

ASSOCIATION OF CHARACTERISTICS OF PEOPLE WITH TYPE 2 DIABETES MELLITUS WITH DISCORDANT VALUES OF FASTING GLUCOSE AND HbA1C

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BACKGROUND

Primary care physicians frequently encounter people with type 2 diabetes mellitus (T2DM) with discordant values for fasting glucose and HbA1c. The aim of this study was to identify the prevalence and characteristics of people in whom blood glucose and HbA1c did not match.

METHODS

Overall, 64553 people with T2DM from 939 general or internal medicine practices (Disease Analyzer database, Germany; January 2013–December 2015) were analyzed. Multivariable logistic regression models were used to identify associations between baseline clinical characteristics, comorbidity, and glucose-lowering treatment and discordance of fasting glucose and HbA1c values measured at the same visit.

RESULTS

Overall, 8582 (13%) patients had fasting glucose ≥ 140 mg/dL and HbA1c $< 7\%$ (< 53 mmol/mol), and 6508 (10%) had HbA1c $\geq 7\%$ (≥ 53 mmol/mol) and fasting glucose < 140 mg/dL. Using patients with both fasting glucose < 140 mg/dL and HbA1c $< 7\%$

as the reference (n=31 834; 49%), solitary high fasting glucose values (and HbA1c $< 7\%$) were positively associated with higher age, male sex, longer diabetes duration, obesity, liver disease, low estimated glomerular filtration rate (eGFR), and glucose-lowering treatment. High HbA1c (and fasting glucose < 140 mg/dL) was positively related to longer diabetes duration, obesity, neuropathy, retinopathy, low eGFR, and insulin treatment. There were lower odds of having solitary increased HbA1c $\geq 7\%$ (fasting glucose < 140 mg/dL) with higher age, hypertension, depression, and the number of diabetes patients (> 200) per practice.

CONCLUSIONS

A considerable number of people with T2DM in primary care practices have discordant fasting blood glucose and HbA1c values. People who have discordant glycemic values have different characteristics.

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If you would like to read any of the studies in its entirety, please, contact us to obtain the full version of a publication. Also, our research director is at your disposal if you have any further questions.

Thank you for your interest!