Cardiovascular Disease Prevention
A Challenge for Latin America

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on behalf of the Interamerican Society of Cardiology

Contemporary cardiology is revealing a growing interest in prevention, particularly in the field of atherosclerosis. This is due in part to the availability of new therapeutic tools that have proved to be effective for both primary1 and secondary2,3 prevention.

Latin America is therefore faced with the challenge of defining new prevention strategies. Such strategies ought to consider issues such as clinical benefit, the impact on population morbidity and mortality, and the cost/benefit ratio.4 Most importantly, however, attention must be paid to the epidemiological peculiarity of this region.

The native peoples of Latin America have different ethnic origins and high internal migration rates. Immigrants coming from Europe, Asia, and Africa in various waves have also contributed to define communities with original profiles, not only in terms of genetics but also with regard to diverse nutritional habits and lifestyles.

Our continent thus has an epidemiological profile of its own. This peculiar profile should prompt us to acquire increasing knowledge and not to assume, as we have for many years, the existence of similarity to the developed countries in the northern hemisphere.

This is why, unlike those countries, we still have to foster so-called observational studies on cardiovascular disease and its risk factors in Latin America. This information is scarce and even nonexistent in several countries, and such studies should arouse as much interest as pharmacological studies and novel therapeutic procedures.

We believe that all efforts directed at preventing sickness and promoting health are best instrumented by educating the community, and it is here that epidemiological investigation becomes essential. Medical care is therefore more accessible and equitable and less dependent on technology. This applies to Latin America, a continent characterized by wide social differences. One could expect this aspect to also contribute to the epidemiological profile of cardiovascular disease and its risk factors, as is the case in other countries, where the impact of psychosocial aspects on cardiovascular morbidity and mortality has already become evident.5,6

The conduction of observational cardiovascular epidemiological studies should constitute a priority in Latin America so that strategies to prevent sickness and promote health can be implemented to modify the cultural standards of the population. Despite social difficulties prevailing in Latin America, data from urban and rural communities suggest that risk factors for atherosclerosis have a similar prevalence.7,8

Two trials are currently under way and have already shown preliminary results. The FRICAS trial7 (Factores de Riesgo Coronario en América del Sur [Coronary Risk Factors in South America]) has already produced results for Argentina and is ongoing in various Latin American countries. Results for Argentina show that hypertension doubles the risk of acute myocardial infarction (AMI) in men (OR = 2.26) and triples the risk in women (OR = 3.15); smoking more than doubles the risk in men (OR = 2.23) and almost quadruples it (OR = 3.79) in women. Smoking >25 cigarettes a day increases the risk 5 times in men (OR = 5.10) and >9 times in women (OR = 9.11). These figures confirm the impact of smoking on the prevalence of cardiovascular disease in Argentina.9 Passive smoking increases the risk by >70% (OR = 1.76) in nonsmokers, and its association with other factors has high statistical significance.10

Plasma cholesterol levels showed a gradual and positive relation with the development of AMI in both men and women. Hypercholesterolemia almost tripled the risk in men, with values exceeding 246 mg/dL (OR = 2.90), and increased the risk by >4 times in women (OR = 4.15). Diabetes increased risk by 50% in men (OR = 1.56) and almost doubled the risk in women (OR = 2.37). In men, overweight and obesity increased the risk by 50% (OR = 1.49). Family history increased risk more than twice (OR = 2.18).12

The CARMEN program (Conjunto de Acciones para la Reducción Multifactorial de Enfermedades No transmisibles [Action to Reduce the Multiple Factors Associated With Noncommunicable Diseases]) is both the Pan American version and the sister network of the WHO’s CINDI (Countrywide Integrated Noncommunicable Diseases Intervention). CARMEN is being fully carried out in Canada and Chile, and 5 other countries are complying with the formalities necessary to join the study.

CARMEN is an intervention strategy aimed at reducing morbidity and mortality resulting from noncommunicable diseases, including cardiovascular diseases. The strategy consists of preventive interventions for risk factors associated with these conditions. It combines public health intervention with intervention in high-risk individuals. The strategy also

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provides for a demonstration area that allows intervention strategies to be monitored and evaluated at a local level before being applied generally throughout the country. Standardized methods will provide comparable information on the prevalence of cardiovascular risk factors for all the countries participating in CARMEN.

A risk factor prevalence study was conducted with 3120 people between 25 and 64 years of age in Valparaíso, Chile. The study showed that in this adult population made up of economically active people, 73% of the subjects had one of the following major risk factors: hypertension, smoking, hypercholesterolemia, or diabetes. The prevalence of smoking and dyslipidemia was particularly high.13

According to trials and studies, there is a high prevalence of risk factors in Latin America that significantly expands the incidence of cardiovascular disease. This mandates the development and implementation of preventive and promotional healthcare strategies covering both the population at large and high-risk groups.

References
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