

Aterotrombosi e Tromboembolismo arterioso: aspetti clinici

EVALUATION OF A NON-LABORATORY CARDIOVASCULAR RISK SCORE ADAPTED FOR RURAL TANZANIA

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Background and Aims. Cardiovascular diseases represent a growing health challenge in low-resource settings, where access to laboratory testing is often limited. In rural Tanzania, this constrains the use of standard risk prediction tools and delays preventive care. This study aimed to assess the feasibility and utility of a simplified non-laboratory cardiovascular risk score adapted from a previously validated model. The primary objective was to evaluate its application within a district-level noncommunicable disease program, while describing score components, temporal trends, and potential impact on cardiovascular outcomes.

Methods. A longitudinal observational study was conducted from March 2019 to September 2023 in a rural referral hospital. Adults aged 25–74 years with hypertension or type 2 diabetes mellitus were enrolled. The risk score included age, sex, smoking status, systolic blood pressure, body mass index, diabetes history, and capillary fasting glucose. Assessments were performed at baseline and every six months. Analyses included descriptive statistics and estimation of changes in risk score over time, alongside projected reductions in cardiovascular events.

Results. A total of 1,284 participants were included. The tool enabled immediate risk stratification and facilitated early identification of previously undiagnosed diabetes mellitus. The average risk score decreased by 1.54% (95% CI: −1.98% to −1.10%) at 54 months, corresponding to an estimated 10.2 (95% CI: −13.1 to −7.3) avoided fatal and non-fatal cardiovascular events. Significant reductions in systolic blood pressure (−18.7 mmHg) and fasting glucose (−3.6 mmol/L) were observed at 54 months, along with a decrease in body mass index (−1.7 kg/m^2). No differences emerged by distance from the hospital or insurance status.

Conclusions. This simplified risk score is a feasible, low-cost approach for cardiovascular risk assessment in resource-limited settings. Its use may support earlier intervention, strengthen preventive strategies, and enhance patient engagement and local awareness.