

Dietary habits and gastric cancer risk in north-west Iran

Mohammadreza Pakseresht · David Forman ·
Reza Malekzadeh · Abbas Yazdanbod · Robert M. West ·
Darren C. Greenwood · Jean E. Crabtree · Janet E. Cade

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Abstract

Objectives North-west Iran is a high-risk area for gastric cancer (GC). Dietary practices may increase risk of GC. For the first time, the diet–GC association in this area was assessed using a validated food frequency questionnaire.

Methods Cases and controls were recruited in a population-based study. In addition to collecting dietary data using a food frequency questionnaire, *Helicobacter pylori* antibody level was measured. Multiple logistic regression models were used to estimate odds ratios for associations between dietary factors and GC among 286 cases and 304 controls.

Results A positive association was estimated for total fat intake (OR = 1.33/20 g, 95% CI: 1.12–1.57) and risk of GC. Inverse associations were observed for vitamin C, iron, and zinc intake and risk of GC and its subgroups (cardia, non-cardia). Fruits and vegetables consumption and refrigerator use showed inverse associations (OR = 0.72/100 g, 95% CI: 0.65–0.80 and OR = 0.75/10 years,

95% CI: 0.60–0.95, respectively). Positive association was observed among those who preferred fried food (OR = 2.21, 95% CI: 1.45–3.37) or consumed highly salted/roasted seeds (OR = 1.97, 95% CI: 1.13–3.43).

Conclusion GC in north-west Iran is associated with dietary practices: foods, nutrients and food preparation habits.

Keywords Diet · Gastric cancer · Case–control study · *H. pylori* · Iran

Introduction

Gastric cancer (GC) is the fourth most common type of cancer in the world and the second most common cause of death from cancer [1]. Since the mid-1980s GC incidence and mortality rates have fallen substantially in most high-income countries, but remain high in parts of Asia (China,

M. Pakseresht (✉)
Department of Epidemiology and Biostatistics, School of Health,
Yazd Shahid Sadoughi University of Medical Sciences,
Yazd, Iran
e-mail: ppakseresht@yahoo.com

M. Pakseresht · J. E. Cade
Nutritional Epidemiology Group, Centre for Epidemiology
and Biostatistics, Leeds Institute of Genetics,
Health and Therapeutics, University of Leeds, Leeds, UK

D. Forman
Section of Cancer Information, International
Agency for Research on Cancer, Lyon, France

D. Forman
Cancer Epidemiology Group, Centre for Epidemiology
and Biostatistics, Leeds Institute of Genetics,
Health and Therapeutics, University of Leeds, Leeds, UK

R. Malekzadeh
Digestive Diseases Research Center,
Tehran University of Medical Sciences, Tehran, Iran

A. Yazdanbod
Ardabil University of Medical Sciences, Ardabil, Iran

R. M. West · D. C. Greenwood
Division of Biostatistics, Centre for Epidemiology
and Biostatistics, Leeds Institute of Genetics,
Health and Therapeutics, University of Leeds, Leeds, UK

J. E. Crabtree
Section of Molecular Gastroenterology, Leeds Institute
of Molecular Medicine, University of Leeds, Leeds, UK