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Pretransplant replacement of donor liver grafts with recipient Kupffer cells attenuates liver graft rejection in rats

Kosuke Endo, Tomohide Hori, Kanta Jobara, Toshiyuki Hata, Tatsuaki Tsuruyama, and Shinji Uemoto

**Background and Aim:** Rejection of liver grafts is a difficult issue that has not been resolved. Preoperative replacement of liver cells in the graft with cells from the intended recipient may attenuate rejection. We investigated whether preoperative transplantation of recipient BMCs to the donor replaced liver allograft cells and attenuated rejection.

**Methods:** We used a rat model of allogeneic liver transplantation (LT) from DA to LEW rats. In BMC group, DA rats received BMC transplants from LacZ-transgenic Lewis rats at 1 week before LT. In Control group, DA rats received no preoperative treatment. We evaluated graft damage at 7 d after LT and the survival of the recipient rats.

**Results:** Rats in the BMC group experienced prolonged survival that was abrogated by the administration of gadolinium chloride to donors at 24 h before LT. Serum concentrations of total bilirubin and hyaluronic acid on day 7 were significantly lower in the BMC group, and histopathological analyses revealed that rejection of the liver graft was attenuated. X-gal staining and Immunohistostaining of the liver graft revealed that BMCs engrafted in the sinusoidal space differentiated into Kupffer cells.

**Conclusions:** Preoperative transplantation of recipient BMCs to liver transplant donors replaced donor KCs and attenuated post-LT rejection, indicating that this strategy may increase the success of liver transplantation.
References


44. Breous E, Somanathan S, Vandenberghhe LH, Wilson JM. Hepatic regulatory T cells and Kupffer cells are crucial mediators of systemic T cell