

PREVALENCE AND AETIOLOGY OF WORK-RELATED RHINO-CONJUNCTIVITIS AMONG DOMESTIC WASTE COLLECTORS

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Introduction:

Waste collectors may suffer from acute and chronic health effects caused by organic dust (bioaerosols). Pathophysiological symptoms may originate from either allergic or irritative mechanisms but an explicit distinction of the aetiology is difficult although essential for risk assessment and prevention.

Methods:

In this cross-sectional study, a total of 69 male waste collectors (56 loaders, 13 drivers) from the Ruhr area in Germany underwent a customised testing protocol including a questionnaire, basic clinical examination, spirometry, and immunologic parameters. Exposures were characterised according to work tasks and ambient monitoring of the bioaerosols. Loaders are known to be much higher exposed (up to two orders of magnitude) than drivers, who served as a reference group. The atopy status of the workers was determined serologically using the specific IgE measurement to a variety of environmental allergens (sx1).

Results:

Mean period of occupational activity was similar in both groups (loaders 24 years, drivers 22 years). A high percentage of workers (48%) reported eye or nose complaints without any significant difference between loaders and drivers. Complaints could often be attributed to working conditions (64%). Prevalence of atopy in loaders was 33% compared to 23% in drivers. An allergic aetiology could be suspected in 44% of loaders reporting symptoms in terms of rhino-conjunctivitis (drivers 38%).

Conclusions:

Our results indicate a high prevalence of work-related rhino-conjunctivitis in long-term exposed domestic waste collectors. Notably, an underlying allergic disease could be suspected more common than previously reported.