

plaques which are a feature of AD, diffuse LBD, and normal ageing.³

We thank the Parkinson's Disease Society of Great Britain (R. J. M., J. L., M. L.), the Motor Neurone Disease Association (R. J. M., J. L.), the Wellcome Trust (R. J. M.), the Science and Engineering Research Council (I. S.), and Pfizer Ltd (I. P.) for support.

JAMES LOWE
MICHAEL LANDON
IAN PIKE
IAN SPENDLOVE
HELEN MCDERMOTT
R. JOHN MAYER

Departments of Pathology and Biochemistry,
University of Nottingham Medical School,
Queen's Medical Centre,
Nottingham NG7 2UH, UK

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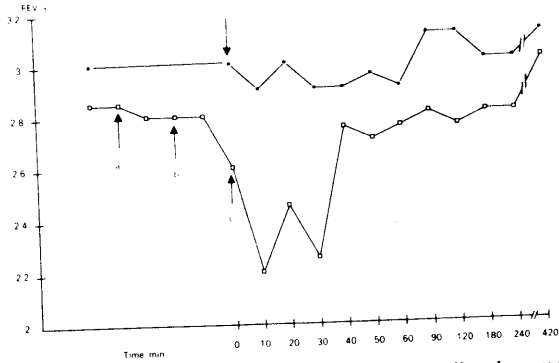
Latex as aeroallergen

SIR,—Anaphylactic reactions to latex surgical gloves have often been reported¹⁻³ in patients sensitive to latex, as have reactions to latex-containing products used in anaesthesia and surgery.⁴ All have involved skin or visceral contact, however. We describe here an allergic reaction resulting from airborne exposure to latex.

A 27-year-old woman began working as a nurse in intensive care in 1984. In November, 1988, she started work in the operating room. In both positions she had to wear latex gloves ("Triflex"; Travenol Laboratories). In January, 1989, she noticed contact urticaria, rhinitis, conjunctivitis, and chest wheezing when wearing latex gloves. Asthma symptoms developed when she was in the operating room and not wearing gloves. She had no history of asthma and had no symptoms outside the workplace.

Skin prick tests (Stallergenes Laboratories) showed an immediate reaction to common aeroallergens such as house dust, grass pollens, and cat and dog dander. Natural latex induced a 7 mm wheal in 15 min. A negative-control test (50% glycerol phosphate) provoked no reaction while a positive control (9% codeine phosphate) induced a 5 mm wheal. Latex-specific IgE were measured at 1 PRU/ml ('Latex R82' discs; Pharmacia Diagnostic).

Baseline lung function tests were normal. A non-specific challenge by inhalation of 500 μ g carbachol demonstrated bronchial hyperreactivity with specific airway resistances rising from 3 to 11 cm H₂O l⁻¹ s⁻¹. After inhalation of two puffs of salbutamol (200 μ g) her specific airway resistance returned to 2.4. A week later, 2 days after the patient had stopped working, we did specific inhalation challenges on two consecutive days. These tests⁵ were done in our hospital laboratory with progressive increases in the duration of exposure. On the first day, a research worker put on and removed vinyl gloves sterilised with ethylene oxide (Becton-Dickinson) and then waved her hands in front of the patient's face. She did this with several pairs of gloves for 30 min. No bronchial reaction was elicited (figure). On the next day the exercise was repeated, with the latex gloves. Cumulated exposure time was 53 min (3 + 10 + 40). Forced expiratory volume in 1 s (FEV₁) fell by 22% (figure) and sneezing and conjunctivitis were observed.



FEV₁ responses to manipulation, in front of latex-allergic nurse, of vinyl or latex gloves.

Arrows: upper line = vinyl gloves 30 min; lower line = latex gloves 3 min (a), 10 min (b), 40 min (c).

This nurse exhibited an immediate asthmatic reaction when latex (but not vinyl) surgical gloves were manipulated in front of her. This reaction can be ascribed to latex particles in the glove powder. We know of two other cases of asthma due to latex. In one⁶ the patient wore the gloves and was thus exposed via skin. The second case⁷ was a latex glove inspector in a manufacturing plant diagnosed as having occupational asthma on the basis of peak-flow and methacholine-responsiveness changes related to workplace exposure. However, the specific challenge test was negative. In the same plant, a survey revealed positive skin-prick tests to latex in seven of sixty-four workers. Six worked with the finished glove. All but one had respiratory symptoms related to work but it is not clear if they had skin contact with latex gloves. Specific challenges were not done.⁷

This seems to be the first report of allergy to latex via a purely airborne route. Latex should be added to the list of compounds known to cause occupational asthma.⁸

Hôpital Sainte-Marguerite,
Pneumo-allergology Service,
Department of Respiratory Diseases,
13009 Marseille, France

F. LAGIER
M. BADIER J. MARTIGNY
D. CHARPIN D. VERVOLET

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How maximal is "maximum"?

SIR,—In their audit of coronary angiography and bypass surgery Dr Gray and colleagues (June 2, p 1317) refer several times to "maximum medical therapy". If this means "maximum tolerated medical treatment" how do they define submaximum medical therapy?—and how was such tolerance measured? Patients show varying degrees of tolerance, and such tolerance may change with time. Temporal changes also confound any attempt to quantify medical therapy in terms of number of agents used or doses. It is simplistic to equate triple therapy with maximum therapy and misleading to equate "maximal" with "optimal". It may be necessary to introduce the concept of time into any practical definition, since coronary disease, irrespective of prescribing fashions, can alter with time.

Rather than focus on tolerance of side-effects it may be more meaningful to consider therapeutic efficacy, but again, how effective must a drug or combination of drugs be to be considered "maximum"? Would Canadian Cardiovascular Society class I or

even II suffice myocardial infarction? Would such longer, repeated exercise tests be objective?

The message of "maximum medical therapy" need not be disease. Quite apart from the clinician's interpretation, optimum management renders the patient angina free, without beta blocker, without nitrate, and without modification of account of Maximum Medical Therapy, with

Department of
St Bartholomew
London EC1A

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SIR,—Dr I encountered a selection of

We start various terms "maximal" produced. This could be defined as at least two calcium antagonists or intolerant overstimulation.

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We are happy to highlight surgery in comparison

Department
University
Nottingham

SIR,—T report (already β -receptor, namely, advocate xamoterol severe heart failure