

disease burden and promoting well-being across diverse populations. Continued research and collaboration are essential to address disparities, mitigate risk factors, and strive towards equitable health outcomes worldwide. Constant medical checkups, efficient use of vaccines, adequate spread of information can help in the deduction of disease rates.

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ADDITIONAL RISK FACTORS IN PATIENTS WITH CARDIOVASCULAR DISEASES AND DIABETES MELLITUS

Introduction

Noncommunicable diseases (NCDs), such as heart disease, cancer, chronic respiratory disease, and diabetes, are the leading cause of death worldwide and represent an emerging global health threat. Deaths from Noncommunicable diseases now exceed all communicable disease deaths combined. Non-communicable diseases are those without an infectious origin. The majority have a chronic onset and persist as life-long diseases, leading to mortality, morbidity and disability. Of these, four are identified as major Noncommunicable diseases (NCDs) responsible for its burden, namely Cardiovascular Disease (CVD) comprising Coronary Heart Diseases (CHD), stroke and Peripheral Arterial Disease (PAD), Diabetes Mellitus (DM), cancer and chronic respiratory diseases. But mainly In Sri Lanka, the incidence of non-communicable diseases such as Cardiovascular Disease (CVD) and Diabetes Mellitus (DM) is high. Major Noncommunicable diseases have increased in Sri Lanka during the last few decades, on one hand due to the demographic transition towards rapid aging of the population, and on the other due to a change in the lifestyle of people from traditional active to a more sedentary lifestyle, leading to an accumulation of multiple risk factors responsible for Noncommunicable diseases.

Cardiovascular disease and Diabetes mellitus Noncommunicable diseases (NCDs) refers to a group of conditions that are not mainly caused by an acute infection, result in long-term health consequences and often create a need for long-term treatment and care. Cardiovascular Disease (CVD) are the leading cause of death in people with diabetes type 02. The assessment of additional risk factors for cardiovascular disease among diabetes patients and comparing current practices with the best practices can improve patient care. The aim of this study was to assess these additional risk factors and awareness of them among adult patients with DM [1, 4].

In comparison with 72% in the world, NCDs in 2016 accounted for 83% of all deaths in Sri Lanka, 10% due to injuries; and 8% due to communicable diseases and maternal & perinatal conditions according to the WHO estimates (WHO, 2018), highlighting higher burden of NCD mortality than the global estimate. According to the SLDHS estimates, NCDs comprised 70% of all deaths in 2016 (Department of Census & Statistics)[6].

Goal

To assess the presence of additional risk factors in patients with diabetes mellitus and cardiovascular diseases.

Material and methods of the research

The analysis and generalization of modern medical scientific literature on this topic.

The results of the research and their discussion

The major NCDs usually emerge during adult life most often without showing symptoms, thus leading to delayed diagnosis and complications that may be fatal or disabling. Further, these are also known as ‘lifestyle diseases’ mainly due to their non-infectious origin of multiple risk factors that they may accrue since childhood. There are few risk factors shared among all major chronic NCDs, namely smoking, unhealthy diet, physical inactivity and harmful alcohol use. Prevalence of these risk factors at population level has a major influence on morbidity and mortality due to NCDs. Though NCDs in Sri Lanka contribute to the total deaths in a proportion closer to that in developed countries, the premature deaths due to NCDs are much higher in Sri Lanka, reflecting a greater disease burden than in developed countries; and as in many other developing countries, the major NCDs in Sri Lanka end predominantly in premature death (ex-2016 death between 29–70 years%male 22%, female 13%, total17%) [6]. CVD disorders of the heart and blood vessels and those are coronary heart disease, cerebrovascular disease, rheumatic heart disease. The effects of behavioural risk factors may show up in individuals as raised blood pressure, raised blood glucose, raised blood lipids, and overweight and obesity [4]. CAD mainly coronary arteries struggle to supply the heart with enough blood, oxygen and nutrients. Cholesterol deposits, or plaques, are almost always to blame. These buildups narrow arteries, decreasing blood flow to heart. This can cause chest pain, shortness of breath or even a heart attack [5]. DM is a disorder in which the body does not produce enough or respond normally to insulin, causing blood sugar (glucose) levels to be abnormally high [1]. The pathophysiology of diabetes is related to the levels of insulin within the body, and the body’s ability to utilize insulin. There is a total lack of insulin in type 1 diabetes, while in type 2 diabetes, the peripheral tissues resist the effects of insulin [3]. High blood glucose from diabetes can damage blood vessels and the nerves that control heart and blood vessels. Over time, this damage can lead to heart disease [5]. Most patients (70,1%) were women, and their mean age was 57 years. Their lifestyle-related risk factors included being overweight (9%) or obese (2,1%), smoking (8,8%), consuming alcohol (2,4%), insufficient physical activity (23,5%), and not meeting the Sri Lankan dietary guidelines for the consumption of fruits and vegetable (75,3%). In addition, 3,3% were suffering from chronic kidney disease, 6.2% from micro-albuminuria, 49.4% from hypertension, and 67.7% from hypercholesterolemia. Further, 11.4% (CI: 8.6–11.7%) had

uncontrolled diabetes, only 40.1% had low-density lipoprotein (LDL) levels within the target range, and only 16.2% had systolic blood pressure within the target range [1, 3, 5, 6].

Then, the last Sri Lanka Demographics Health Survey (SLDHS) conducted in 2016 collected data for the first time on heart disease and DM from 18,302 ever-married women in addition to the usually collected Maternal & Child Health (MCH) data. Accordingly, the prevalence of heart disease was 2.2% and that of DM was 5.7%. It is noteworthy that this data is limited to a sub-group of women [3, 4].

In contrast, the STEPS Survey 2015 carried out in a nationally representative sample of 15–64 year old adults has reported a prevalence of DM of 7.4%, with a higher prevalence in females (7.6%) compared to males (7.3%). Impaired fasting glycaemia also followed a similar trend [2, 3, 5]. Particularly males of South Asian origin are known to be at increased risk of developing insulin resistance and DM. In this regard, ethnic variation in CAG repeats in the androgen receptor (AR) has been reported, which is shown to associate significantly with body fat content, leptin and insulin. For exploring this relationship further, a case control study of 21–65 aged 100 males each with DM (cases) and no DM (controls) recruited from NHSL was conducted (Malavige et al., 2017). The study concludes that AR CAG repeat polymorphism is not associated with insulin resistance and diabetes among Sri Lankan males [5]. Physical inactivity is an established risk factor for premature mortality and several non-communicable diseases. It has been estimated that physical inactivity causes 6–10% of the cases of premature mortality, coronary heart disease, type 2 diabetes, and breast cancer and colon cancer globally [6]. CVD has a raised and potentially modifiable risk of type 2 diabetes (T2DM). Patients with coronary heart disease (CHD) and impaired fasting glucose (IFG) have a very high rate of conversion to T2DM [5, 6].

Conclusion

1. The vast majority of the adult population of Sri Lanka are not aware that smoking, drinking alcohol, and overeating (being overweight or obese) are the causes of heart disease and diabetes.

2. I think that doctors should conduct educational work among the adult population about these risk factors.

3. I think it is necessary to conduct more statistical research on these diseases.

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