

Chapter

1. Asbestos Exposure Assessment, Risk Identification, and Substitutes

Section

C. Epidemiology of ARDs

No./Title

9. Analysis of latency time and its determinants in asbestos related malignant mesothelioma cases of the Italian register

Author/Contributor

Marinaccio A, Binazzi A, Cauzillo G, et al

Bibliographic ID

Eur J Cancer 2007 Dec;43(18):2722-8

Introduction

Asian context

It is widely known that malignant mesothelioma has long latency time, but the exact distribution may vary according to local conditions.

Critical appraisal

The latency time of mesothelioma in Italy is analyzed in detail. The situation in other countries may vary according to local conditions.

Unique keywords

Latency time, mesothelioma

Abstract



Italy was an important producer of raw asbestos until 1992 (when it was banned) and it is now experiencing severe public health consequences due to large-scale industrial use of asbestos in shipbuilding and repair, asbestos-cement production, railways, buildings, chemicals and many other industrial sectors. Latency of malignant mesothelioma generally shows a large variability and the relationship with the modality of asbestos exposure is still not fully clarified. We present an analysis of latency period among the case list collected by the Italian mesothelioma register (ReNaM) in the period of diagnosis 1993-2001 (2,544 malignant mesothelioma (MM) cases with asbestos exposure history). Exposure is assessed retrospectively by interview. Statistical univariate analyses were performed to estimate median and variability measures of latency time by anatomical site, gender and diagnosis period. The role of diagnostic confidence level, the morphology of the tumour and the modalities of asbestos exposure were verified in a regression multivariate model. We found a median latency period of 44.6 years increasing in recent years with a linear trend. Anatomical site, gender and morphology were not relevant for MM latency time whereas a shorter latency period was documented among occupationally exposed subjects (43 years) with respect to environmentally and household exposed ones (48 years).

Annotation

Fact 1

- There are 5,173 malignant mesothelioma cases diagnosed during the period 1993 -2001 in the Italian National Mesothelioma Registry.

Fact 2

- In this population, the mean latency of mesothelioma after first exposure to asbestos was 44.6 years (95% CI; 44.1 - 45.0) with a SD of 12 years.

Fact 3

- Latency length for mesothelioma appeared related to the age at diagnosis, the year of diagnosis and the modalities of asbestos exposure.

Fact 4

- An increase of latency period for mesothelioma in recent years is observed with a trend close to linear. Shorter latency periods were observed among occupational exposed subjects (43.4 years) in contrast to those environmentally (48.0 years) and household (48.1 years) exposed.

Fact 5

- The increase in latency time by years of diagnosis could be due to some reduction of the intensity of asbestos exposure in most workplaces during the period before the asbestos ban or to the increased proficiency of Regional Operating Center to detect the earliest asbestos exposure.

References