

doi:10.1093/occmed/kqi131

Latent period for symptomatic sensitization in bakeries

Dear Sir,

We read with interest the paper by Smith [1] recently in this journal presenting the results of a respiratory health surveillance programme in bread bakery workers. He describes a mean latency period of 7.3 years for symptomatic sensitization, defined as work-related symptoms and a positive skin prick test to flour or amylase. An apparent difference in latency periods between subjects developing symptoms in the last 10 years and those developing symptoms before 1993 is considered, as well as the potential implications for health surveillance strategies. Although interesting, the data merit further discussion.

The exact number of employees included is not clear, and no information is given regarding the turnover of employees (although this may be low in this industry). Ninety symptomatic workers equates to roughly 5% of total employees, which is lower than in other reports [2,3].

The latency data are not normally distributed and would be better presented as median values rather than means. In addition, there is no test of significance of the reported difference in latency between those developing symptoms before and after 1993. The author speculates that the chance of meeting a sensitizing exposure has been reduced. This statement, however, does not seem to be supported by the data presented, which demonstrate only a small difference in both the number of employees affected and the average latency periods. Furthermore, it is not clear that the current study has sufficient statistical power to address this issue.

A significant proportion (60/90) of the workers developed symptoms and/or related them to exposures prior to commencement of the health surveillance programme in 1993. Besides the problems of recall bias, such retrospective data may be subject to a 'healthy worker effect' whereby the average latency period could be increased

by sensitized workers leaving the industry because of associated symptoms.

No data regarding those subjects with work-related respiratory symptoms in the absence of sensitization are presented. It is interesting to speculate whether such symptoms are the result of exposure to irritant substances or unidentified allergen(s), and differences in latency period may help to clarify this point. Certainly bakery workers have the potential to be exposed to a wide variety of allergens other than flour and amylase [4].

We have previously investigated a sample of 113 employees in a large UK bakery and found work-related respiratory symptoms in 28 subjects (25%), regardless of sensitization status. Latency periods were calculated by comparing duration of symptoms with time spent working in the industry. Our findings were comparable to those presented in this paper, although there was wide variation between different symptoms, with latency periods ranging from 4.3 years (work-related cough) to 17.6 years (work-related dyspnoea).

In summary, we have also observed that latency periods in bakery workers may be longer than in other allergen-exposed workers, but would highlight the potential bias inherent in retrospective studies. Although it is interesting to consider symptomatic sensitization, we are sure that the author would agree that health surveillance strategies should be targeted at identifying all symptomatic workers rather than just those with sensitization to the common bakery allergens.

Richard Barraclough, Lisa Bradshaw, Chris Barber, Andrew Curran, David Fishwick
Health and Safety Laboratory, Harpur Hill, Buxton, Derbyshire SK17 9JN, UK
e-mail: Richard.Barraclough@hsl.gov.uk

References

1. Smith TA. Latent period for symptomatic sensitisation in bakeries. *Occup Med (Lond)* 2005;**55**:93–95.
2. Brant A, Berriman J, Sharp C *et al.* The changing distribution of occupational asthma: a survey of supermarket bakery workers. *Eur Respir J* 2005;**25**:303–308.
3. De Zotti R, Bovenzi M. Prospective study of work related respiratory symptoms in trainee bakers. *Occup Environ Med* 2000;**57**:58–61.
4. Houba R, Doekes G, Heederik D. Occupational respiratory allergy in bakery workers: a review of the literature. *Am J Ind Med* 1998;**34**:529–546.