Editorial Commentary

Ethnicity

New Challenge for Cardiovascular Prevention in Europe

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The increase in net migration in Europe is introducing a new element of complexity into risk estimation and prevention of cardiovascular disease (CVD). CVD risk-assessment models for a population rely on 3 components derived from a cohort representative of the same population: mean levels or prevalence of risk factors; average absolute CVD risk; and relative risk of CVD associated with the risk factors. Current tools are mainly developed on white population so that systematic errors may result when are directly applied to populations with different profiles of the 3 components. Data on the prevalence of hypertension and diabetes mellitus in South Asians (SA) living in United Kingdom are available. Likewise, data on the higher average absolute CVD risk of SA compared with Europeans have been provided. In the current issue of Hypertension, Eastwood et al first provide data on the third component, reporting a greater adverse effect of blood pressure (BP) on stroke in first-generation SA migrants than in Europeans. The multiethnic cohort of 1375 Europeans and 1074 SA men without stroke at baseline, not in receipt of baseline antihypertensive medication, and aged 40 to 69 years was randomly selected in Northwest London. After a median of 20 years, BP values measured at baseline were more adversely associated with stroke in SA than in Europeans. The combined effects of high BP and high glycaemia were more deleterious in SA than in Europeans.

The study by Eastwood et al has at least 3 points of great strength: the prospective design with long median follow-up; the homogeneity of the studied ethnic group; and the UK setting.

1. BP levels and hypertension prevalence among ethnic minorities living in Europe, useful information for public health planning, were yielded in cross-sectional studies. A striking ethnic differences in stroke and mortality rates were retrieved from administrative databases. The definition of ethnic-specific relative risk of a risk factor in migrants requires prospective cohort studies performed in the host country. Prospective studies performed in native countries might be influenced by potential differences in environmental factors and treatment approach. The Southall And Brent Revisited (SABRE) study initiated in 2008 as a 20-year follow-up of 2 baseline studies: the Southall study (1988–1990), recruiting participants among industrial workforces and general practitioners’ lists, and the Brent Study (1990–1991), based on the lists of 6 general practices. For first-generation migrants, the 20-year follow-up is adequate because subjects are reaching pensionable age, where disease burden is anticipated to be high.

2. SA men enrolled in the study were mostly Punjabi Sikhs. Although caution should be exercised in applying these findings to women and other SA subgroups, the bias of a generic inclusion of SA subjects is avoided. The so-called SA group is indeed highly heterogeneous because its ethnic roots originate from a large geographic area including India, Pakistan, Sri Lanka, Nepal, and Bangladesh, with important differences in diet, culture, and lifestyle among different populations and religions. BP variations between populations originating from the different SA countries have been reported.

3. UK setting offers great advantages. As in other Nordic countries, the UK laws and regulations relating to privacy and data linkage make accessible for research routinely collected administrative data in ways that prevent the identification of individuals. Most health information systems in Europe still have to improve their data collection and data linkage to tackle health inequalities. UK health policy also differs from most European countries where the efforts are mainly focused to offer emergency care to migrants. A limited access to treatments for chronic diseases (hypertension and diabetes mellitus) not only introduces a potential selection bias in prospective studies on vulnerable populations but also limits an effective communication between healthcare providers and ethnic minorities and obstacles the dissemination of prevention strategies. The United Kingdom offers a comprehensive health care to immigrant populations. Although this approach may initially carry along an increase in costs, as for renal replacement therapy, it ensures event traceability and allows to define the basis for sustainable programs of intervention in the long term (ie, reduction of dietary sodium). The opportunity to continue supporting prevention should not be rejected by the UK National Health Service, because limiting measures might backfire badly. Systolic BP differences at baseline observed by Eastwood et al could explain a stroke relative risk of 0.9 in the Europeans when compared with the SA. Both groups received comparable level of assistance.
but at the 20-year follow-up the stroke relative risk for the Europeans compared with SA was 0.8. We do not know the magnitude of the absolute reduction of BP and when antihypertensive treatment was started in the 2 groups. However, no ethnic differences in achieving BP control were observed among subjects who attended the follow-up clinic. The definition of the relative risk of BP opens the door to the development of an ethnic-specific risk score. Second, the new evidence strongly recalls the need for prospective intervention studies in minority groups investigating target values and when to start treatment.

It is now the time to move the issue of health of ethnic minorities higher up on the agenda of researchers in Europe. Large trials on ethnic minority groups are lacking in Europe. Sixty-eight BP-lowering randomized controlled trials (RCTs), defined as RCTs comparing active treatment with placebo, or less active treatment, achieving a BP difference, performed between 1966 and end 2013 in cohorts with ≥40% hypertensive patients, and exclusive of trials in acute myocardial infarction, heart failure, acute stroke, and dialysis) were recently identified and meta-analyzed. Nine RCTs were based in continents different from North America or Europe. Twenty seven of the 31 RCT based in North America included ethnic minority groups (mainly black); separate analysis for the ethnic subgroup was performed in 10 studies. Differently, the large majority of RCT based in Europe did not even report ethnicity of enrolled subjects (23 of 30 trials), and no separate analysis in any ethnic subgroup is available. Eighth Joint National Committee guidelines give specific information on management approach to hypertension in black patients, whereas ethnicity is not covered in guidelines jointly released by the European Society of Hypertension and the European Society of Cardiology.

Small studies have been performed in ethnic groups during the years in Europe contributing both to the understanding of mechanisms and logical combination of therapies, and evidence are available on the high prevalence of risk factors and incidence of CVD in ethnic minorities. Most importantly there are ≈60 million citizen belonging to ethnic and religious minorities in Europe, and their presence in the physician’s office is increasing. Although most of the evidence from RCT relies on data obtained in blacks and in other American ethnic groups, the study by Eastwood et al strengthens the need for a consensus at the European level to cover the issue of ethnicity in guidelines for CVD prevention and risk factors clinical management. This effort can be of help not only for European physicians but also to empower communities, major public and private funders of community research, and public policy analysts.

Disclosures

None.

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