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Letter to the Editor

Inclusion of the 1-hour glucose tolerance test in the diagnosis of diabetes mellitus

Inclusión de la prueba de tolerancia a la glucosa de 1 hora en el diagnóstico de diabetes mellitus

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Dear Editor;

A year ago, the International Diabetes Federation (IDF) published a position statement presenting the 1-hour glucose tolerance test (1hGTT) as a more sensitive and practical method for detecting intermediate hyperglycemia (IH) and type 2 diabetes mellitus (T2DM) in at-risk individuals.(1) This news has had little impact in terms of academic debate or scientific production at the national academic environment. However, a review of its justification and significance reveals a new paradigm that represents a step forward in the diagnosis of glycemic status.

To date, the diagnosis of diabetes mellitus is based on the measurement of fasting plasma glucose, randomly glucose, or 2 hours after an oral glucose tolerance test (2-hour glucose tolerance test, 2hGTT). Another method is glycated hemoglobin (HbA1c), which provides an estimate of the average blood glucose level over the past 3 months.(2) There are several methods for diagnosis because diabetes is a pathophysiologically heterogeneous disease, and each identifies a different subset of patients.(3)

The validated cutoffs for 1h-GTT are 8.6 mmol/L (155 mg/dL) for IH and 11.6 mmol/L (209 mg/dL) for T2DM; they promise earlier detection compared to current glycemic thresholds. Moreover, alone or in combination with metabolic markers, it is a better predictor than 2h-GTT for determining future risk of


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T2DM.[4] Therefore, it has the potential to allow for more timely preventive interventions. This method is also more practical, as it requires less time than 2h-GTT, which improves patient adherence and efficiency in clinical settings. Considering these factors, we could be "witnessing the death" of the 2h-GTT, due to its less sensitive, less specific, and more time-consuming nature.

The World Health Organization has not explicitly stated its position on the use of the 1h-GTT for diagnosing DM. Neither have the European Association for the Study of Diabetes nor the American Diabetes Association.

Despite its advantages, the implementation of the 1h-GTT faces challenges. The need to validate the procedures in different populations and clinical settings is crucial to ensure consistent and reliable results. Furthermore, training medical personnel and updating clinical guidelines are essential for effective adoption.[1]

Looking ahead, this method is expected to improve early detection and prevention of TDM2, reduce the burden of associated complications, and improve patients' quality of life. A parallel effect will be an increase in the prevalence of diabetes as this procedure becomes more widespread, due to the test's greater sensitivity. Undoubtedly, the world will surpass the current figure of 828 million people with diabetes.[4]

Furthermore, future research could focus on optimizing cutoff points and evaluating their impact on different population subgroups. Personalized, precision medicine could also benefit from this advance, allowing for more targeted and effective interventions.

In conclusion, the inclusion of 1hGTT represents a significant advance in the diagnosis of diabetes mellitus, with the potential to transform medical care and research in this field.

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Conflict of interest

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