

O12

A SINGLE INFUSION OF THIRD-PARTY MESENCHYMAL STROMAL CELLS AT DAY 3 AFTER LIVER TRANSPLANTATION IS NOT SUFFICIENT TO INDUCE OPERATIVE TOLERANCE

O. Detry², M. Vandermeulen², M.H. Delbouille², J. Somja¹, N. Bletard¹, A. Briquet³, C. Lechanteur³, O. Giet³, E. Baudoux³, M. Hannon³, F. Baron³, Y. Beguin³

¹Service d'Anatomo-Pathologie; ²Service de Chirurgie & Transplantation; ³Service d'Hématologie, CHU Liege, Liege, Belgium

Introduction: Mesenchymal stromal cell (MSC) infusion could be a mean to establish donor-specific immunological tolerance in solid organ recipients. The aim of this phase 2 study was test the hypothesis of possible induction of operative tolerance by third-party MSC in liver transplant (LT) recipients.

Methods: 10 stable and low-risk LT recipients under standard immunosuppression (Tac-MMF- low dose steroids) received $1.5-3 \times 10^6$ /kg third-party MSCs on post-operative day 3 ± 2 . By protocol, progressive weaning of immunosuppression was attempted in patients who did not develop rejection and had normal graft function and month-6 graft biopsy. Tacrolimus was progressively tapered from day 180 to be discontinued by day 270. After day-270 graft biopsy, MMF was progressively tapered and definitely discontinued by day 365 in the absence of rejection.

Results: One patient from the MSC group was excluded from immunosuppression withdrawal attempt due to HCC recurrence, and the 9 others met the necessary criteria. In one patient, tacrolimus and MMF withdrawal was performed without rejection. In two patients, MMF monotherapy was achieved at month 9, but graft rejection occurred during MMF withdrawal and was successfully treated by tacrolimus reintroduction. In 6 patients, the transaminases significantly increased during tacrolimus withdrawal. In these cases, withdrawal was cancelled and liver tests normalised after increase of the tacrolimus dose. No graft was lost due to the withdrawal attempt.

Conclusion: A single post transplant MSC injection is not sufficient to induce operative tolerance after LT.