

HEPATITIS C INFECTION INCREASES THE RISK OF POST-LIVER TRANSPLANT DIABETES MELLITUS

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Aims: Hepatitis C (HCV) is a common cause of end stage liver disease requiring adult orthotopic liver transplantation (OLT_x). Recent evidence suggests that Post-Transplant Diabetes Mellitus (PTDM), an increasingly common finding among OLT_x recipients, adversely affects patient and graft survival. The objective of this study is to evaluate the effect of HCV infection on the natural history of PTDM following liver transplantation.

Methods: A retrospective review of 510 consecutive OLT_x in 492 recipients was conducted from January 1993 to January 2003 (18 retransplants, 350 male, 142 female, average age 48.5 years). Patients were followed for a minimum of 12 months (range 12 months to 10 years). 225 recipients had a pretransplant diagnosis of HCV. 48 of these liver transplant recipients also had a diagnosis of diabetes mellitus at the time of transplant. PTDM was defined by the *de novo* need for medication to treat diabetes following transplantation. The study population consisted of 444 OLT_x recipients who were either HCV-positive (n=206) or HCV-negative (n=238). All patients received triple drug maintenance immunosuppression therapy consisting of calcineurin inhibitors, antimetabolites, and prednisone. Statistical analysis was performed using the Student t test, Kaplan Meier survival, and X^2 tests.

Results: The overall incidence of PTDM was 30.2%. The median time to PTDM was 340 days after liver transplantation. The overall mortality rate at 1 and 5 years was 18% and 27% respectively. There was a significant difference in the development of PTDM between the HCV-positive group (35%) and the HCV-negative group (25%) (p=0.019). Other independent risk factors for development of PTDM were male gender and age >50years.

Conclusion: HCV contributes to the development of Post-Transplant Diabetes Mellitus in orthotopic liver transplant recipients. HCV-positive OLT_x recipients should undergo strategies aimed at preventing PTDM in order to avoid the worse outcomes and comorbidities associated with poorly controlled diabetes.