Introduction

Based on similar studies, Asian countries need to identify their own high-risk occupations which incur asbestos exposure and leading to mesothelioma. The needs for prevention of asbestos exposure in occupational activities where asbestos has been used in Asian countries are required to reduce asbestos-related diseases.

Critical appraisal

Based on a population-based case-control study, the ranking of occupations and industries at high risk for pleural mesothelioma was investigated. Risks were confirmed for occupational activities reported earlier and pointing out risks in activities never previously reported, e.g., sheet metal workers and welders.

Unique keywords

Occupational risk, mesothelioma

Abstract

Background: Occupational exposure to asbestos, widely used in various industries for decades, is the most important risk factor for pleural mesothelioma. We report here the ranking of occupations and industries in France at high risk for this cancer among men and women.

Methods: A population-based case-control study, conducted from 1998 to 2002, included 462 cases (80.3% men) and 897 controls. Data were collected in face-to-face interviews with a standardized questionnaire. Odds ratios (ORs) and 95% confidence intervals (CIs) were calculated for each occupation and industry; subjects never employed in each category were the reference.

Results: For men, risks were high for several occupations and industries. Besides the expected high risks for non-metallic mineral product makers and manufacturing asbestos products, occupations such as plumbers (OR=5.57, 95% CI: 2.90-10.69), sheet-metal workers, welders, metal molders, coremakers, and cabinetmakers were also at high risk. Elevated risks were found in the industries of shipbuilding (OR=9.13, 95% CI: 5.20-16.06) and construction, but also in the manufacturing of metal products, chemicals, and railroad and aircraft equipment. The results for women showed increased but not significant risks in several occupational activities.

Conclusions: This report provides new insight into the epidemiology of mesothelioma, confirming risks for occupational activities reported earlier and pointing out risks in activities never previously reported. It offers guidance to authorities for the compensation of asbestos victims and for prevention in at-risk activities still involving asbestos-containing products.
Based on a population-based case-control study in France where the ranking of occupations and industries at high risk for pleural mesothelioma was investigated, eleven occupations had a significantly elevated risk of pleural mesothelioma among men, with the highest risks for plumbers and pipe fitters (OR = 5.57; 2.90-10.69), structural metal preparers and erectors (OR = 5.01; 1.92-13.18), and sheet-metal workers (OR = 5.00; 3.01-8.33).

For industries, significant high risks of pleural mesothelioma were confirmed for men in the manufacture of asbestos products (OR = 11.41; 3.80-34.30), followed by the industry of shipbuilding and repairing (OR = 9.13; 5.20-16.06) and manufacture of structural metal products (OR = 3.82; 2.35-6.20).

Previously unreported risks for pleural mesothelioma were found for certain occupations. The findings offer guidance to authorities for the compensation of asbestos victims and for prevention in at-risk activities still involving asbestos-containing products.