Globorisk Predicts Risk of Heart Disease and Stroke

In a new research published in *The Lancet Diabetes & Endocrinology* journal, scientists have developed a new risk score that can predict the 10-year risk of developing heart disease or having a stroke in people 40 years and older in any country of the world.

The research was led by Dr. Goodarz Danaei, Assistant Professor of Global Health at the Harvard T. H. Chan School of Public Health in Boston, USA and colleagues. The new score called Globorisk was developed, validated and evaluated by using data from eight cohort studies with more than 50,000 participants. Compared to previous risk scores, Globorisk can be updated according to local conditions and risk factor levels in different countries.

Dr Danaei explains, "Globorisk is an important advance in the field of global cardiovascular disease prevention. Until now, most prediction scores were developed using a single cohort study and were never validated for accuracy in national populations for low- and middle-income countries. Therefore, clinicians and public health policy makers in these countries were left without a reliable tool to predict cardiovascular risk in their patients, community, or country.

The new score measures cardiovascular risk by factoring in the individual's smoking status, blood pressure, diabetes status and total cholesterol level. It adjusts for the effects of sex and age on cardiovascular disease between countries.

The research team applied the risk score to 11 countries from different world regions. They used data from recent national health surveys and replaced the average age-and-sex risk factor levels in each country. They developed country-specific risk charts so that they could predict individual risk of disease and country-specific assessments of the 10-year cardiovascular burden. Based on this analysis, the researchers estimate that people at a high risk of having a fatal heart attack or stroke within ten years is higher in low and middle income countries as compared to high-income countries.

Dr. Danaei points out that Globorisk can be useful in identifying individuals as high risk of cardiovascular disease and who are likely to benefit from lifestyle changes or preventative drug treatment. In addition, the ability to estimate high risk individuals in any given country can help WHO achieve its target of 50% coverage of multidrug treatment and counselling for people 40 years and older.

The next step, as highlighted by Karel Moons from the Utrecht University Medical Center in the Netherlands and Ewoud Schuit from the same centre and from Stanford University in the USA, would be to quantify these effects as they could help convince decision makers across the world to decide on wide-scale introduction of prediction models and risk based management for cardiovascular disease.

Source: The Lancet

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