Burge P, Moore V, Robertson A (2012). "Sensitization and irritant-induced occupational asthma with latency are clinically indistinguishable". Occupational Medicine; 62 (3):129-133.

LINK - https://academic.oup.com/occmed/article/62/2/129/1482341/Sensitization-and-irritant-induced-occupational

Abstract

Background

Acute irritant exposures at work are well-recognized causes of asthma. In the occupational setting, low-dose exposure to the same agent does not provoke asthma. Occupational asthma (OA) with latency due to irritants is not widely accepted.

Aims

To compare workers with OA with latency likely to be due to irritant exposures with workers with the more usual sensitization-induced OA.

Methods

Following identification of a worker who fulfils all the criteria for irritant-induced OA with latency whose investigation documented lime dust as a cause for his OA, we searched the Shield reporting scheme database between 1989 and 2010 for entries where the OA was more likely to be due to irritant than allergic mechanisms and compared these with the remainder where allergic mechanisms were likely. Outcome measures were latent interval from first exposure to first work-related symptom, non-specific bronchial reactivity, smoking, atopy and the presence of pre-existing asthma.

Results

A previously fit lecturer teaching bricklaying had irritant-induced OA with latency without unusual exposures with an immediate asthmatic reaction following exposure to a sand/lime mixture (pH 8). The Shield database identified 127 workers with likely irritant-induced asthma with latency and 1646 with hypersensitivity-induced OA. The two groups were indistinguishable in terms of pre-existing asthma, atopy, age, latent interval, non-specific reactivity and smoking.

Conclusions

Irritant exposure is a cause of OA with latency currently clinically indistinguishable from OA due to sensitization.