Portuguese health care costs related to asbestos exposure: a cost-of-illness study on mesothelioma hospital admission in the period 2000-2015

Mariana Neto, MD, MPH, MSc*; Elisabete de Almeida PharmD, MSc**
National Institute of Health Doutor Ricardo Jorge, Lisbon, Portugal.

*Department of Epidemiology **Health and Safety Service

BACKGROUND

Portugal has a temperate climate and low industrialization levels existing in the period after World War II, when asbestos materials were used worldwide, has contributed to the generalized belief of low usage of those materials.

- Such supposition lacks confirmation;
- There is no specific registry of asbestos-related diseases, workers asbestos exposure or asbestos industrial use;
- Mesotheliomas are rare neoplasms strongly related to asbestos exposure so they can be used to understand the possible dimension of past exposure to asbestos;
- It was estimated that professional diseases under notification was up to 90% for asbestos-related diseases, mainly mesotheliomas.

MESOTHELIOMAS

These neoplasms develop mainly from the mesothelial cells overlying pleurae, peritoneum, pericardium and tunica vaginalis emerging usually after a latency period of 30-40 years after the first exposition. Periods of short latency have been described (2). They can also develop as a later consequence of radiotherapy (3), Simian virus (SV) 40 has also been implicated as a cause (4) and the asbestos fibers passage of the placenta is documented (5).

- The diagnosis at an early stage is an uncommon feature due to the deep location of the lesions and the lack of specific symptoms.

RESULTS

A total of 1059 hospital admissions were registered in the national DRG database in the period 2000-2015 with the CIID – 9 code 905xx. After inconsistencies and misclassifications detection, a final sample of 1004 records was obtained. 640 patients with benign and malignant mesothelioma of any location were identified. The number of cases by year of first hospital admission is shown in figure 1.

During the period 2000-2015 a total of 3.6 M € was spend by the Portuguese NHS on hospital care for mesothelioma patients. Average costs by admission remained stable over time but the total expenditure increased as shown in figure 2.

In the first admission, there is no statistical difference on age between men and women for malignant mesothelioma however it is higher in man for the benign type. Intra-hospital mortality was about 20% (n=125) and it was slightly higher in men (21%).

CONCLUSIONS

The results are consistent with the literature (5) and show an increase in the number of cases of mesothelioma, especially of malignant types. Results are also suggestive that asbestos exposure have been higher than it is believed.

The absence of significant differences in age at first hospitalization between men and women for malignant tumors may indicate that both sexes were exposed to the same factors at the same time, suggesting an equal participation of women in the labor market but a domestic exposition cannot be discarded. These findings needs further investigation in the future.

The value of 3.6 M € is a relative small amount for the period under study, but is however important because it was improperly supported by the NHS. Consequently, physicians should be aware of the need to notify the compensation system. Moreover, a professional disease recognition may provide further care and support for the patients, allowed by the Portuguese compensation system.

Intra-hospital mortality was about 20% (n=125) and it was slightly higher in men (21%).

The authors have no conflict of interest to declare. This study has been externally funded.

References


