

Research Article

Colorectal cancer: physical activity, obesity and consumption of foods a case-control study in the east of Algeria

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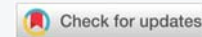
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Keywords: Colorectal cancer; BMI; Physical activity; Dietary



Abstract

Purpose: To evaluate the role of dietary components, physical activity, smoking and Obesity in colorectal cancer.

Materials and methods: With a population-based case-control study, 49 colorectal cancer patients and 72 controls were interviewed with uniform questionnaires. Conditional logistic regression was used for multivariate analysis of colorectal cancer. A total of 121 pairs of case controls were interviewed.

Results: Relationship between body mass index (BMI) and colorectal cancer was shown in this study, obesity was shown in 21 patients (42.86) before cancer and in 0% of patients during colorectal cancer. Physical activity was a significant risk factor $p < 0.0001$. Malnutrition was noted in 48 patients (97.96%) according to Brachial muscular circumference in patients with colorectal cancer ($p = 0.002$). Daily consumption of sugar Khi^2 of Wald (5.423) and butter Khi^2 of Wald (7.694) is higher in cases than in controls. During that time, high daily consumption of pasta ($p = 0.018$) and vegetables ($p = 0.045$) was a protective factor for colorectal cancer.

Conclusion: Colorectal cancer in Algeria was related to dietary and environmental factors. The research results support the colorectal cancer etiological hypothesis of deficiency vegetable and high consumption of lipids and sugar. Obesity and lack of physical activity were also correlated with colorectal cancer.

Introduction

The term colorectal cancer refers to a slowly developing cancer that begins as a tumor or tissue growth on the inner lining of the rectum or colon [1]. Colorectal cancer is, by its frequency and by its severity, an important public health problem in both rich and poor countries. According to the International Agency for Research on Cancer (IARC), colorectal cancer is the third most common cancer in the world after lung cancer and breast cancer with a prevalence of 10.2%. In terms of mortality, it ranks second with 880,792 deaths (484,224 men and 396,568 women) (Bray, et al. 2018). The highest colorectal cancer incidence rates are found in parts of East Asia, Europe, North America, and Australia. In

contrast, its prevalence is low in South Asia and most regions of Africa (Bray, et al. 2018). In Algeria, colorectal cancer is the most common cancer after breast cancer, with a prevalence of 10.4%. In terms of mortality, it is ranked in 3rd position after lung cancer and breast cancer. It occupies the 2nd position in both men and women after lung cancer and breast cancer respectively (Ferlay, et al. 2018). The same observations have been made by GLOBOCAN 2012 [2] and Arnold, et al. [3].

Colorectal cancer (CRC) is associated with several acquired risk factors. Among these factors, we cite environmental exposures and comorbid medical conditions which are in some cases of genetic origin. These risk factors are based on the results of observational studies.