EVALUATION OF THE RELATIONSHIP BETWEEN SMOKING AND PNEUMOCONIOSIS: A REVIEW OF THE LITERATURE

741

Introduction Pneumoconiosis is a condition that results in fibrosis in the lung tissue due to accumulation of inorganic dusts in the lung. Smoking and exposure to inorganic dusts affect respiratory functions separately. However, the combined effect may be much more increased than either exposure alone. In this review, we aimed to evaluate the relationship between smoking and dust exposure and their effects on pulmonary function tests (PFT).

Methods Studies have been conducted between 1961 and 2016 on the relationship between smoking and dust exposure, and their effects on PFT were evaluated.

Result All 4 researches evaluated were performed in coal workers. In 1961, Ashford, et al evaluated 4014 coal workers in 3 coal mines of Scotland. Statistically significant increase in respiratory symptom frequency and decrease in forced expiratory volume in 1 s (FEV1) were found in smokers compared to non-smokers. In 1980, Oger, et al investigated 465 coal workers with diagnosis of pneumoconiosis. Airflow obstruction was detected in 74.1% of smokers and 26.3% of non-smokers. In 1988, William, et al included 3380 coal workers to their study in the United Kingdom and found that smokers had higher respiratory symptoms and more FEV1 reductions. In China, Quink, et al included 376 coal workers to their study published in 2016. Of those, 200 (53.1%) were smokers. Cigarette smoking and exposure to dust impaired respiratory functions more than exposure alone and it has been determined that as the exposure time increases, the abnormality increases in the PFT. No significant difference was found between the non-smoking coal workers and the non-smoking control group.

Discussion Results of researches supporting combined effects of smoking and dust exposure reveal the requirement of minimization of dust exposure and cessation of smoking. Further studies could be performed to elucidate relationship between smoking and other types of dust exposures in terms of respiratory symptoms and dust exposure.
MALIGNANT HEMOPATHIES DUE TO PROFESSIONAL EXPOSURE IN MOROCCO

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Introduction Malignant hemopathies are rare diseases whose professional origin is probably underestimated, despite the growing number of epidemiological studies on this subject.

The important role of extraprofessional factors (especially genetic factors), the rarity of malignant hemopathies, their heterogeneity, and their significant onset after carcinogenic exposure, all contribute to explain the difficulties of etiological research in regards of occupational factors.

Methods The aim of this work is to study the various work related malignant hemopathies recognised by the legislator and their etiologies, based on data from the literature as well as the Moroccan occupational diseases charts.

Results Only benzene and ionising radiation are recognised as undisputable carcinogens for blood-forming organs. Thus, different types of leukaemia occurring in the context of occupational exposure to these toxic substances, are included in the occupational diseases charts and are, for this reason, compensable. Nonetheless, there are uncertainties regarding the induction of malignant hemopathies by exposure to certain pesticides, organic solvents, infectious agents and electromagnetic fields for which further epidemiological studies are required.

Discussion Since the only agents known for their induction of malignant hemopathies and are recognised by the Moroccan regulations are benzene and ionising radiation, it is necessary to push the interrogation to establish the causal link to influence the repair of other cancers due to alternate professional exposures and to put in place preventive actions.

Conclusion Prolonged conservation of medical records of the exposed employees and the appeal to the responsible committee are necessary for the improvement of knowledge and the evolution of regulation.

In terms of prevention, medical surveillance, the protection of employees and the use of less toxic alternatives as soon as possible are obviously essential.