Diabetes diagnosis by HbA1c

The most important diabetes-related news recently is the report of a World Health Organization (WHO) Expert Group who have been considering the feasibility of diagnosis of diabetes using glycated haemoglobin (HbA1c). WHO recommend that an HbA1c >6.5% is now sufficient for a diagnosis of diabetes.¹

Over the last decade, HbA1c assays have become more accurate, and ranges have standardised between assay methods and laboratories. As a reflection of mean glycaemia over the preceding 2–3 months, there are good theoretical reasons why HbA1c is a potentially appropriate diagnostic test. It also has the advantage of being a single measurement, which does not need to be done in the fasting state. There has been considerable research lately, looking into which HbA1c level correlates best with standard blood glucose-based diagnostic criteria, and a cut-off for HbA1c of 6.5% seems to be the most appropriate.²

The main problem for Africa, and other resource-limited areas, is that HbA1c remains an expensive test that is not widely available. WHO points out that HbA1c can be used as an additional diagnostic test, supplementary to random and fasting blood or plasma glucose measurements and/or the GTT (glucose tolerance test). HbA1c as a diagnostic tool is also most appropriate for confirming type 2 diabetes; type 1 and gestational diabetes are best diagnosed using traditional systems. In asymptomatic patients with potential type 2 diabetes, two separate abnormal HbA1c levels are ideal to confirm the diagnosis (though again, this greatly increases cost).

Cost and availability will mean that in most of the African continent, diabetes diagnosis will remain on traditional lines. Nevertheless, HbA1c will undoubtedly increase in availability over the next few years; and the WHO announcement is, therefore, certainly worth noting, if not implementing.

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References