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EMPOWERING SOCIETY - THE ROAD TO PREVENTION

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Coronary Artery Disease (CAD) is the leading cause of death worldwide and with the advent of an aging society; it has become one of the most important health problems worldwide. CAD is estimated to increase continuously during the next few decades. In fact, the number of people 60 years of age is expected to double by 2025 and to triple by 2050 globally.[1] The proportion of this aged population is likely to increase more in the Asian-Pacific region; thus, half of the world's cardiovascular burden is predicted to occur in our area.[2]

Most of the studies on cardiovascular risk factors have been done recruiting whites in the western countries. However, there exists a strong possibility that relationships between the traditional risk factors and cardiovascular disease may differ in Asian and Western societies. The ethnic differences in the association between diabetes mellitus and ischemic heart disease are noted even within Asian populations.[3] In most Asian countries, the prevalence of overweight and obesity is increasing, and more important, rates of diabetes are increasing even more quickly possibly as a consequence of the economic developments. It is of grave concern that a moderate increase in body mass index renders South Asians more prone to insulin resistance and related diseases.[4] Thus, it has been suggested that lower cutoff points for body mass index, cholesterol and other parameters be adopted in Asian than in Western countries.

There is a considerable body of evidence for a relation between socioeconomic factors and all-cause mortality. Studies carried out in developed countries provide credible evidence of an inverse relationship between socioeconomic status and cardiovascular disease, primarily CAD and stroke.[5,6] However, this relation is quite variable, and a growing vulnerability to CAD has been shown in lower socioeconomic groups.[7] In the Asia-Pacific region, many countries are attaining economic development, and as this region undergoes a transition to a Western lifestyle, living more sedentary lives and consuming foods with higher energy and fat, cardiovascular disease is increasing.[8]

In rapidly developing economies, income inequality and the double burden of under nutrition and over nutrition has brought about the coexistence of diseases associated with both poverty and affluence.[9] The prevalence of conventional cardiovascular has been increasing among all South Asian populations. Extensive urbanization, shift in dietary pattern and sedentary daily life style is contributing towards the worsening of the CVD risk factor scenario. The burdens

of the chronic cardiovascular risk factors are much prevalent in the South Asian populations. These are also rising alarmingly which will influence the already existed heavy CVD burden.[10]

We must recognize that the burden of CAD in developing countries has increased to epidemic proportions; [11] it is anticipated that it will rise further and within the next fifteen years CAD will be the leading cause of death in these countries.[12,13] According to data from the National Health Survey of Pakistan, the prevalence of hypertension and diabetes is approximately 33% and 25% respectively, in persons over the age of 45 years,[14,15] while the overall prevalence of smoking is 28% in men, going as high as 41% amongst those aged 40 to 49 years.[16] Furthermore dietary habits in Pakistan are heavily weighted towards the consumption of saturated fats as well as ghee (hydrogenated vegetable oil).[17] Estimating the knowledge base of the community regarding CAD has important public health applications as it assists in developing targeted educational programs. Studies in South Asians including Indians, Pakistanis and Bangladeshis suggest a very poor degree of knowledge regarding CAD and its risk factors.[18]

Knowledge about CAD and its risk factors is an important pre-requisite for an individual or society to implement behavioral changes leading towards CAD prevention. A cross sectional study carried out at four tertiary care hospitals in Pakistan, using convenience sampling, documented median knowledge score was 3.0 out of a possible maximum of 15. Only 14% were able to correctly describe CAD as a condition involving limitation in blood flow to the heart. A majority of respondents could identify only up to two risk factors for CAD. Most commonly identified risk factors were stress (43.4%), dietary fat (39.1%), smoking (31.9%) and lack of exercise (17.4%). About 20% were not able to identify even a single risk factor for CAD. Factors significantly associated with knowledge included age ($p = 0.023$), income ($p < 0.001$), education level ($p < 0.001$), residence ($p < 0.001$), a family history of CAD ($p < 0.001$) and a past history of diabetes ($p = 0.004$). Preventive practices were significantly lacking; 35%, 65.3% and 84.6% had never undergone assessment of blood pressure, glucose or cholesterol respectively. Only a minority felt that they would modify their diet, stop smoking or start exercising if a family member was to develop CAD. There are striking gaps in knowledge about CAD, its risk factors and symptoms. These can translate to inadequate preventive behavior patterns. [19]

It is of paramount importance that specific prevention initiatives should be linked into wider CAD frameworks to ensure transferability of learning and integration within wider service provision. [20] Pakistan Cardiac Society through all her portals must prepare a comprehensive plan to transmit this valuable information to the national medical community not directly involved in taking care of cardiac ailments, allied health workers who are in intimate contact with general population and general practitioners who are approached by general public for their day to day problems. This information must reach the general public in a palatable form which can be assimilated and more importantly put into action. Important initiatives are required by the government and her partners to encourage the general population to adopt healthy life style, take up regular exercise and apply caution in dietary choices. Regular checkup should be made mandatory for all and sundry for earlier detection and management of the risk factors.

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