

Head and neck cancer risk in relation to jobs held in a nationwide case-control study in Iran

Thursday, 23 November 2023 12:34 (6 minutes)

Background: Worldwide, head and neck cancers (HNC), including cancers of the oral cavity, oropharynx, hypopharynx, and larynx, accounted for more than 744,000 cancer cases in 2020. Tobacco and opium use, alcohol consumption, and human papillomavirus (HPV) infection have been identified as major risk factors for HNC cancer. In addition, several occupational exposures are known to increase the risk of some HNC cancers. There is evidence that some of the known carcinogens may increase the risk of HNC cancers in occupational settings, namely exposure to wood dust for sinonasal cancer, and exposure to asbestos and strong acid mists for laryngeal cancer. Although an association has been observed in some studies, a strong association cannot be ruled out due to the small sample size in most studies. Therefore, the current study may help to improve our understanding of the rule of occupational exposure in the risk of HNC.

Methods: We will use the IROPICAN nationwide hospital-based case-control study including 918 incident head and neck cancer cases and 3477 controls. We will assess the risk of HNC in relation to ever working in major International Standard Classification of Occupations (ISCO-68) groups and specific jobs that possibility increase the risk of HNC including textile dust, working in the rubber industry, metal working fluids, while controlling for individual potential confounders including cigarette smoking and opium consumption.

Next steps:

To investigate associations between occupations and HNC, odds ratios (ORs) and 95% confidence intervals (CIs) will be computed using unconditional logistic regression models. The models will be adjusted for tobacco, opium, and alcohol consumption.

Keywords: Occupational cancer, Head and Neck cancer, Exposure, Carcinogen, Iran

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Session Classification: Mini-oral Presentations