

IX-2 RESPIRATORY EXPOSURE AND BRONCHIAL CARCINOMA

A relationship between the prevalence of bronchial carcinoma and occupational asbestos exposure has been established beyond any doubt: the first observations already date from the thirties. Wagner et al (1971) reviewed the literature up to that time. Their findings may be summarized as follows:

- A clear relationship with occupational asbestos exposure has been established; workers exposed to improved conditions in the factory had little or no excess risk: there apparently is a dose-response relationship. In short (less than two years) intensive exposure as well as in those with intensive exposure over a longer period an excess risk occurs.
- There is evidence that combined exposure to cigarette smoke is more likely to be associated with lung carcinoma than either alone.
- More than the risk of mesotheliomas, the risk of bronchial cancer is more clearly related to the intensity of past exposure and to the risk of asbestosis. In fact this carcinoma is often regarded as a complication of occupational asbestosis.
- Bronchial tumours are much less clearly linked to the type of asbestos than mesotheliomas.

A few studies deserve to be mentioned:

In two cohort studies in the Quebec chrysotile mines and mills (McDonald 1973) an increased incidence of malignant neoplasms in the two highest dust exposure groups was observed, mainly of tumours of the respiratory tract and to a lesser extent of the gastrointestinal tract: the excess in respiratory cancer, mainly bronchial carcinoma, became evident between 100 and 400 mppcf-years (mppcf = million particles per cubic feet), and was clearly present above this level. Ghezzi et al (1972) did not observe any excess prevalence of lung cancers in workers from a chrysotile mine, Balangero (Italy).

Enterline et al (1973) calculated a time-weighted asbestos dust exposure at the time of retirement (65 years) in a cohort study of 1348 men who completed their working lifetime in the asbestos industry and retired during the

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