Evaluation of respiratory effects of occupational exposure to pesticides

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Abstract

Background: Pesticides are chemical compounds used against vectors of human and animal diseases as well as plant pests. This study was undertaken to assess pulmonary reactions, if any, associated with occupational exposure to pesticides.

Methods: This was a cross sectional analytical study in which a group of 86 exposed (employees of a pesticide producing company) and 75 unexposed referent subjects (Paper board recycling factory workers) were investigated. A standard questionnaire used to determine the prevalence of respiratory symptoms. Additionally, the parameters of pulmonary function were measured at the first day of workweek before and after shift, and several days after exposure.

Results: Significant decrements were noted in some parameters of pulmonary function after exposure. Similarly, mean values of all parameters of pulmonary function, both prior to and after exposure were significantly lower than those of referent individuals. The prevalence of respiratory symptoms such as cough, phlegm and wheezing in the exposed group was significantly higher than those of referent subjects.

Conclusion: Significant, chronic, irreversible, and acute, partially reversible, decrements in parameters of pulmonary function of exposed subjects observed in this study indicate that exposure to pesticides is associated with ventilatory disorders and reduced pulmonary capacities.

Keywords: pesticides, occupational exposure, cough, phlegm, wheezing.

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