

Prevalenza di sintomi respiratori, riduzione della funzionalità polmonare e sensibilizzazione allergica in un gruppo di vigili urbani esposti al traffico urbano

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KEY WORDS

Respiratory symptoms; lung function; allergic sensitisation; traffic wardens

SUMMARY

«Prevalence of respiratory symptoms, reduction in lung function and allergic sensitization in a group of traffic police officers exposed to urban pollution». Background: Environmental factors are believed to play a critical role in the development of allergic respiratory diseases, such as asthma and rhinitis. Particularly, the role of urban pollution in the pathogenesis of these diseases is debated. Objectives: The aim of the study was to investigate whether subjects with a well-defined occupational history of exposure to road traffic fumes presented an increased prevalence of respiratory symptoms of chronic bronchitis (cough), asthma (wheeze), and allergic sensitisation to the most common allergens and reduced lung function compared with an unexposed control group. Methods: The study was conducted on 484 traffic police in Catania (465 men and 19 women), with a mean age of 45 ± 7.9 years, who were subdivided into three groups. The first group included traffic police assigned to traffic direction, the second group included traffic police working in administrative offices, the third group included all traffic police who did not fall into the previous groups. In the first group, "truly exposed" subjects were identified as police officers assigned to traffic direction in the last 8 years. Similarly, in the second group, "truly non-exposed" subjects were identified as police officers working in offices in the last 8 years. Results: Statistical analysis showed a significant difference in mean age between the truly exposed group and the truly non-exposed group ($p < 0.01$). The truly exposed group showed a greater prevalence of symptoms (cough, wheeze and dyspnoea), and positive reaction to skin allergy tests compared with the "truly non-exposed group", but this increase did not reach statistical significance. Alterations of the respiratory function tests were more frequent in the non-exposed (14.3%) compared to the exposed group (9.6%). The highest prevalence of cough, dyspnoea and wheezing was detected in smokers compared to non-smokers and to ex-smokers within each group. Conclusions: Our results show a major prevalence of respiratory symptoms and allergic sensitisation in exposed traffic police compared with non-exposed police, although this did not reach statistical significance. Further epidemiological studies conducted on larger samples are required to better understand the role of road traffic pollution in inducing allergic respiratory diseases.