

A Simple Indian Diabetes Risk Score Could Help Identify Nondiabetic Individuals at High Risk of Non-Alcoholic Fatty Liver Disease (CURES-117)

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Abstract

Objective:

We aim to determine whether a simple Indian diabetes risk score (IDRS) is associated with individuals with non-alcoholic fatty liver disease (NAFLD) among nondiabetic Asian Indians.

Methods:

Nondiabetic participants ($n = 409$) were selected from the Chennai Urban Rural Epidemiology Study. Mean age was 40 ± 11.9 years, mean body mass index was 23.2 ± 3.9 kg/m², and 224 (54.8%) were women. The IDRS was classified as high (≥ 60), medium (30–50), and low (< 30) risk. Non-alcoholic fatty liver disease was assessed by high-resolution β mode ultrasonography. To determine the factors associated with NAFLD, a univariate analysis was first done and a stepwise logistic regression analysis was done based on the factors associated with NAFLD. Biochemical and anthropometric measurements were obtained using standardized procedures.

Results:

The overall prevalence of NAFLD was 24.7% (101/409 participants), and it was significantly higher among those with a high (30.4%) and medium IDRS (21%) compared with the low IDRS group (15.8%; trend chi square; $p = .022$). In stepwise logistic regression, IDRS was associated with NAFLD with an adjusted odds ratio of 1.78 (95% confidence interval 1.04–3.06), even after adjusting for potential confounders.

Conclusions:

The IDRS can be used as the initial step to screen individuals at high risk of NAFLD in the community.

J Diabetes Sci Technol 2012;6(6):1429-1435

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Abbreviations: (ALT) alanine aminotransferase, (AST) aspartate aminotransferase, (BMI) body mass index, (CURES) Chennai Urban Rural Epidemiology Study, (HbA1c) glycated hemoglobin, (HDL) high-density lipoprotein, (HOMA-IR) homeostasis assessment model for insulin resistance, (IDRS) Indian diabetes risk score, (LDL) low-density lipoprotein, (NAFLD) non-alcoholic fatty liver disease, (NASH) non-alcoholic steatohepatitis, (NCD) noncommunicable disease, (OR) odds ratio

Keywords: Asian Indians, diabetes, Indian diabetes risk score, non-alcoholic fatty liver disease, screening, South Asians

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