

Dietary patterns and risk of colorectal cancer in Tehran Province: a case-control study

Abstract

BACKGROUND:Colorectal cancer is the third and fourth leading cause of cancer incidence and mortality among men and women, respectively in Iran. However, the role of dietary factors that could contribute to this high cancer incidence remains unclear. The aim of this study was to determine major dietary patterns and its relationship with colorectal cancer. **METHODS:**This case-control study was conducted in four hospitals in Tehran city of Iran. A total of 71 patients (35 men and 36 women, aged 40-75 years) with incident clinically confirmed colorectal cancer (CRC) and 142 controls (70 men and 72 women, aged 40-75 years) admitted to hospital for acute, non-neoplastic diseases were recruited and interviewed. Dietary data were assessed by 125-item semi-quantitative food frequency questionnaire. Multivariate logistic regression was used to estimate the relationship between dietary patterns and risk of colorectal cancer. **RESULTS:**Two major dietary patterns (Healthy pattern and Western pattern) were derived using principal component analysis. Each dietary pattern explained 11.9% (Healthy pattern) and 10.3% (Western pattern) of the variation in food intake, respectively. After adjusting for confounding factors, the Healthy dietary pattern was significantly associated with a decreased risk of colorectal cancer (OR= 0.227; 95% CI=0.108-0.478) while an increased risk of colorectal cancer was observed with the Western dietary pattern (OR=2.616; 95% CI= 1.361-5.030). **CONCLUSION:**Specific dietary patterns, which include healthy and western patterns, may be associated with the risk of colorectal cancer. This diet-disease relationship can be used for developing interventions that aim to promote healthy eating for the prevention of chronic disease, particularly colorectal cancer in the Iranian population.

Keyword: Western dietary pattern; Healthy dietary pattern; Colorectal cancer; Case-control study; Iranian adults; Tehran