

Pleural mesothelioma risk in the construction industry: a case-control study in Italy, 2000-2018

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ABSTRACT

OBJECTIVES

Workers in the construction industry have been exposed to asbestos in various occupations. In Italy, a National Mesothelioma Registry has been implemented more than 20 years ago. Using cases selected from this registry and exploiting existing control data sets, we estimated relative risks for pleural mesothelioma (PM) among construction workers.

DESIGN

Case-control study.

SETTING

Cases from the National Mesothelioma Registry (2000-2018), controls from three previous case-control studies.

METHODS

We selected male PM incident cases diagnosed in 2000-2018. Population controls were taken from three studies performed in six Italian regions within two periods (2002-2004 and 2012-2016). Age-adjusted and period-adjusted unconditional logistic regression models were fitted to estimate odds ratios (OR) for occupations in the construction industry. We followed two approaches, one (primary) excluding and the other (secondary) including subjects employed in other non-construction blue collar occupations for >5 years. For both approaches, we performed an overall analysis including all cases and, given the incomplete temporal and geographic overlap of cases and controls, three time or/and space restricted sensitivity analyses.

RESULTS

The whole data set included 15 592 cases and 2210 controls. With the primary approach (4797 cases and 1085 controls), OR was 3.64 (2181 cases) for subjects ever employed in construction. We found elevated risks for blue-collar occupations (1993 cases, OR 4.52), including bricklayers (988 cases, OR 7.05), general construction workers (320 cases, OR 4.66), plumbers and pipe fitters (305 cases, OR 9.13), painters (104 cases, OR 2.17) and several others. Sensitivity analyses yielded very similar findings. Using the secondary approach, we observed similar patterns, but ORs were remarkably lower.

CONCLUSIONS

We found markedly increased PM risks for most occupations in the construction industry. These findings are relevant for compensation of subjects affected with mesothelioma in the construction industry.

Keywords: case-control studies; epidemiology; occupational & industrial medicine; public health; respiratory tract tumours.

FULL TEXT

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