Colon cancer: overweight young adults at greater risk

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The incidence and mortality associated with colorectal cancer are steadily increasing amongst young adults. The results of a recent study indicate that one of the causes of this recent phenomenon is the increased levels of excess weight within this population.

EARLY CANCERS

Cancers of the colon and rectum represent the second greatest cause of cancer deaths within Canada, being responsible for about 12% of all deaths linked to cancer. These cancers usually affect elderly patients, with 90% of cases being diagnosed after age 50. It is also for this reason that it is generally recommended to wait until age 50 before undergoing diagnostic colonoscopy, unless there is a family history of colon cancer.

In recent years, however, a new trend seems to be emerging: while the incidence of these cancers is overall decreasing in North America, the number of young people who are affected by a colorectal cancer is constantly increasing. For example, a study performed by the American Cancer Society showed that in young adults aged 20 to 30, the incidence of colon cancer increased by 1-2% each year between 1990 and 2013[1]. The situation is even worse for rectal cancer, with an annual increase of 3% over the same period. In practical terms, this implies that a person aged between 20 and 30 (born in the 1990s) has actually twice the risk of developing a cancer of the colon and four times the risk of a rectal cancer than had a person of the same age forty years previously who was born in 1950. This increase in cancer incidence is directly linked to recent changes in lifestyle because only 7% of early colorectal cases are due to an inherited genetic susceptibility.

A QUESTION OF EXCESS WEIGHT

One of the major changes observed over the past decades is the large increase in the number of overweight individuals. According to an analysis by the institut national de santé publique du Québec, the prevalence of obesity in Quebec more than doubled between 1987 and 2012 (going from 8 to 17%) and will likely reach 22% for men and 18% for women by 2030[2].

A study recently appearing in *JAMA Oncology* suggests that this increase in the number of overweight people contributes to the increase in early colorectal cancers[3]. By analyzing medical records of the 85,256 women between ages 25 and 42 who have participated since 1989 in the Nurses' Health Study II, the researchers were able to show that women who are overweight are at much greater risk of developing a colorectal cancer at an early age (before 50). Compared to thin women (BMI between 18.5 and 22.9), the risk of cancer was increased by 37% and by 93% in those who were obese (BMI > 30). In other words, the greater the

increase in body weight, the greater the risk of developing a colorectal cancer at an early age.

PRO-INFLAMMATORY LIFESTYLE

A colorectal cancer requires, on average, between 10 and 35 years in order to develop into an advanced stage which can be clinically detected. Diagnosis of a colorectal cancer in a young adult thus signifies that these cancers are triggered very early in the lives of these individuals and that they seem to be evolving quite rapidly. Obesity favors this rapid growth because the excess fat creates a chronic inflammatory environment, which accelerates the acquisition of mutations by the precancerous cells and supports their progress. The Western diet, rich in industrially processed products containing added sugars and refined flours, is also pro-inflammatory and it has been shown that this type of diet considerably increases the risk of colorectal cancer[4]. It is thus apparent that the North American lifestyle (processed foods, excess weight and sedentary nature) is toxic for the body and accelerates the development of cancer to a remarkable degree.

(1) Siegel RL et al. Colorectal cancer incidence patterns in the United States, 1974-2013. J. Natl Cancer Inst. 2017; 109(8): djw322109.

(2) https://www.inspq.qc.ca/sites/default/files/publications/2329_projections_poids_corporel_adultes_2013_2030.pdf

(3) Liu PH et al. Association of obesity with risk of early-onset colorectal cancer among women. JAMA Oncol., published online October 11 2018.

(4) Tabung FK et al. Association of dietary inflammatory potential with colorectal cancer risk in men and women. JAMA Oncol. 2018; 4: 366-373.

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