

INCIDENCE AND PREDICTIVE FACTORS OF DEVELOPING TYPE 2 DIABETES MELLITUS, ACUTE MYOCARDIAL INFARCTION AND STROKE AMONG IMPAIRED FASTING GLUCOSE INDIVIDUALS IN SINGAPORE

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This study describes the incidence and predictive factors of developing type II diabetes mellitus (T2DM), Acute myocardial infarction (AMI) and stroke, among patients with Impaired fasting glycemia (IFG) over a five-year period. This is a retrospective cohort study of patients with newly diagnosed IFG from the Singapore National Healthcare Group hospitals and primary care clinics from 1 January 2008 to 31 December 2010. Clinical data were collected over five years from the date of diagnosis, including the outcomes of T2DM, AMI and stroke based on first occurrence of the ICD-9 diagnoses. Demographic characteristics, laboratory tests, anthropometric measurements and medical history were adjusted in the multivariate logistic regression. Out of 2295 eligible

patients, 552 (24.1%) developed at least one outcome: 492 (21.4%) developed T2DM, 20 (0.9%) developed AMI and 62 (2.7%) developed stroke. Predictive factors for developing any of the three outcomes included age 40-49 [AdjOR 2.09, 95% CI: 1.38 to 3.16], blood pressure of 140/90 mmHg and above [AdjOR 1.47, 95% CI: 1.15-1.87] and BMI of 27.5 kg/m² or more [AdjOR 2.45, 95% CI: 1.74 to 3.45]. Females were more likely to develop T2DM [AdjOR 1.39, 95% CI: 1.09 to 1.77] but less likely to develop AMI and/or stroke compared to males [AdjOR 0.43, 95% CI: 0.24-0.76]. Development of T2DM, AMI or stroke within the first five years of IFG was especially high for subjects aged 40-49 and those with high BMI. In addition to healthy lifestyle and weight control, there should be regular cardiovascular risk screening for population at risk of pre-diabetes, diabetes and metabolic syndrome in Singapore.

Biography

Matthias Paul Han Sim Toh has graduated from the National University of Singapore as Medical Doctor and is a Consultant Public Health and Family Physician. Presently, he works at the National Healthcare Group in Singapore and is the clinical champion of its operational Chronic Disease Registry. He has special interest in non-communicable disease prevention and control, health promotion and primary care. He has participated in the planning, implementation and evaluation of clinical programmes involving diabetes mellitus, stroke and heart failure. He is an Adjunct Assistant Professor with the Saw Swee Hock School of Public Health and the Associate Program Director for National Preventive Medicine Residency Program.

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