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Asbestos-Induced Lung Injury Among Danish Jewelry Workers

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Asbestos has been used extensively in a variety of occupations. In the jewelry industry, inadequate hygiene practices may often go unrecognized with resultant exposure to hazardous amounts of asbestos. We report on four retired jewelers. Two of these had both pleural and parenchymal changes. One had isolated pleural plaques and the final patient showed only parenchymal infiltrates. Their work involved hand cutting asbestos plates used for protection during soldering. In the soldering process asbestos fibers were then blown into the workroom air as the plates broke down. In addition, at the end of each work day the workroom floor was swept, with subsequent airborne asbestos dust distribution. Any patient with pleural plaques or interstitial lung disease should be questioned about potential sources of asbestos exposure in the past, regardless of present employment status. © 1994 Wiley-Liss, Inc.

Key words: asbestos, asbestosis, pleural plaque, jewelry industry, occupational history

INTRODUCTION

Pleural thickening and interstitial changes are by no means specific to asbestos exposure. A surprisingly large proportion of workers with daily occupational exposure to asbestos dust are unaware of sources of asbestos in their working environment [Engholm et al., 1987]. If chest physicians are unfamiliar with the many different occupations with potential asbestos exposure, a diagnosis of asbestos-induced pleural or parenchymal chest disorders may easily be missed.

Work as a jeweler may involve exposure to a highly varying working environment including dust, metals, solvents, and other chemicals. Asbestos powder has been used to make soldering forms in the jewelry industry, and this work has been associated with the development of pleural plaques, pleural plaques with asbestosis, and mesothelioma in case reports [Kern and Frumkin, 1988; Kern et al., 1992]. However, a few mortality studies among jewelry workers have not revealed any excess mortality from lung cancer or mesothelioma [Sparks and Wegman, 1980; Dubrow and Gute, 1987]. We report four cases of asbestos-associated pleural and pulmonary disease among jewelry workers.

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