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Letters

Biological washing powders as allergens

EDITOR,--A paper by me¹ is cited by P J Rees in the reply to a query on whether biological washing powders might be a new allergen.² Rees states that I reported late onset asthma in workers in factories producing these powders. In fact, the proteolytic enzyme was found to be a potent respiratory sensitiser, causing immediate and late asthma mediated by IgE in both atopic and non-atopic subjects, few of whom had had asthma previously. Sensitisation and symptoms associated with enzymes can occur in laboratory and office workers, and the material was no more visible in the general workplace than house mite allergen is in a domestic setting.

Later, a worker who was sensitised to the enzyme was admitted to hospital with severe asthma, which stopped when he was no longer exposed to the enzyme. There were two recurrences: once when he wore clothes that, unknown to him, had been washed in biological detergent; and once after the floor of his otherwise enzyme free workplace had been washed, without his knowledge, with a biological detergent solution.

Thus, although precautionary encapsulation of the enzyme powder appreciably reduced the incidence of sensitisation and asthma in people involved in its manufacture and lessened domestic airborne contamination, continual use of liquid or powder enzyme preparations cannot be assumed to be free of risk. Apart from the possibility of invisible dust occurring from powders and xeromists occurring from liquid preparations or powders in solution, the allergen will persist in garments, bedclothes, and carpets washed or cleaned with detergents containing the enzyme. The build up of allergen in the domestic environment will increase with continued use.

A capacity to give rise to sensitisation is not confined to enzymes that are proteolytic.³ These enzymes seem to be sensitisers by virtue of being high molecular weight proteins, irrespective of their

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specific activity.⁴ Thus lipases, or other enzymes in the new detergents, share the potential for sensitisation of the original preparations.

Known allergens must not be overlooked when sources of an increased incidence of asthma are sought, and it is particularly unfortunate when patients are symptomatically treated for asthma while they continue knowingly to be exposed to a specific allergen. This often happens when the source is occupational¹ and may have fatal consequences.⁵

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