

Indian Diabetes Risk Score Helps to Distinguish Type 2 from Non-Type 2 Diabetes Mellitus (GDRC-3)

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Abstract

Aim:

The aim of this study was to investigate whether the Indian Diabetes Risk Score (IDRS) could assist in classifying type 2 diabetes mellitus (T2DM) and non-T2DM among patients attending clinics in India.

Methods:

Patient records from 2006 through 2009 were taken from the clinical database of a tertiary care diabetes hospital in Chennai, Southern India. A total of 8747 patients with diabetes, diagnosed by a physician either as type 1 diabetes mellitus (T1DM), T2DM, or other types were included for analysis. The IDRS, based on age, abdominal obesity, family history of diabetes, and physical activity, was calculated for each patient at first visit to our clinic. Receiver operating characteristic (ROC) curves were generated to obtain optimal IDRS cut points for predicting T2DM and non-T2DM.

Results:

Of the 8747 patient records analyzed, 204 (2.3%) were classified as non-T2DM and 8543 (97.7%) as T2DM. In ROC analysis, an IDRS ≥ 60 [area under the curve (AUC), 0.894; sensitivity, 83.8%; specificity, 81.0%] was predictive of T2DM, while an IDRS < 60 (AUC, 0.882; sensitivity, 79.9%; specificity, 83.8%) was predictive of non-T2DM.

Conclusions:

The IDRS, a simple, cost-effective risk score, can assist in classifying T2DM versus non-T2DM among clinic patients in India.

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Abbreviations: (A1C) glycated hemoglobin, (AUC) area under the curve, (BMI) body mass index, (CI) confidence interval, (CURES) Chennai Urban Rural Epidemiology Study, (FCPD) fibrocalculous pancreatic diabetes, (IDRS) Indian Diabetes Risk Score, (ROC) receiver operating characteristic, (T1DM) type 1 diabetes mellitus, (T2DM) type 2 diabetes mellitus, (WHO) World Health Organization

Keywords: Asian Indians, classification, diabetes risk score, primary care centers, test costs, tool, type 1 diabetes, type 2 diabetes

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