calcineurin inhibitor (CNI) nephrotoxicity is a major factor predisposing to DGF. A drug regimen consisting of prostaglandin E(1) (PGE(1)) furosemide and dopamine has been used to reduce DGF after kidney transplantation. Prostaglandin E(1) has multiple anti-ischemic and tissue-protective abilities, furosemide improves diuresis, and dopamine augments renal blood flow and urinary volume. To evaluate a potential positive effect of this drug regimen on the primary function of cadaveric renal allografts, we performed a retrospective single-center study that compared 100 patients who received this regimen with a control group. The results showed no significant improvement in renal function. In contrast, plasma levels of creatinine and urea were increased in the drug regimen group. Thus, the effectiveness of PGE(1) in combination with high-dose furosemide and dopamine in diminishing DGF was not demonstrated in this trial.