PRIMARY CARE DIABETES

Preventive oncology: Role of the primary diabetes care professional

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Abstract

Cancer is a major cause of disease and death across the world, including South Asia. Much of the cancer burden is due to modifiable behavioural/lifestyle related factors (the modifiable 'exposome'), such as the five S's: smoking, spirit (alcohol), stoutness (obesity), unsafe sex, and sugar (hyperglycaemia). The primary diabetes care professional works not only to manage disease, but also to encourage healthy behaviours and promote health. This communication highlights how the diabetes care professional can play a significant part in preventing cancer and reducing the burden of disease.

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Water as a nutrient

Cancer has emerged as a major contributor to morbidity and mortality, across the world. The incidence of cancer is increasing rapidly in South Asian countries as well. Several reasons contribute to the rising incidence and prevalence of cancer. While some of these factors are non-modifiable, many can be modified. The Global Burden of Disease (GBD) reports that behavioural factors have replaced environmental factors as the main causes to which cancer can be attributed.[1] This suggests that a concerted effort, on our part, can halt or even reverse the rising trajectory of cancer cases.

The Scary S's

In 2019, 44.4% of all cancer deaths, and 42.0% of all DALYs (disability-adjusted life years) were attributed to specific risk factors. In numbers, this meant that 2.88 million men and 1.58 million women died due to specific risk factors.[1] The three Scary S's: smoking, spirit (alcohol use) and stoutness (high body mass index) contribute to Cancer across the globe, as well as in highly developed countries. In lower income countries, a slightly different set of Scary S's: smoking, unsafe sex, and stoutness, operates.

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Metabolic factors, too, predispose to cancer, and their contribution has been rising over the past decade. Dietary factors, as well as obesity and high fasting plasma glucose are major contributors to mutagenic stress and in turn cancer. Maximum risk-attributable deaths occur due to tracheal, bronchial and lung cancer in both sexes (36.9% of all attributable cancer deaths). Other risk-attributable cancers which lead to a high burden of mortality are cancers of the colon, rectum, oesophagus and stomach in men, and cervix, colon, rectum and breast in women.[1]

Diabetes and Cancer

The greatest increases in cancer due to metabolic risk is noted in South Asia.[1] Persons with diabetes are known to be more prone to cancer.[2] Multiple pathophysiologic factors promote carcinogenesis in diabetes. Also, there is a multidirectional interaction between genetic and acquired factors, a dysmetabolic state, susceptibility to infection and cancer. Multiple endocrine neoplasia may affect the pancreas; hyperglycaemia can be a marker of pancreatic cancer; and insulin resistance, obesity and non-alcoholic fatty liver disease predispose to cancer as well. Infections such as human papilloma virus[3] may be more common and more severe in persons with uncontrolled diabetes.

Primary Care Diabetes: Surmounting The 5Ss

What does this mean for primary care diabetes? As primary care professionals, we have a responsibility to prevent disease, including cancer and how they can be prevented? The five S's: smoking, spirit (alcohol), stoutness (obesity) sugar (diabetes) and unsafe sex can be targeted at primary care level. Routine diabetes care must aim at a healthy balanced diet, as well as optimization of body weight. Inclusion of discussion on genital and sexual health, and promotion of vaccination against HPV (human papilloma virus)[4] by the primary diabetes care professional will further empower preventive oncology services in our part of the world.[5] .As diabetes care evolves from a gluco-centric to a more comprehensive approach, we need to focus not only on vasculo-metabolic, but viscero-metabolic health as well.[6]

Summary

While addressing viscero-metabolic disease, it is important that we try to prevent disease, as well as manage it. The

high burden of cancer, and the modifiable nature of many of its risk factors, suggests that this should be made a priority in diabetes care clinics. Integrating preventive oncology in diabetes care will help reduce the prevalence of cancer, facilitate its timely detection and treatment, reduce the economic impact of the disease, and lead to healthier outcomes.

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