Recipient IL28B Variant as Predictor of New Onset Diabetes Mellitus in Liver Transplant Patients with Chronic Hepatitis C

Prof. Dr. Sherif Mogawer1, Dr. Ula Mabid AlJarhi2, Dr. Mona Mohsen3, Dr. Noha Tarek Eldessouky4
1Professor of Internal Medicine and Hepatology, Faculty of Medicine, Cairo University
2Assistant Professor of Internal Medicine, Faculty of Medicine, Cairo University
3Lecturer of Chemical Pathology, Faculty of Medicine, Cairo University
4Assistant Lecturer of Internal Medicine, Faculty of Medicine, Cairo University

Background:

New onset diabetes after liver transplantation (NODAT) is increasingly recognized as a complication that affects the quality of life. In addition to well known risk factors for diabetes in such patients, little is known regarding the genetic predisposition for this condition.

Aim of the study:

To study the association of IL28B polymorphism with occurrence of new onset DM after liver transplantation in HCV patients.

Methods:

A prospective cohort studies. Fifty non-diabetic LDLT recipients were recruited from the liver transplantation Unit at El Manial, Cairo- University Hospital. FBS was done at 0, 3 and 12 months; HBA1c was done after 6 months. IL28B rs12979860 polymorphism was done to all patients.

Results:

According to FBS after 3months and HBA1C, 20 patients developed diabetes, 21 patients' prediabetes and 9 remained normal. IL28B CT genotype was 78%, CC 20% and TT 2%. G. Univariate regression showed that the CT genotype was significantly associated with higher blood glucose at 0 months (coefficient ± SE, 64±4.7; P<0.001), 3 (coefficient ± SE, 58±4.0; P<0.001) and 12 months (coefficient ± SE, 57±3.2; P<0.001), and with development of diabetes and prediabetes after LDLT. (coefficient ± SE, 0.6±0.06; P<0.001)

Conclusion:

IL28B polymorphism is significantly associated with new onset diabetes after LDLT. CT genotype may represent a marker to identify high risk recipients.

Key words:

IL28B polymorphism, rs12979860, LDLT, NODAT