Abstract

Background: Food and nutrition as major causes of colorectal cancer (CRC) are still debatable. Aim of the Study: This cross-sectional study in a Portuguese population aimed to characterize and identify “high-risk” diets/life-styles and explore their associations with colorectal cancer. Methods: In 70 colorectal cancer patients and 70 sex, age-matched subjects without cancer history, we evaluated: diet history and detailed nutrient intake (DIETPLAN5 2002, UK), alcohol (amount, type, years), smoking (number packages/year, years), physical activity, co-morbidities and body mass index. Age-adjusted Relative Risks were calculated, Proportional Hazards models adjusted the analysis for multiple risk factors. Results: Smoking was a risk factor (1.90). Increased colorectal cancer risk regarding the lowest vs the highest intake quartile emerged for: vitamin B12 (3.41), cholesterol (3.15), total fat (2.87), saturated fat (1.98), animal protein (1.95), energy (1.85), alcohol (1.70), iron (1.49), refined carbohydrates (1.39). Reduced colorectal cancer risk for the highest vs the lowest intake quartile was found for: n-3 fatty acids (0.10), insoluble fiber/folate (0.15), flavonoids/vitamin E (0.25), isoflavones-/carotene (0.30), selenium (0.36), copper (0.41), vitamin B6 (0.46). Conclusion: Our results corroborated well-established risk factors and identified emergent nutrients. Prolonged excessive intake of macronutrients and some micronutrients concurrent with marked deficits of fiber and protective compounds were dominant in colorectal cancer and more significant than alcohol and smoking. The interaction diet- colorectal cancer is consistent and the relevance of new nutrients is emerging.

Keywords