

Indagine epidemiologica sullo stato di salute degli addetti alla produzione e riparazione carrozze ferroviarie: uno studio prospettico storico di mortalità

ROBERTA TESSARI, CRISTINA CANOVA, L. SIMONATO

Dipartimento di Medicina Ambientale e Sanità Pubblica - Sede di Igiene - Università di Padova

KEY WORDS

Asbestos; carcinogenic risk; mesothelioma; lung cancer; railway rolling stock

SUMMARY

«Epidemiological investigation on the health status of employees in two factories manufacturing and repairing railway rolling stock: a historical prospective study of mortality». Background: *Epidemiological studies of cancer risk due to occupational exposure to asbestos in production and repair of railway rolling stock has so far given consistent results for mesothelioma, but conflicting evidence for lung cancer.* Objectives: *The main purpose of this study was to investigate risk for mesothelioma and lung cancer in relation to estimated patterns of exposure in the occupational environment of railway rolling stock manufacture and repair.* Methods: *A historical prospective study approach was adopted. The mortality experience of the study population was compared to that of the population of the Veneto Region. Two historical cohorts of workers employed in two plants manufacturing and repairing railway coaches were followed up for mortality. A total of 1,621 workers were enrolled in the study from the first factory, and 1,190 from the second.* Results: *An elevation of both pleural mesothelioma and lung cancer was reported in the two factories with SMRs of 21.52 (CI 95%=1.64-32.29) and 6.46 (CI 95%=1.33-18.88), and 1.26 (CI 95%=1.01-1.54) and 1.18 (CI 95%=0.81-1.66) respectively. The two excesses however showed different patterns in relation to historical exposure estimates, which appear to correlate with mesotheliomas but not with lung cancer. An elevation of mortality for non-neoplastic respiratory diseases was associated with employment during periods when it was estimated that exposure was at higher levels in one of the two firms.* Conclusions: *The results confirm the high carcinogenic risk deriving from asbestos exposure, although inconsistencies were found between target organs in relation to exposure estimates, and the existence of time periods in production in which cancer risk was different.*

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Corrispondenza: Roberta Tessari, Dipartimento di Medicina Ambientale e Sanità Pubblica, Sede di Igiene, Via Loredan, 18
35131 - Padova - Tel. 049/8275401 - Fax: 049/8275752 - E-mail: roberta.tessari@unipd.it