Clinical Oncology: Case Reports

Perspective

A SCITECHNOL JOURNAL

Cancer Risk Factors, Cancer Causes, and Cancer Control Strategies

Alan Walker*

Abstract

Considering what is known about the causes and risk factors for common cancers and then assessing how simple or complex it is to eliminate or modify them in ways that might reduce cancer occurrence are two obvious ways to find chances for cancer control. The potential lay in how simple or complex it is to "treat" those who get cancer or to care for those with cancer who cannot be cured in cases where the causes or risk factors are poorly known, weak, or easily changeable.

Keyword: Immunutherapy, Tumortherapy

Perspective

A zero level of exposure is at least theoretically feasible for some main risk factors. hese include the most cancer-causing infectious agents, smoking, drinking alcohol (though see below), cooking inside, and using tobacco products (if not zero exposure, vastly reduced from current levels). Zero exposure is not a concept that applies to other factors, such as weight or inactivity. he risk factor values are based on a feasible level that would reduce the risk of all main diseases linked to that risk factor. he primary chronic diseases-heart disease, stroke, cancer, chronic respiratory diseases, and diabetes share some risk factors. he most important risk factor for chronic diseases in general, including cancer, is tobacco use.

In addition to affecting all diseases, diet, physical activity, and alcohol consumption also have an impact on cancer, though more so than other illnesses. Factors including workplace exposure to asbestos, coal, and other toxins; indoor smoke from cooking and heating; and air pollution, which can cause cancer and a higher burden of chronic respiratory disorders, are of less importance on a global scale (though in certain circumstances, very relevant focally). In addition to this, additional chronic diseases do not have any major risk factors with the common malignancies in Low and Middle-Income Countries (LMCs). What is notable is how infections play a part in prevalent LMC malignancies. Integrated ways to manage chronic diseases will help with cancer control, but there is also a need for cancer-specific techniques that will have little to no effect on managing other chronic diseases. Human Papilloma Virus (HPV), Helicobacter pylori, Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) are the three most developing nations.

***Corresponding author:** Alan Walker, Editorial Office, Clinical Oncology: Case Reports, United Kingdom E-mail: oncologyreport@escienceopen.com

Recieved: June 04, 2022; Manuscript No: COCR-22-69034; **Editor Assigned:** June 06, 2022; PreQC Id: COCR-22-69034 (PQ); **Reviewed:** June 21, 2022; QC No: COCR-22-69034 (Q); **Revised:** June 23, 2022; Manuscript No: COCR-22-69034 (R); **Published:** June 30, 2022; DOI: 10.4172/cocr.5(6).237

prevalent cancer-causing illnesses, followed by cigarettes as a risk factor for cancer incidence in The fact that they account for an estimated 8% of all malignancies in high-income nations compared to 26% in developing countries shows that theseinfections can be considerably reduced in prevalence, even though the methods vary. It is simple to immunize against HBV. Safe injection techniques and blood bank screening are necessary for preventing the spread of hepatitis C, and they are more challenging to put into practice as a package of measures. In high-income nations, precancerous lesions have mainly been identified and treated to avoid HPV-related cancers; nevertheless, vaccination is now a new tool for infection prevention. Cancers caused by HBV and HPV present an immediate opportunity to avoid cancer in the current generation. One of the main causes of stomach cancer, which has a poor prognosis and treatment response, is H. pylori. Most LMCs are among the regions where the prevalence of H. pylori (and stomach cancer) has not decreased much despite focused efforts. This raises the prospect of designing interventions for these regions.This research question is now concerned with treating affected people using drugs that kill the bacterium. Vaccine development is also said to be moving forward. Progress depends on keeping up with hot leads. However, this paper does not go into additional detail regarding H. pylori studies. About 4% of all malignancies are caused by other infections, which are significant locally. The Epstein - Barr virus, which accounts for 2% of cancers in LMCs and is a risk factor for Burkett's lymphoma and nasopharyngeal cancers, is the most important.These two cancers are far more prevalent in developing nations than in wealthy ones.

Diet, physical activity, and body mass appear to interact in intricate ways to either increase or decrease the risk of cancer. Based on the finest quantitative data available and emphasizing low intake of fruits and vegetables as the most well-established particular dietary factor, the Global Burden of Disease and Risk Factors developed separate estimates for each of the three components. These three factors, which could serve as the focus of interventions, are responsible for 9% of cancer fatalities in LMCs. As essential as these risk factors are for cancer, they also play a substantial role in heart disease, hypertension, stroke, diabetes, and arthritis, which all contribute to significantly increased disability and death from other causes. In epidemiologic studies, a high diet of fresh fruits and vegetables has consistently been linked to lower cancer rates (usually omitting root vegetables and pulses (peas and beans), which have a greater carbohydrate content than other types of vegetables). In most nations, fruits and vegetables provide less than 5% of the calories consumed, but they are high in fibre, vitamins, minerals, and other active substances. Studies that have examined vegetables individually or in groups (divided into various categories, either botanically or gastronomically) have not been able to more clearly identify which fruits and vegetables are more or less healthy, or which ingredients have what benefits.

The evidence is strong that eating enough fruits and vegetables reduces the chance of developing some cancers, including colon and rectum, lung, stomach, oesophagus, mouth, and throat. Other malignancies may also be at a lower risk, but the evidence is not as compelling.

The larynx, pancreas, breast, and bladder cancers have the most solid supporting data. The estimate that 6% of cancer deaths are linked to an inadequate diet of fruits and vegetables is supported by the robustness of the body of research material. Although the specifics of the correlations are unclear, diet and exercise are undoubtedly significant determinants of cancer, and even more so for other serious chronic diseases. Although practically all of the recorded initiatives have been done in high-income countries, interventions that are known to have a significant impact on food and exercise habits are not yet well established in these nations (e.g., changing dietary composition, losing weight, or increasing exercise). 1%-4% of all malignancies globally are thought to be brought on by pollution of the air (including indoor and outdoor), water, and soil. Despite the relatively low-risk levels per individual, the sheer number of unintentionally exposed individuals can result in a sizable population effect. Lung cancer is the primary cancer form associated with both indoor and outdoor air pollution. Vehicle exhaust, which contains a variety of pollutants, is the primary source of ambient air pollution. While emission levels have generally decreased over the past few decades in high-income nations, they are levelling off or rising in many LMCs. Indoor air is contaminated by heating and cooking fires, as well as emissions from cooked food, particularly in underdeveloped rural areas of sub-Saharan Africa, South Asia, East Asia, and the Pacific.

The most common fuels utilized in these locations are biomass and coal, both of which produce the greatest smoke. Indoor cigarette smoke is far more common. Adult mortality from respiratory and some cardiovascular illnesses, as well as child deaths from acute respiratory infections, outweigh the number of cancer deaths brought on by interior and outdoor air pollution. Infectious disorders are usually linked to poor water quality. Arsenic, which exists naturally in high proportions in some soils and is used to cleanse water, as well as byproducts of chlorination, are both likely causes of some malignancies. Some malignancies in the surrounding population may also result from focal exposure to a range of dangerous substances from industrial waste, although these are challenging to distinguish and even more challenging to measure. Similar to occupational exposures, regulation is the primary method for lowering exposure to outdoor pollution. In high-income nations, efforts to reduce air and waterborne industrial and vehicular emissions have been successful and have undoubtedly benefited public health, albeit the gains in cancer prevention have likely been limited. Specific governmental measures are needed to reduce exposure to stove-related indoor air pollution. The population's poorest and most vulnerable members, who lack the financial resources to improve their living conditions, including the use of cleaner fuels and better stoves, are those who are most adversely affected.

Gamma rays from space and man-made X-radiation from nuclear weapon testing and reactor mishaps both expose everyone to ionizing radiation, which is harmful to living things (e.g. Chornobyl). The natural decay product of uranium from the soil, radon gas, diffuses through the atmosphere and is found everywhere. It disperses outside and has minimal impact. Residents may be significantly exposed in areas where radon is prevalent and leaks into reasonably sealed dwellings. Although radon is an innocuous gas, its decay products contain radioactive alpha particles that can lodge in the lungs, harming the area in which they are deposited and, in rare cases, leading to lung cancer. The majority of these fatalities involve smokers, whose risk is almost 26 times higher than that of nonsmokers (i.e., most of these deaths would be prevented by the elimination of exposure to either smoking or radon). The significance of radon in LMCs has not been calculated. Exposure is probably lower than in cooler cities in tropical, lower-income countries where houses are less likely to be tightly sealed. By taking very modest precautions during construction and corrective actions in existing structures, radon can be largely prevented from buildings. The majority of high-income nations in Europe and elsewhere have rules for doing this. Even while it's probably not a big issue in most LMCs, it might be significant locally in some places.

The majority of melanoma cases in the world (approximately 160,000 annually) are caused by natural UV radiation from sunlight, with North America, Europe, Australia, and New Zealand accounting for roughly 80% of these cases. It is also the main factor in the majority of non-melanoma skin malignancies, which are likewise more common in those with light skin and are typically quite treatable with excision. Sun avoidance, wearing protective clothes and accessories, and using sunscreen is the most evident interventions to prevent UV-related cancer. These actions call for increased public knowledge and availability of physical things. Since UV-related cancer affects the majority of LMCs in a relatively minor way, it is not further discussed in this paper. However, other LMCs, such as those in Eastern and Central Europe, do have sizable populations with light skin and could want to give UV exposure measures priority. Cancer planning, early detection and prevention of cancer, cancer management-diagnosis and treatment, including palliative care delivered by a multidisciplinary team and psychosocial support for patients and families are the fundamental components of cancer control that are universally applicable. The specifics of what is most crucial and what is practical depending on the prevalence of cancer and the available resources. The opportunities that are discussed in this report's main body contain components of each strategy. Here, the fundamental strategies are succinctly explained. Priority setting and budgeting, at the very least, necessitate knowledge about a nation's cancer issues and the resources available to solve them in order for cancer control to develop methodically. This logically happens as a result of cancer control planning. Because of the variations between nations, cancer control policies and programs must be adapted to the conditions of each nation, taking historical and geographic context into account. In the end, an ideal cancer plan and program may be more extensive or may be restricted to a single or a small number of activities. Every few years, plans and programs should be evaluated and updated as needed and possible.

The most effective strategy to minimize the burden of cancer is primary prevention, which involves preventing cancer from developing in the first place. It is necessary to have some understanding of the causes or risk factors related to cancer in order to develop primary prevention efforts. Prevention is possible by behaviour adjustment, environmental alteration, or in the case of infectious agents, vaccination or therapy if the cause or risk factor can be removed or minimized. Unsurprisingly, high-income nations are the focus of the majority of the research on cancer prevention and early detection. While some of this knowledge may be immediately applicable to LMCs, it's possible that preventative tactics will need to be altered to account for local situations. A variety of services may be required when cancer is suspected in a person, whether as a result of a

screening test or as a result of signs and symptoms that prompts the person to seek care. The person should ideally have access to diagnostic services and, in the event that cancer is discovered, services suited to cancer's kind and stage. For some patients, this entails potentially curative care delivered by a multidisciplinary medical team that may include surgery, radiation, chemotherapy, or much more frequently-any combination of these modalities. Palliative care for symptom control can be advantageous even at the earliest stages of a disease that is treatable, and frequently as a result of therapy. Palliative care alone may be most appropriate for malignancies that are difficult to treat, the vast majority of cancers of all types that are not discovered until they are beyond reasonable hope of recovery, and other cancers that progress despite treatment. Virtually all cancer patients, as well as the survivors of cancer victims, may benefit from psychosocial therapy to aid with the psychological and social effects of the disease.

Author Affiliations Top

Editorial Office, Clinical Oncology: Case Reports, United Kingdom