Asbestos-Related Burden of Disease in Latin American Countries

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The aim of the study is to provide estimates of asbestos burden of disease for the Latin American countries which have been the highest asbestos consumers in the Region since 1970: Brazil, Colombia, and Mexico. Malignant diseases for which a causal association with asbestos exposure has been established are asbestosis, mesothelioma, and cancers of the lung, larynx, and ovary. For asbestosis and mesothelioma the burden of disease can be defined on the basis of the absolute number of cases, while the other neoplasms have a multifactorial etiology. For these latter, the burden of disease associated with occupational asbestos exposure can be estimated, as originally suggested by Driscoll, using the Population Attributable Fraction (PAF), on the basis of the following information: a) proportion of workforce employed in each occupational sector; b) proportion of workers exposed to asbestos in each sector; c) occupational turnover; d) levels of exposure; e) proportion of the population in the workforce; f) relative risk for each considered disease for each level of exposure. The proportion of workers exposed to asbestos in each occupational is not available for Latin American countries. For this reason, data from the European CAREX database (carcinogen exposure database) for asbestos were applied to the countries of interest with the assumption that presence of asbestos in the various occupational sectors can be similar to the one observed in Europe in the Nineties. Using mortality data of the WHO Health Statistics database for the year 2009 and applying the estimated values for PAFs, the number of estimated deaths in 5 years for mesothelioma, and for lung, larynx, and ovary cancers attributable to occupational asbestos exposures, were respectively 340, 611, 68, 43 for Brazil, 255, 97, 14, 9 for Colombia, and 1,075, 219, 18, 22 for Mexico. These figures can be improved, but are already usable to promote asbestos ban.