

Incidence of mesothelioma in young people and causal exposure to asbestos in the Italian national mesothelioma registry (ReNaM)

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Abstract

Introduction

The epidemiological surveillance of mesothelioma incidence is a crucial key for investigating the occupational and environmental sources of asbestos exposure. The median age at diagnosis is generally high, according to the long latency of the disease. The purposes of this study are to analyse the incidence of mesothelioma in young people and to evaluate the modalities of asbestos exposure.

Methods

Incident malignant mesothelioma (MM) cases in the period 1993-2018 were retrieved from Italian national mesothelioma registry and analysed for gender, incidence period, morphology and exposure. Age-standardised rates have been calculated and the multiple correspondence analysis has been performed. The association between age and asbestos exposure has been tested by χ^2 test.

Results

From 1993 to 2018, 30 828 incident MM cases have been collected and 1278 (4.1%) presented diagnosis at early age (≤ 50 years). There is a substantial association between age at diagnosis and the type of asbestos exposure and a significantly lower frequency of cases with occupational exposure to asbestos (497 cases vs 701 expected) in young people has been documented. Paraoccupational and environmental exposure to asbestos have been found more frequent in young MM cases (85 and 93 observed cases vs 52 and 44 expected cases, respectively).

Conclusions

Mesothelioma incidence surveillance at population level and the anamnestic individual research of asbestos exposure is a fundamental tool for monitoring asbestos exposure health effects, supporting the exposure risks prevention policies. Clusters of mesothelioma incident cases in young people are a significant signal of a potential non-occupational exposure to asbestos.

Keywords: Asbestos; Epidemiology; Mesothelioma; Occupational Health

FULL TEXT

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