Editorial

SECONDARY PREVENTION IN CARDIOVASCULAR DISEASES: CLOSING THE GAPS

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Non-Communicable Disease (NCD) accounts for a large and increasing burden of disease worldwide. It is currently estimated that NCDs accounts for approximately 59% of global deaths and 43% of the global disease burden; this is projected to increase to 73% of deaths and 60% of disease burden by 2020.[1] In comparison, NCDs in low- and middle-income populations accounts for 78% of the global NCD burden and for 85% of the global CVD burden of disease.[2] Cardiovascular Disease (CVD) is the most important single cause of NCD, accounting in 2001 for 29% of all deaths and 10% of the global disease burden.[3]

The incidence of CVD has been rising steadily in low- and middle-income populations, so that approximately three-quarters of global deaths from CVD now occur in that populations.[4]

Every year about 32 million individuals suffer acute coronary and cerebral vascular events and at least half of these occur in people with established coronary heart disease (CHD) and Cerebrovascular Disease (CeVD).[5,6] Patients who have suffered a stroke are at an increased risk of a further stroke, about 7% per annum.[7] Survivors of myocardial infarction are at an increased risk of recurrent events and have an annual death rate at least 5 to 6 times higher than that of people who do not have CHD.[6,7]

The interventions that appreciably reduce the high risks of recurrent CVD include changes in lifestyle, pharmacological interventions and revascularization procedures which are named *secondary prevention*. Although some of these interventions are effective in reducing the risk of vascular events in subjects at high risk but who have not previously had vascular disease, the absolute benefits of these interventions are particularly high when they are used in patients with established vascular disease. When used in appropriate combinations, they can reduce recurrent events by between two-thirds and four-fifths.[7]

There is a defect in valid data related to the secondary prevention of CVD in lower and middle income countries, which currently bear 75% of the CVD burden.[5] In this regard, WHO has conducted a program on Prevention of REcurrence of Myocardial Infarction and StrokE (WHO-PREMISE) which aims to provide technical cooperation to countries for assessing and scaling up secondary prevention of CVD.

Isfahan Cardiovascular Research Center as a WHO collaborating center is one of the participating institutes which is active in design and implementation of the project concurrent with other centers around the world (10 countries).

The first phase of this program aimed at assessing current practice patterns related to secondary prevention of CHD and CeVD, documenting the use of secondary prevention interventions, and identifying barriers to and opportunities for scaling up secondary prevention.

This is a preliminary report of this project in the city of Isfahan as a focal point for this study in Iran.

In the first phase of this project, in a stratified random sampling from primary and secondary facilities in rural / urban areas and private versus public ones was used to select 1000 eligible cases. The inclusion criteria were: previous MI, stable/unstable angina, percutaneous tranluminal coronary angioplasty (PTCA), coronary artery bypass graft (CABG), stroke, transient ischemic attack (TIA) or carotid endarterectomy.

Patients were included if their first cardiovascular event had occurred more than one month, but no earlier than 3 years ago. The diagnosis was verified by checking the patients' health records. The overall response rate was 80%.

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During a period of six months, data were collected from cases through interviews by a validated questionnaire. The following data were collected: demographic and personal details, information on exposure to risk factors, knowledge of and attitude to risk factors, adherence to treatment and perceived barriers, access to care, and availability and affordability of drugs.

The mean age of patients in the study was 56.7 years (SD=8.7). About 41.5% of patients were aged more than 60 years and 29.6% less than 50 years.

Approximately, 86%, 83% and 72% of patients were aware of the cardiovascular benefits of quitting smoking, a heart healthy diet and regular physical activity, respectively. Physicians were the main sources of the patients' knowledge about lifestyle risk factors.

In practice, the patients did not have acceptable behaviors as regards healthy lifestyle. About 59% did not have acceptable physical activity, 12% continued tobacco smoking and about 38% did not follow a healthy diet. Aspirin had been prescribed to 81.3% of CVD patients, beta blockers to 66%, ACEI to 27.9% and statins to 28.1%.

Analysis of the extent of risk factors showed that only 17.6% of the patients had no major coronary risk factors. About 48.2% of the patients were exposed to at least two major risk factors and 14.3%, to at least three.

We will report other details of this phase in an article. Based on these findings, we conducted educational courses on secondary prevention for health professionals and also target patients. The Continuous Medical Education (CME) courses are ongoing through our community and will last until the end of 2005.

In conclusion, despite the availability of cost-effective interventions, there are significant gaps in secondary prevention of CVD in our community. There is a need to increase access to preventive drug therapy and to improve the quality of provider-patient relationships. This would ensure that patients benefit fully from available knowledge and medical technology in secondary prevention of CVD. The capacity of the health system for managing CVD needs to be enhanced through the development of effective national drug policies, rational and evidence-based selection of medicines for inclusion in national drug lists, affordable prices for pharmaceutical and sustainable financing and supply systems. Proactive policies are also required to promote clinical prevention, strengthen the infrastructure of health care facilities particularly at the primary health care level, and to provide continuing medical education to health care providers.

To ensure sustainability of these measures, they need to be supported with complementary population-wide strategies that promote healthy lifestyles. Finally effective information systems are crucial for monitoring the performance of secondary prevention programs.

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