

Occupational exposures and risk of oesophageal cancer by histological type: a case-control study in eastern Spain.

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Abstract

OBJECTIVE: To explore the relationship between occupations and specific occupational exposures and oesophageal cancer (OC) by histological type.

METHODS: A multicentre hospital-based case-control study was conducted in two Mediterranean provinces of Spain. Occupational, sociodemographic and lifestyle information was collected from 185 newly diagnosed male oesophageal cancer patients (147 squamous cell, 38 adenocarcinoma) and 285 frequency matched controls. Occupation was coded according to the Spanish National Classification of Occupations 1994. Occupational exposure to a selection of carcinogenic substances was assessed by the FINJEM job exposure matrix. Odds ratios were calculated by unconditional logistic regression adjusting for age, education, alcohol intake and cigarette smoking.

RESULTS: For the squamous cell variety, statistically significant associations were found for waiters and bartenders (OR 8.18, 95% CI 1.98 to 33.75) and miners, shotfirers, stone cutters and carvers (OR 10.78, 95% CI 1.24 to 93.7) in relation to other occupations. For the adenocarcinoma variety, statistically significant associations were observed for carpenters and joiners (OR 9.69), animal producers and related workers (OR 5.61) and building and related electricians (OR 8.26), although these observations were based on a low number of cases. Regarding specific exposures, the study found a statistically significant increased risk of squamous cell carcinoma for ionising radiation, and of adenocarcinoma for high exposure to volatile sulphur compounds (OR 3.12) and lead (OR 5.30). For all

histological types of OC combined, a three-fold increase in risk was found with a significant trend for asbestos exposure (OR 3.46, 95% CI 0.99 to 12.10).

CONCLUSIONS: The data suggest that some occupational exposures may specifically increase the risk of oesophageal squamous cell carcinoma or adenocarcinoma, while other exposures such as asbestos may increase the overall risk of OC.