

Serum micronutrients and the subsequent risk of cervical cancer in a population-based nested case-control study.

Batieha AM, Armenian HK, Norkus EP, Morris JS, Spate VE, Comstock GW.

Department of Epidemiology, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland 21205

A nested case-control study was conducted in Washington County, MD, to determine whether low serum micronutrients are related to the subsequent risk of cervical cancer. Among the 15,161 women who donated blood for future cancer research during a serum collection campaign in 1974, 18 developed invasive cervical cancer and 32 developed carcinoma in situ during the period January 1975 through May 1990. For each of these 50 cases, two matched controls were selected from the same cohort. The frozen sera of the cases and their matched controls were analyzed for a number of nutrients. The mean serum levels of total carotenoids, alpha-carotene, beta-carotene, cryptoxanthin, and lycopene were lower among cases than they were among controls. When examined by tertiles, the risk of cervical cancer was significantly higher among women in the lower tertiles of total carotenoids (odds ratio 2.7; 95% confidence limit, 1.1-6.4), alpha-carotene (odds ratio, 3.1; 95% confidence limit, 1.3-7.6), and beta-carotene (odds ratio, 3.1; 95% confidence limit, 1.2-8.1) as compared to women in the upper tertiles and the trends were statistically significant. Cryptoxanthin was significantly associated with a lower risk of cervical cancer when examined as a continuous variable. Retinol, lutein, alpha- and gamma-tocopherol, and selenium were not related to cervical cancer risk. Smoking was also strongly associated with cervical cancer. These findings are suggestive of a protective role for total carotenoids, alpha-carotene and beta-carotene in cervical carcinogenesis and possibly for cryptoxanthin and lycopene as well.

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I risultati suggeriscono un ruolo protettivo dei carotenoidi totali, alfa-carotene e beta-carotene nella carcinogenesi della cervice e possibilmente anche della criptoxantina e del licopene.