Detecting Undiagnosed Type 2 Diabetes: Family History as a Risk Factor and Screening Tool

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Abstract

A family history of diabetes is a major risk factor for the disease. As such, it is often included in a variety of tools designed to detect either people at risk of diabetes or people with undiagnosed diabetes. One of the reasons to screen for diabetes is that it has a prolonged asymptomatic phase, which includes impaired fasting glucose, impaired glucose tolerance, and the early stages of diabetes. In terms of prevalence, diabetes is a major public health problem. Evidence shows that the detection of impaired glucose metabolism in its early stages (prediabetes) could lead to the delay or prevention of the disease and its complications. However, the issue of using family history to screen for diabetes must be discussed within the context of screening for diabetes in general. Screening for a disease among asymptomatic people must meet a series of stringent requirements to ensure the best possible outcomes. Screening for diabetes meets most of these requirements but the ones it does not meet are still important. Therefore, based on systematically collected evidence or simply by consensus among scientists, influential organizations recommend screening only among high-risk individuals. As a result, researchers have developed a variety of simple tools to identify high-risk individuals for diabetes in populations. Family history is included as a key variable in the vast majority of them. This article is a brief overview of the reasons to screen for diabetes in general, the tools available for conducting this screening, and the role of family history in these tools.

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Abbreviations: (ADA) American Diabetes Association, (AUC ROC) area under the receiver operating characteristic curve, (BMI) body mass index, (IFG) impaired fasting glucose, (IGT) impaired glucose tolerance, (T2DM) type 2 diabetes mellitus, (WHO) World Health Organization, (USPSTF) U.S. Preventive Services Task Force

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