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IMPACT OF PREVENTION OF CARDIOVASCULAR DISEASE AFTER EFFECTIVE EDUCATIONAL PROGRAM AND ITS CHALLENGES: A STUDY

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Abstract

This research confirms the importance of the cardiac educational program in improving the knowledge and adherence to healthy lifestyle. This research revealed that there was significant difference in the knowledge regarding early signs and symptoms and immediate treatment of myocardial infarction before and after planned teaching. It was evident that planned teaching significantly improves the knowledge regarding myocardial infarction. Thus this planned teaching programme was found to be effective in increasing the knowledge of the patients at high risk for myocardial infarction.The application of this research in practice may help improve the knowledge and the adherence to healthy lifestyle of patients with CAD. Conducting research exploring the effect of cardiac educational program on knowledge and adherence to healthy lifestyle among patients with CAD in India may provide a basis for conducting other studies which can address the gap and the limitations of the present research.

1. OVERVIEW

Total CVD risk is characterized as the probability of an individual's encountering a CVD occasion (for example, myocardial infarction or stroke) over a given timeframe, for example, ten years. Total CVD risk relies upon the individual's particular risk factor profile, sex, and age; it will be higher for older men with several risk factors than for younger women with few risk factors. The total risk of developing the cardiovascular disease is controlled by the consolidated impact of cardiovascular risk factors, which commonly coincide and act multiplicatively. An individual with several mildly raised risk factors might be at a higher total risk of CVD than somebody with only one elevated risk factor.

Timely and continued lifestyle mediations and, when required, tranquilize treatment will lessen the risk of CVD occasions, for example, heart attacks and strokes, in people with a high total risk of CVD, and thus will decrease untimely morbidity, mortality, and disability. Numerous people are uninformed of their risk status; crafty and different types of screening by health care

suppliers are along these lines a potentially useful means of identifying risk factors, for example, raised blood pressure, abnormal blood lipids, and blood glucose.

The anticipated risk of an individual can be a useful guide for settling on clinical choices on the power of preventive mediations: when dietary exhortation should be exacting and explicit, when suggestions for physical activity should be heightened and individualized, and when and which medications should be endorsed to control risk factors. Such a risk stratification approach is particularly suitable to settings with limited assets, where sparing the best number of lives at the lowest cost ends up basic. In patients with systolic blood pressure over 150 mmHg or a diastolic pressure over 90 mmHg or a blood cholesterol level over 5.0 mmol/l, sedate treatment decreases the relative risk of cardiovascular occasions by between one-quarter and 33% (20–27). On the off chance that blood pressure was decreased by 10–15 mmHg (systolic) and 5–8 mmHg (diastolic) and blood cholesterol by about 20% through consolidated treatment with antihypertensives and statins, at that point cardiovascular disease morbidity and mortality would be diminished by up to half. People at high CVD risk would profit more, regarding the number of occasions kept away from, because the relative risk decrease would be applied to higher baseline risk. Hence, focusing on patients with a high risk is the principal need in a risk stratification approach.

As the expense of medications is a noteworthy segment of total preventive health care costs, it is particularly critical to put together medication treatment choices with respect to an individual's risk level, and not on self-assertive criteria, for example, ability to pay, or on blanket preventive strategies. Also, guidelines dependent on total risk of CVD, which use risk scoring strategies, have been demonstrated to be both less costly and more compelling than guidelines dependent on single risk factor levels. Hence the utilization of guidelines dependent on risk stratification may be relied upon to free up assets for other contending needs, especially in developing countries. It should be noticed that patients who already have symptoms of atherosclerosis, for example, angina or discontinuous claudication, or who have had a myocardial infarction, transient ischaemic attack, or stroke are at extremely high risk of coronary, cerebral and peripheral vascular occasions and death.

2. COMPLEMENTARY STRATEGIES FOR PREVENTION AND CONTROL OF CARDIOVASCULAR DISEASE

In all populations it is essential that the high-risk approach elaborated in this document is complemented by population-wide public health strategies. Although cardiovascular events are less likely to occur in people with low levels of risk, no level of risk can be considered “safe”. Without population-wide public health prevention efforts, CVD events will continue to occur in

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people with low and moderate levels of risk, who are the majority in any population. Furthermore, public health approaches can effectively slow down the development of atherosclerosis (and also reduce the incidence of some cancers and chronic respiratory diseases) in young people, thereby reducing the likelihood of future epidemics of CVD, such as were seen in 1960–1990 in most high-income countries.

Population-wide strategies will also support lifestyle modification in those at high risk. The extent to which one strategy is emphasized over the other depends on achievable effectiveness, cost-effectiveness and resource considerations.

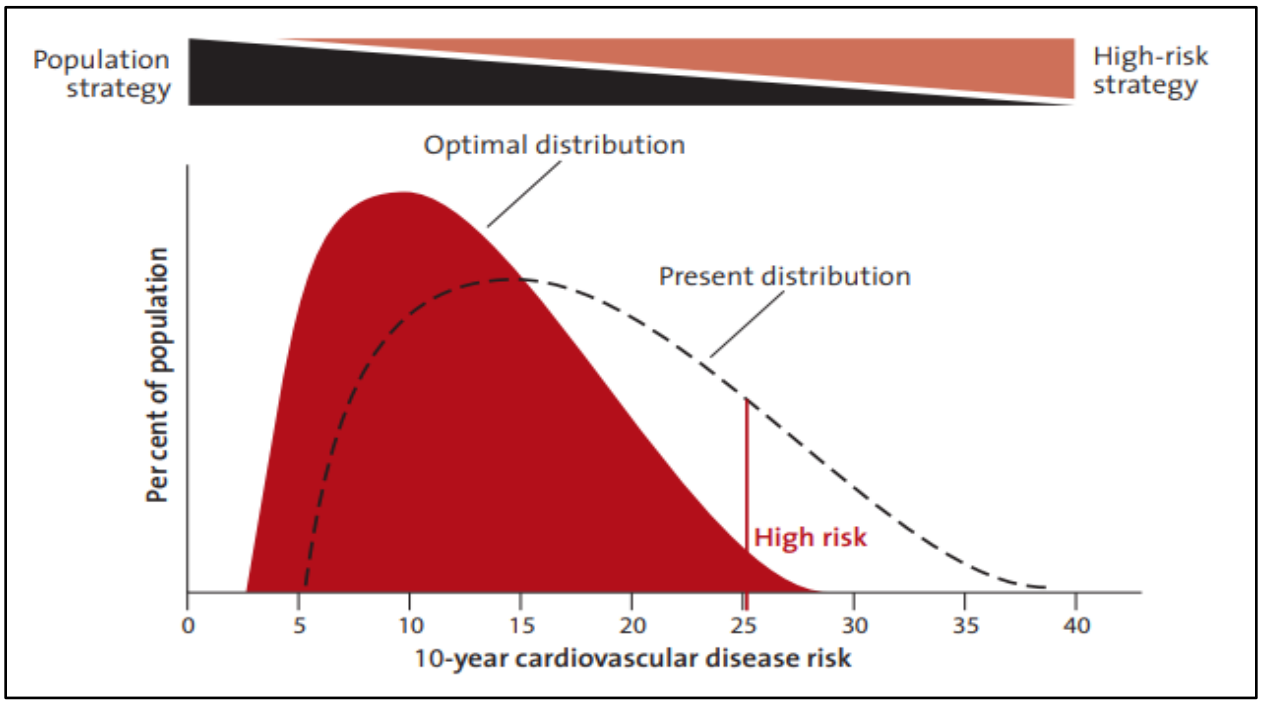

Figure 1: A combination of population-wide and high-risk strategies are required to reduce the cardiovascular disease risk distribution of the population

After an alarming rise in the mortality from atherothrombotic cardiovascular disease (CVD) in the 1950s in most industrialised countries, the CVD epidemic levelled off and an impressive decline started. The majority of the reduction in CVD mortality rates is attributable to preventive efforts more than to changes in care. However, the epidemic is still very dynamic in different parts of the world and changes may again occur in the wrong direction; it was recently reported that the rate of decline in CVD mortality has decelerated in the USA and was absent in young adults.

Lifestyle, behaviour, socio-economic issues

Societal changes may affect the CVD epidemic in different ways. Globalisation, migration, socio-economic changes and unemployment may have influences. Differences in CVD health among countries, regions and neighborhoods have increased over the years; these inequalities can be explained by components of human behavior such as diet, exercise, smoking and job-related features but also by overcrowding, unemployment and other indicators of deprivation. Life expectancy increases continuously with income.

In the USA at the age of 40 years, the gap in life expectancy between individuals in the top and bottom 1% of the income distribution is 15 years for men and 10 years for women. Most of the variation in life expectancy across areas was related to differences in health behaviour, including smoking, obesity, and exercise.

Smoking of tobacco

Tobacco smoking remains the single most important preventable cause of premature mortality and of DALYs, and stopping smoking is the most practical strategy to counteract CVD. Enhancements have been made in regards to the smoking of tobacco in certain countries more than in others, with large contrasts as indicated by financial class. Governmental limitations and regulations have been successful; high assessments on tobacco items are the best policy measure to lessen smoking in the young. Be that as it may, constant health education crusades should complement this, mainly focused on the young and different subgroups of society. Limitations on advertising, advancement, and sponsorship by the business are required.

Diet

Regarding the dietary propensities for the population, changes have happened in various territories. For example, the admission of salt and saturated fats has been diminished in many social orders. The food industry has reduced the nearness of Tran's unsaturated fats in various food things; regulatory activities in certain networks have advanced this. Be that as it may, the potential to avoid CVD through dietary adjustments is still poorly implemented. Adherence to a balanced eating regimen is generally limited; the control of elevated blood pressure, dyslipidaemias and dysglycaemia can largely be improved through changes in lifestyle. Accomplishing better adherence to dietary recommendations requires an understanding of the determinants of poor compliance.

Physical activity

The promotion of physical exercise is a crucial and central issue in all strategies of CVD counteractive action. At the individual level, physical activity should be prompted at various time focuses; it should turn out to be a piece of regular life from childhood onwards. Children and adolescents should be encouraged to go through 30 to 45 minutes daily in exercise exercises either at school or in their leisure time.

3. MANAGEMENT OF CVD RISK FACTORS

All current guidelines on the prevention of CVD in clinical practice recommend the assessment of total CVD risk because atherosclerotic CVD is usually the product of a number of risk factors. Prevention of CVD in a given person should be adapted to his or her total CVD risk: the higher the risk the more intensive the action should be. The stratification of the community into different levels of total CVD risk was given in recent guidelines.

Dyslipidaemias

Randomized controlled trials (RCTs) have demonstrated that diminishing the low-density lipoprotein-cholesterol (LDL-C) level with diet and lipid-lowering medications can lessen the risk of CVD occasions. This proof is most prominent for the utilization of statins. In different RCTs, more versus smaller LDL-C decrease was examined in coronary patients, resulting in more CVD prevention with increasingly serious statin treatments. It was also demonstrated that an angle exists between the level of lowering LDL-C and the extent of CVD prevention. The treatment goals for LDL-C rely upon the total CVD risk of the patient and of the baseline LDL-C level. In patients at extremely high CVD risk, a LDL-C goal of <1.8 mmol/L (70 mg/dL), or a decrease of at any rate half if the baseline LDL-C level is somewhere in the range of 1.8 and 3.5 mmol/L (70 and 135 mg/dL), is suggested.

Arterial hypertension

Elevated blood pressure (BP) is one of the most powerful modifiable risk factors for CVD. The beneficial impacts of BP-lowering treatments to lessen stroke, myocardial infarction, heart failure, and death have been appeared in various RCTs and in various meta-analyses. BP-lowering can be accomplished through lifestyle changes and medication treatments. Results from post hoc analyses of trials from the past proposed the presence of a J-molded relationship between accomplished BP and CVD risk.

Dysglycaemia

In people with impaired glucose tolerance, the development of type 2 diabetes mellitus (DM) can be postponed or prevented. In patients with type 2 DM, CVD events can be prevented through good control of CVD risk factors. Intensive management of hyperglycaemia will also reduce the risk of microvascular complications. Unfortunately, the prevalence of type 2 DM is increasing in most parts of the world, mainly due to unbalanced diets and a lack of physical activity. The diagnosis of DM is also still problematic in a large number of individuals, and even in patients with established CVD. Screening should be considered by assessing HbA1c or fasting blood glucose.

4. CONCLUSION

Awareness of hypercholesterolemia, hypertension, and diabetes is suboptimal in Indian young adults. Young adults with barriers to health care such as lack of insurance and no usual source of care were more likely to be unaware of their CHD risk factors. Future studies are needed to better understand impediments to awareness about CHD risk factors among young adults, and to develop and evaluate interventions that target screening in young adults with limited access to care. In the meantime, clinicians should continue to improve patient education around the risks and consequences of borderline and elevated levels of cardiovascular risk factors.

There are deficiencies in CVD knowledge among India population, which could turn into insufficient preventative behaviours and suboptimal patient outcomes. There is an apparent need to establish more wide-spread and effective educational interventions, which should be sensitive to the perceptions, attitudes, and abilities of targeted individuals. This is the first known research to demonstrate the baseline levels of knowledge about CVD types, warning symptoms of heart attack or stroke, and CVD risk factors among the general population in India. The research participants showed deficiencies in CVD knowledge, which could turn into insufficient preventative behaviours and suboptimal patient outcomes. The research findings underscore the urgent need to establish more wide-spread and effective educational interventions, which should be sensitive to the perceptions, attitudes, and abilities of targeted individuals.

Research concludes that majority of the participant had good level of awareness with regard to cardio vascular diseases risk factors such as high fat intake, high sugar intake smoking and alcohol intake among first year medical students. This will ensure that students will become good prevention oriented physicians. The preliminary research results support that the patients who received the one-on-one education programme showed an improvement in their level of depression, anxiety, stress, BMI, and smoking status. In view of professional development, all cardiac nurses should prepare and equip themselves with effective teaching and learning strategies. It has been reported that nurses still lack knowledge on the foundation of effective

patient teaching and education. This highlights the importance of health education programme for patients with MI to improve their health. Nurses may take this opportunity to develop their knowledge and skill in health education to better meet patients' healthcare needs. These strategies can enhance the nurses' competency levels while delivering education programmes to patients with MI.

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