

Association between retinol and vitamin C with the risk of oral cancer - A case-control study.

Type: Meeting Abstract

Content:

Introduction: Dietary intake has been hypothesized to be associated with various diseases including oral cancer. According to studies worldwide, imbalanced diet and nutrient deficiency have been attributed to promote oral malignancies. However, the function of specific nutrients in preventing oral cancer remains largely undefined. This study aims to investigate the association between intake of retinol and vitamin C with the risk of oral cancer. **Materials and methods:** Dietary intake data was collected from 8 participating hospitals throughout Malaysia using a validated foodfrequency questionnaire (FFQ). Intake of retinol and vitamin C were computed using the Nutriemart software. This case-control study included 150 cases and 150 controls matched for age, gender and ethnicity. The association between micronutrients, risk habits and oral cancer was analysed using Pearson Chi-Square test and multiple logistic regression. **Results:** Significantly more controls were found to consume retinol (27.3%) and vitamin C (83.3%) above the Recommended Daily Allowance (RDA) as compared to cases (10.7% and 72.0%, respectively). Among risk habits, only cigarette smoking was found to have an inverse association with vitamin C ($p = 0.021$) where as no risk habits were found to be associated with retinol intake. After adjusting for confounding factors, only retinol intake was found to be inversely related to the risk of oral cancer (aOR 0.272, 95%CI 0.135– 0.548). **Discussion:** This study suggests that vitamin C appears to reduce risk of oral cancer and this relationship is weakened after adjusting for risk habits. Meanwhile, retinol intake proves to provide protection against oral cancer up to 72.8% independent of risk habits practiced.

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